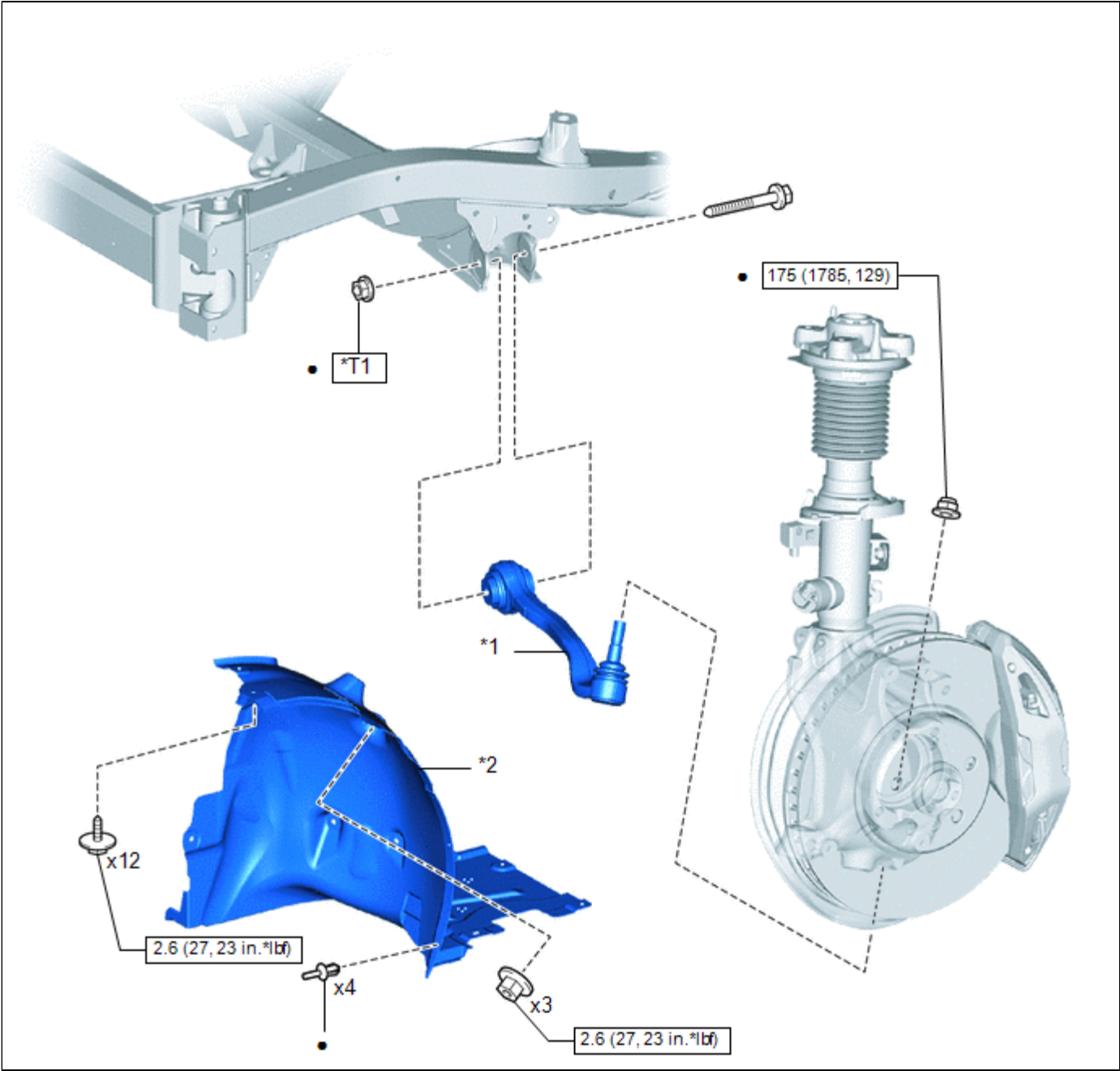


Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0H
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT LOWER SUSPENSION ARM: COMPONENTS; 2020 MY Supra [03/2019 -]		

COMPONENTS

ILLUSTRATION



*1	FRONT LOWER SUSPENSION ARM ASSEMBLY	*2	FRONT NO. 2 FENDER LINER
	N*m (kgf*cm, ft.*lbf): Specified torque	•	Non-reusable part

*T1	1st: 100 (1020, 74) 2nd: Turn 90°	-	-
-----	--------------------------------------	---	---

Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0I
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT LOWER SUSPENSION ARM: REMOVAL; 2020 MY Supra [03/2019 -]		

REMOVAL

CAUTION / NOTICE / HINT

CAUTION:

- Vehicle may slip off the vehicle hoist if the vehicle hoist is handled incorrectly.

Danger! Life-threatening injuries!

- Observe safety information on raising the vehicle using a vehicle hoist.
- For additional information see:

Click here [INFO](#)

HINT:

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

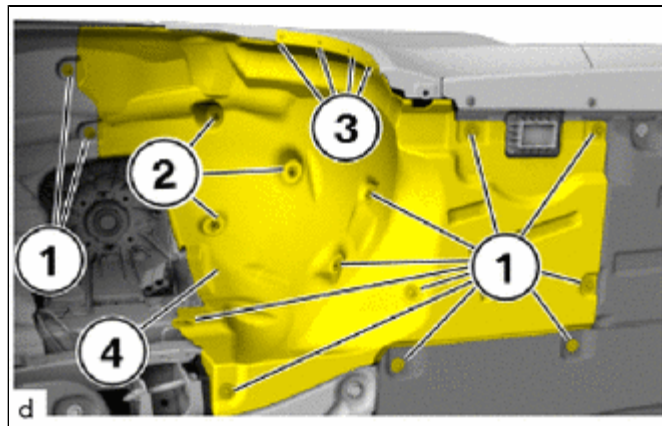
PROCEDURE

1. REMOVE FRONT WHEEL

Click here [INFO](#)

2. REMOVE FRONT NO. 2 FENDER LINER

(a) Loosen screws (1).



(b) Loosen nuts (2).

(c) Release the plastic rivet (3) and remove the front No. 2 fender liner (4).

3. REMOVE FRONT LOWER SUSPENSION ARM ASSEMBLY

NOTICE:

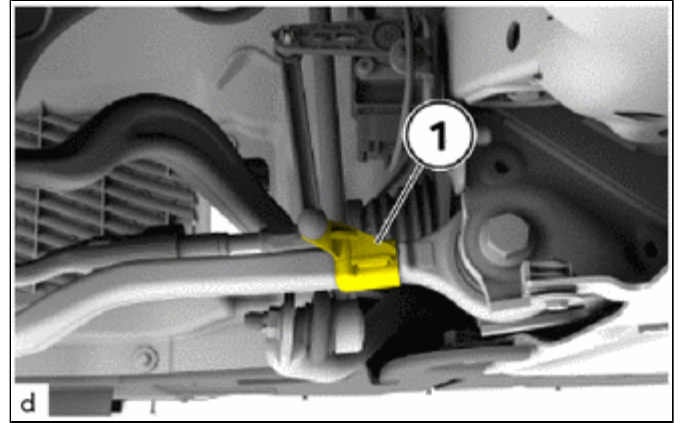
- Component damage caused by striking tools.

Brute force can result in component damage.

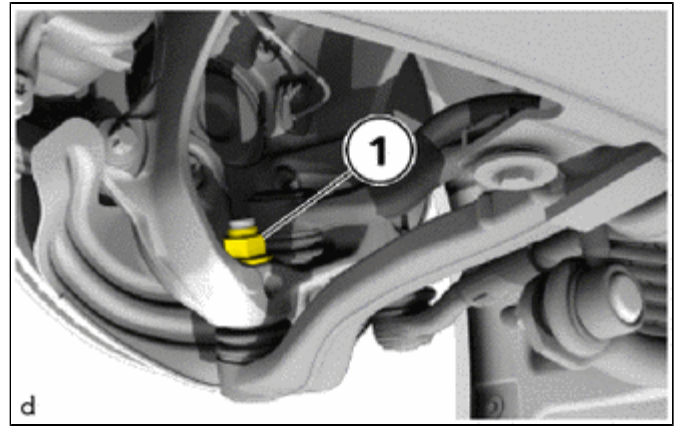
- Only use those tools intended for the work.

(a) for LH Side:

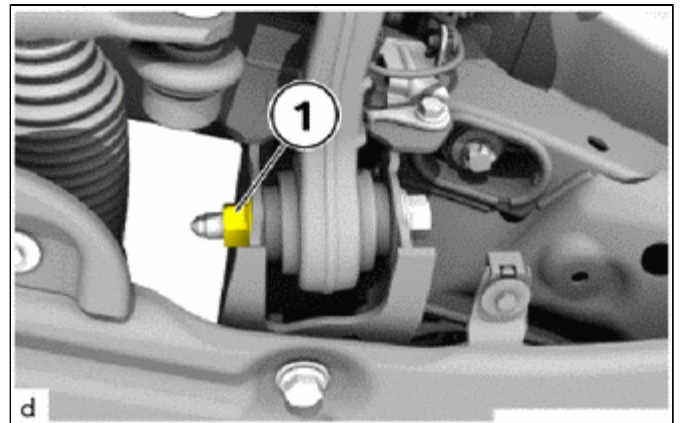
- (1) Release the front height control sensor link sub-assembly (1) on the front lower suspension arm assembly.



- (b) Loosen the nut (1), if necessary, counter-hold the T40 "TORX" socket wrench.



- (c) Using a 18 mm deep socket wrench, unscrew the nut (1) and remove the 18 mm bolt to the rear.



- (d) Remove the front lower suspension arm assembly.

Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0J
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT LOWER SUSPENSION ARM: INSTALLATION; 2020 MY Supra [03/2019 -]		

INSTALLATION

CAUTION / NOTICE / HINT

HINT:

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

PROCEDURE

1. INSTALL FRONT LOWER SUSPENSION ARM ASSEMBLY

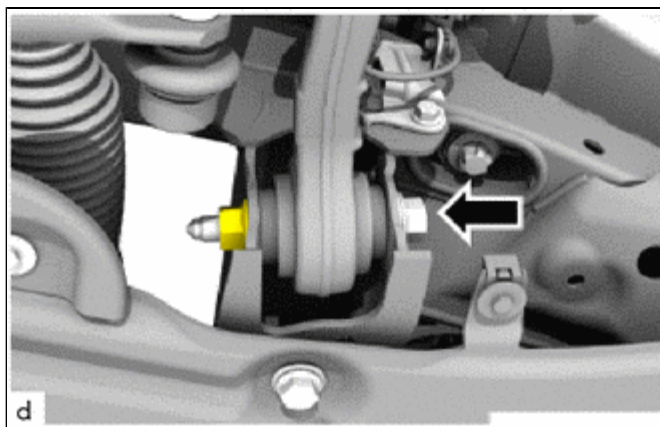
NOTICE:

- Component damage caused by striking tools.

Brute force can result in component damage.

- Only use those tools intended for the work.

(a) Install front lower suspension arm assembly.



(b) Replace the 18 mm bolt and the 18 mm nut.

(c) Using a 18 mm deep socket wrench, tighten the 18 mm nut in the normal position.

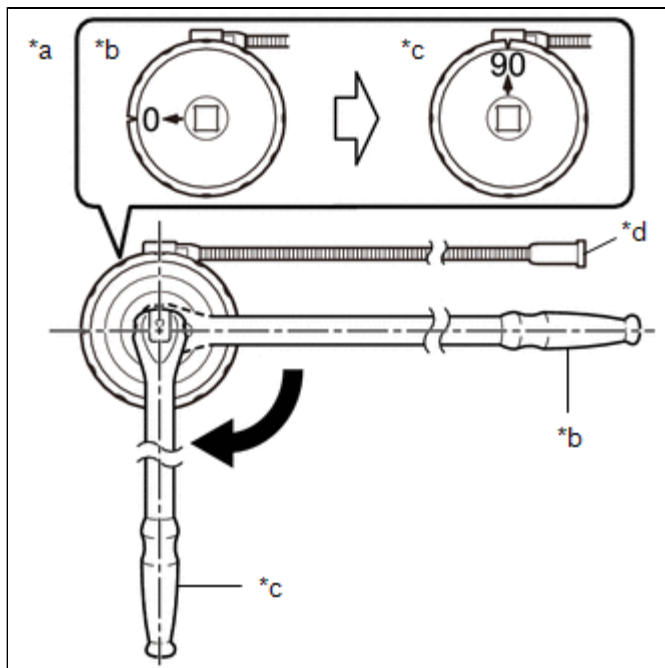
Torque:

100 N·m {1020 kgf·cm, 74 ft·lbf}

(d) Using SST and 18 mm deep socket wrench, tighten the 18 mm nut an additional 90°.

SST: 09900-WA010

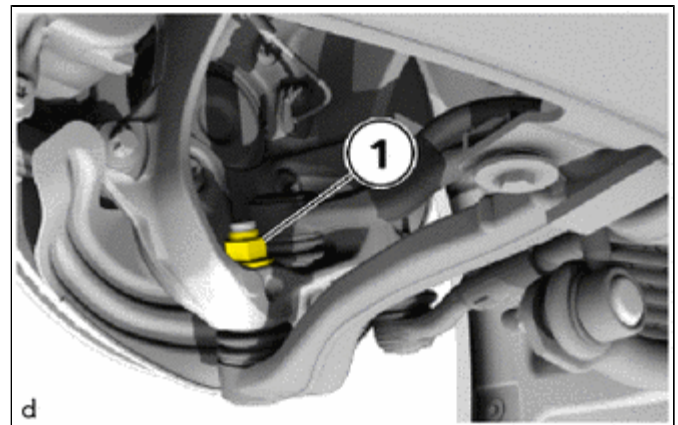
HINT:



*a	Example
*b	Before Tightening
*c	After Tightening
*d	Magnetic Portion

- The magnetic portion is used to secure the gauge to the vehicle.
- After first adjusting the needle of the gauge to 0°, tighten to the specified angle.
- Perform the work procedure carefully so that the gauge, etc. does not become tilted.

(e) Replace nut (1).



(f) Tighten the nut (1), if necessary, counter support the T40 "TORX" socket wrench.

Torque:

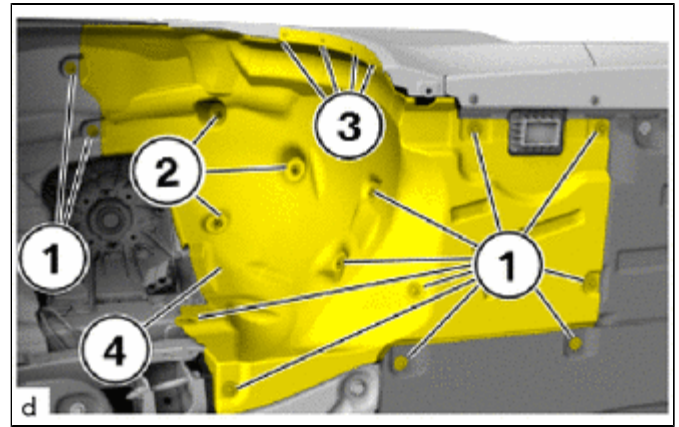
175 N·m {1785 kgf·cm, 129 ft·lbf}

(g) for LH Side:

(1) Clip in the front height control sensor link sub-assembly.

2. INSTALL FRONT NO. 2 FENDER LINER

(a) Insert the front No. 2 fender liner (4).



(b) Tighten the screws (1) and nuts (2).

Torque:

Screw :

2.6 N·m { 27 kgf·cm, 23 in·lbf }

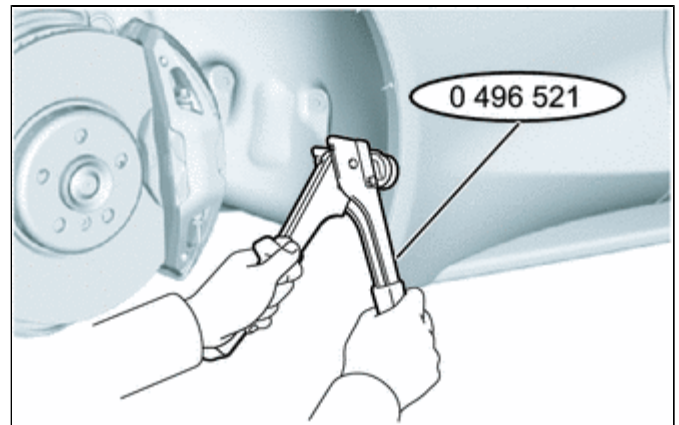
Nut :

2.6 N·m { 27 kgf·cm, 23 in·lbf }

(c) Replace the plastic rivet (3).

(d) Set the plastic rivet with the special tool 0 496 521 (00 2 230).

SST: 09900-WA100



3. INSTALL FRONT WHEEL

Click here [INFO](#)

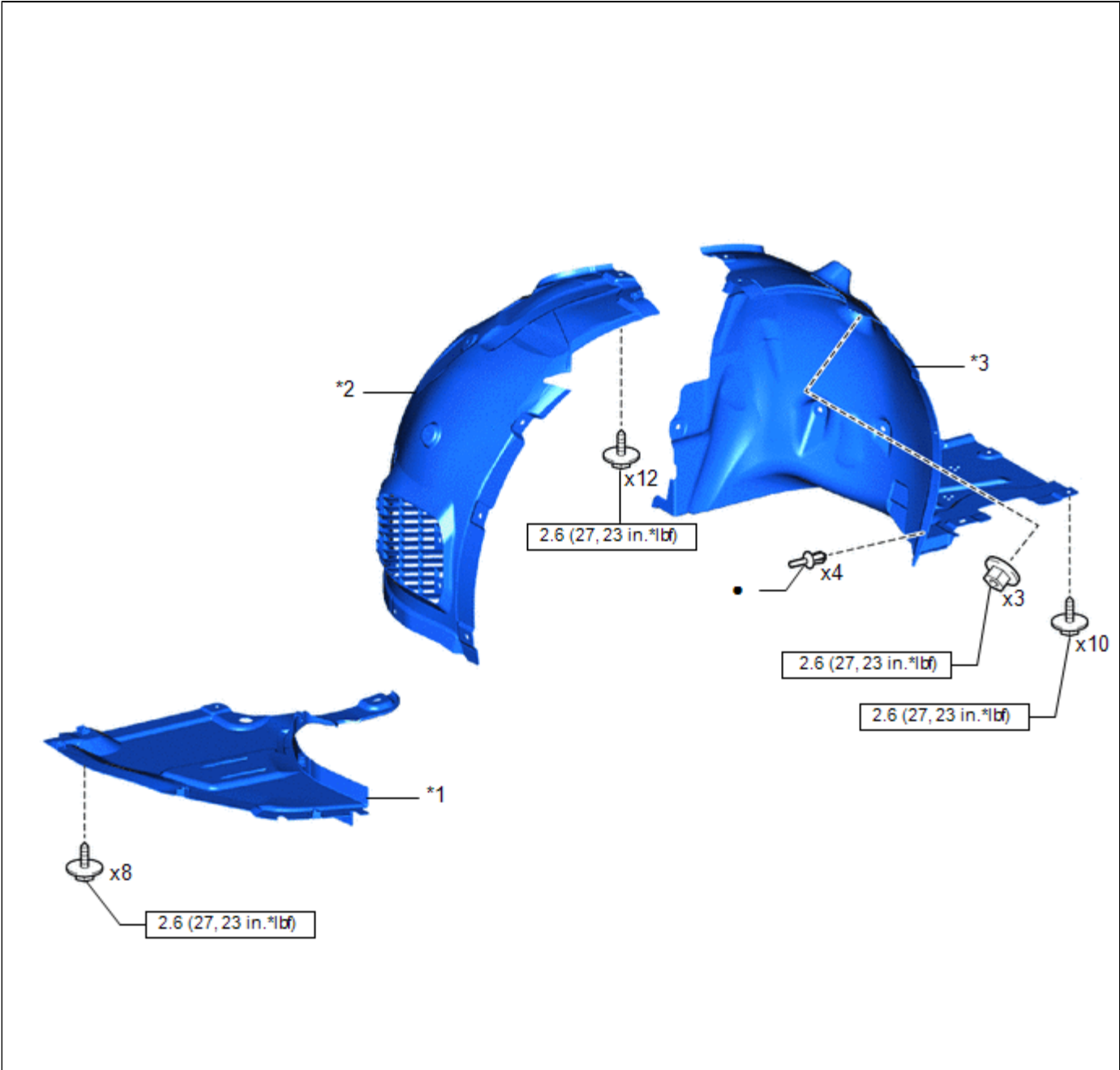
4. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT

Click here [INFO](#)

Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0D
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT SHOCK ABSORBER: COMPONENTS; 2020 MY Supra [03/2019 -]		

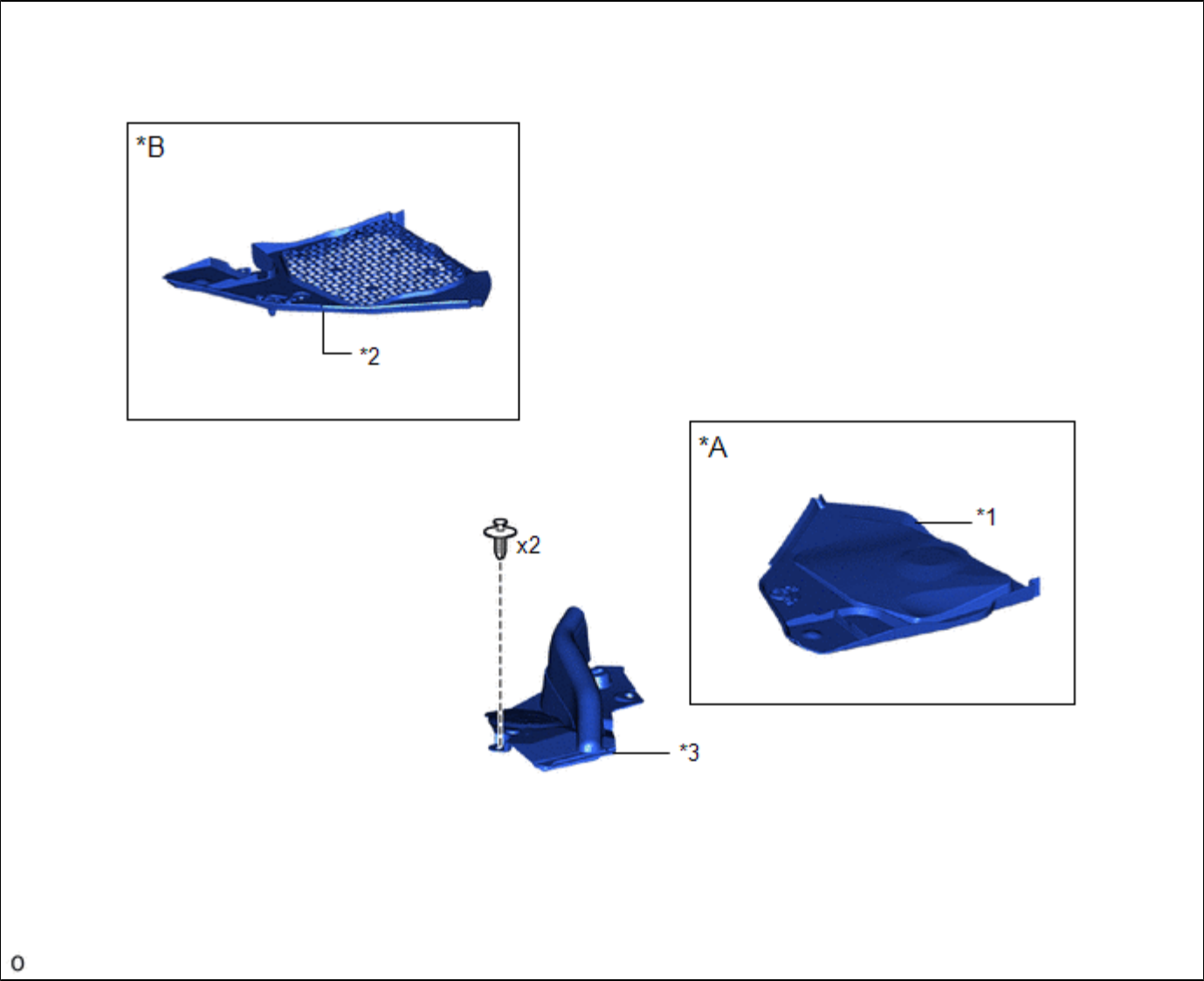
COMPONENTS

ILLUSTRATION



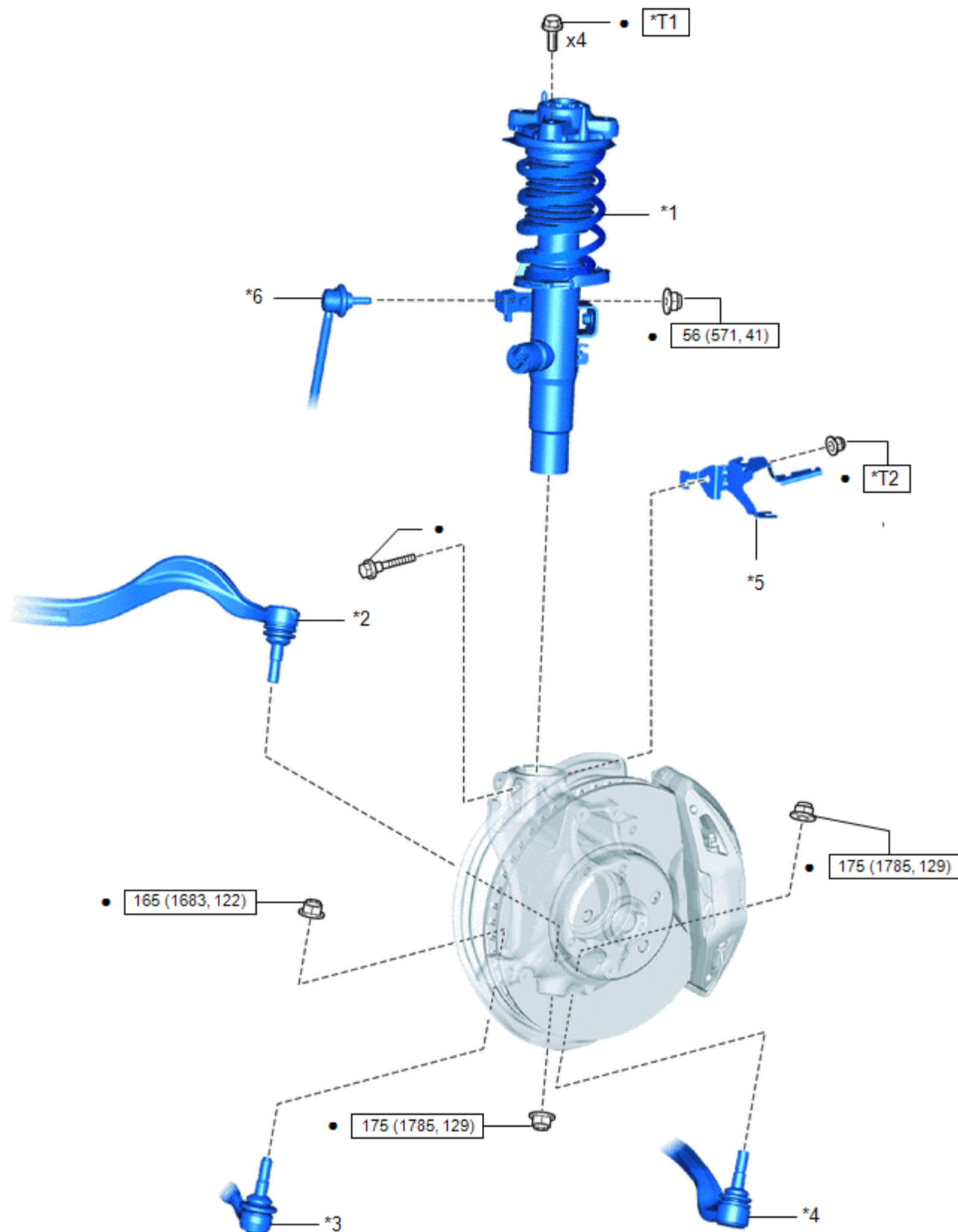
*1	FRONT FENDER SPLASH FRONT SHIELD	*2	FRONT FENDER LINER
*3	FRONT NO. 2 FENDER LINER	-	-
	N*m (kgf*cm, ft.*lbf): Specified torque	•	Non-reusable part

ILLUSTRATION



*A	for LH Side	*B	for RH Side
*1	COWL VENT COVER LH	*2	COWL VENT COVER RH
*3	FRONT FENDER TO COWL SIDE SEAL	-	-

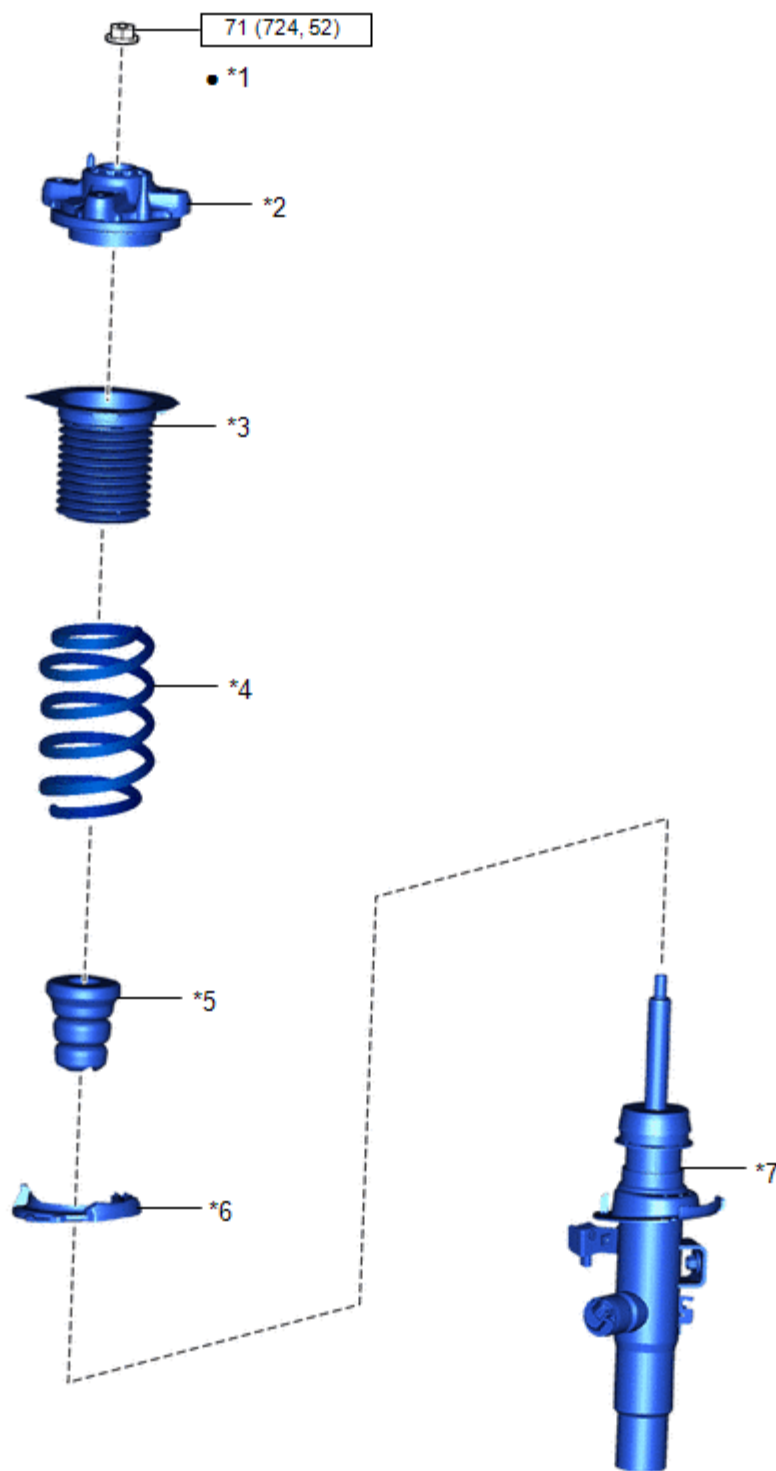
ILLUSTRATION



*1	FRONT SHOCK ABSORBER WITH COIL SPRING	*2	FRONT UPPER SUSPENSION ARM ASSEMBLY
*3	TIE ROD END SUB-ASSEMBLY	*4	FRONT LOWER SUSPENSION ARM ASSEMBLY
*5	HOLDER	*6	FRONT STABILIZER LINK ASSEMBLY

	N*m (kgf*cm, ft.*lbf): Specified torque	●	Non-reusable part
*T1	1st: 28 (286, 21) 2nd: Turn 90°	*T2	1st: 56 (571, 41) 2nd: Turn 90°

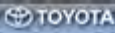
ILLUSTRATION



0

*1	FRONT SUPPORT TO FRONT SHOCK ABSORBER NUT	*2	FRONT SUSPENSION SUPPORT SUB- ASSEMBLY
*3	FRONT NO. 1 SHOCK ABSORBER DUST COVER	*4	FRONT COIL SPRING
			FRONT LOWER COIL SPRING

*5	FRONT SPRING BUMPER	*6	INSULATOR
*7	FRONT SHOCK ABSORBER ASSEMBLY	-	-
	N*m (kgf*cm, ft.*lbf): Specified torque	•	Non-reusable part



Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0E
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT SHOCK ABSORBER: REMOVAL; 2020 MY Supra [03/2019 -]		

REMOVAL

CAUTION / NOTICE / HINT

CAUTION:

- Vehicle may slip off the vehicle hoist if the vehicle hoist is handled incorrectly.

Danger! Life-threatening injuries!

- Observe safety information on raising the vehicle using a vehicle hoist.
- For additional information see:

Click here [INFO](#)

- Spring preload.

Danger of injury!

- The use of the specified special tool (tool) is mandatory.
- The described operation must be carried out properly.

HINT:

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

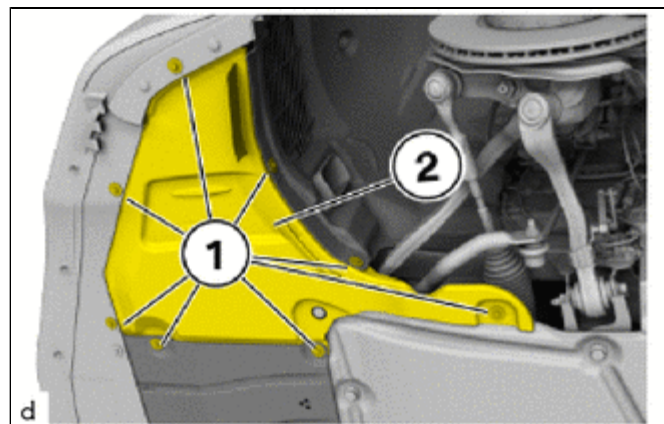
PROCEDURE

1. REMOVE FRONT WHEEL

Click here [INFO](#)

2. REMOVE FRONT FENDER SPLASH FRONT SHIELD

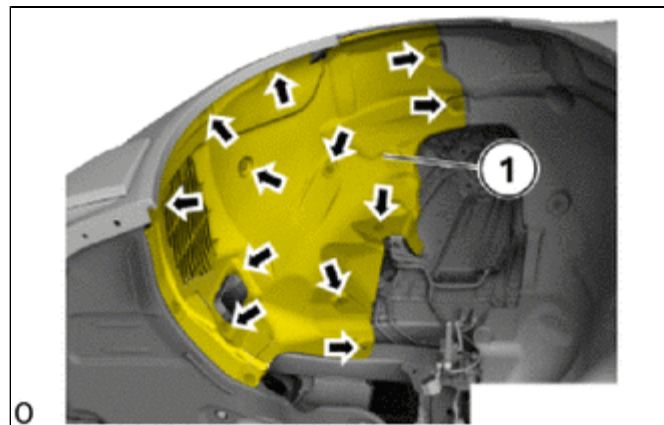
(a) Loosen screws (1).



(b) Feed out the front fender splash front shield (2) to the side.

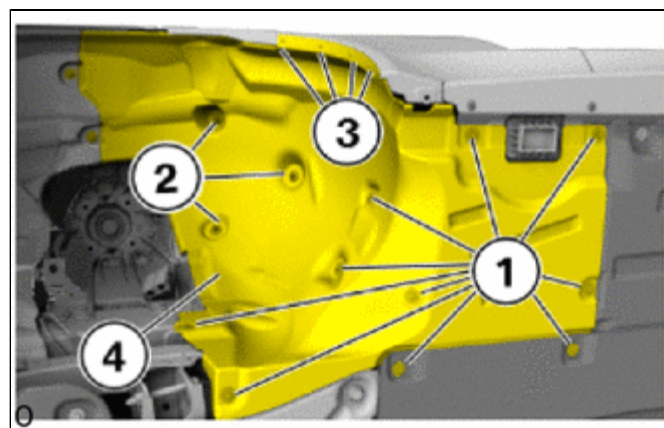
3. REMOVE FRONT FENDER LINER

(a) Unscrew the screws (arrows) and remove the front fender liner (1).



4. REMOVE FRONT NO. 2 FENDER LINER

(a) Loosen screws (1).

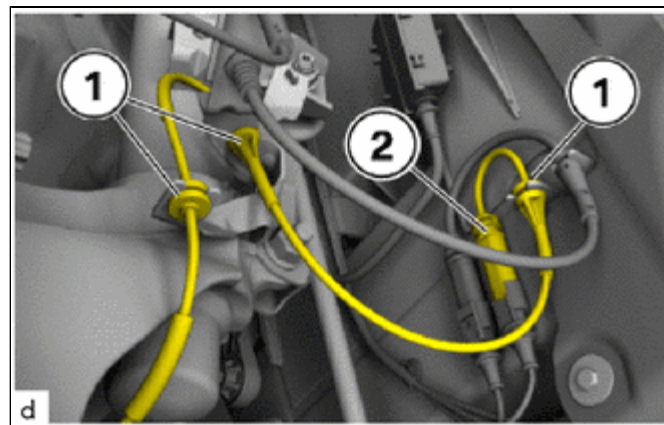


(b) Loosen nuts (2).

(c) Release the plastic rivet (3) and remove the front No. 2 fender liner (4).

5. SEPARATE FRONT SKID CONTROL SENSOR WIRE

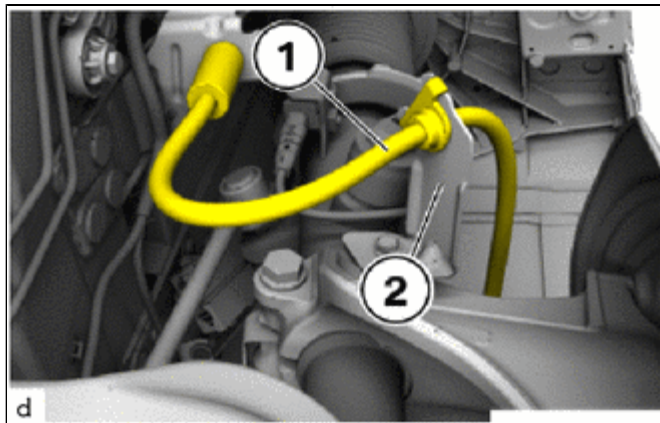
(a) Detach the front skid control sensor wire from the brackets (1).



(b) Unlock the plug connection (2) and disconnect.

6. SEPARATE FRONT FLEXIBLE HOSE

(a) Release the front flexible hose (1) from the bracket (2).

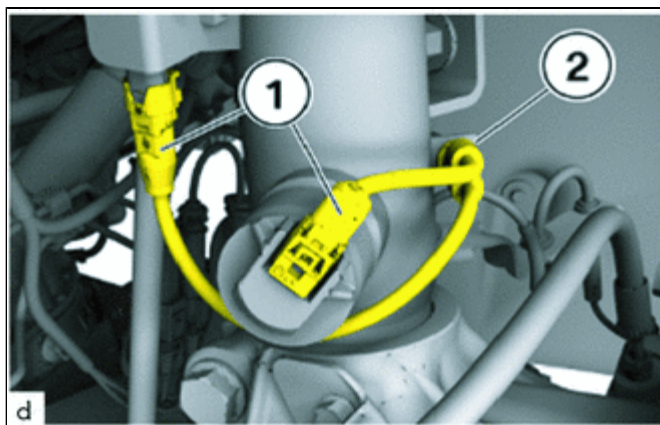


7. REMOVE FRONT BRAKE DISC

Click here [INFO](#)

8. DISCONNECT SENSOR WIRE (w/ AVS)

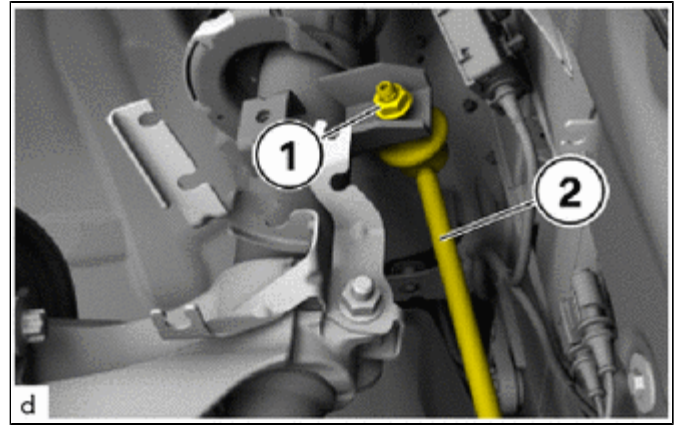
(a) Unlock and disconnect the plug connections (1).



(b) Detach the sensor wire from the holder (2).

9. SEPARATE FRONT STABILIZER LINK ASSEMBLY

(a) Loosen the 16 mm nut (1), if necessary, counter-hold the T30 "TORX" socket wrench.



(b) Release the front stabilizer link assembly (2) from the front shock absorber assembly.

10. DISCONNECT TIE ROD END SUB-ASSEMBLY

Click here [INFO](#)

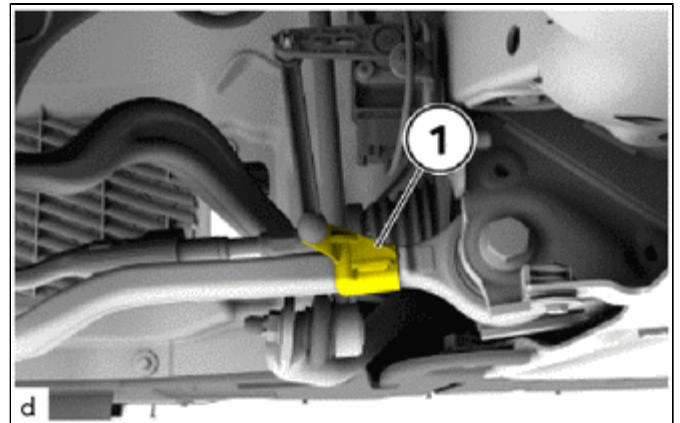
11. SEPARATE FRONT LOWER SUSPENSION ARM ASSEMBLY

NOTICE:

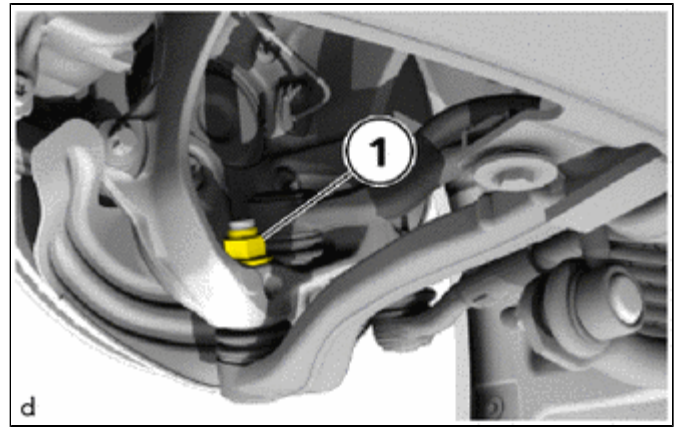
- Component damage caused by striking tools.
 - Brute force can result in component damage.
 - Only use those tools intended for the work.

(a) for LH Side:

- (1) Release the front height control sensor link sub-assembly (1) from the front lower suspension arm assembly.



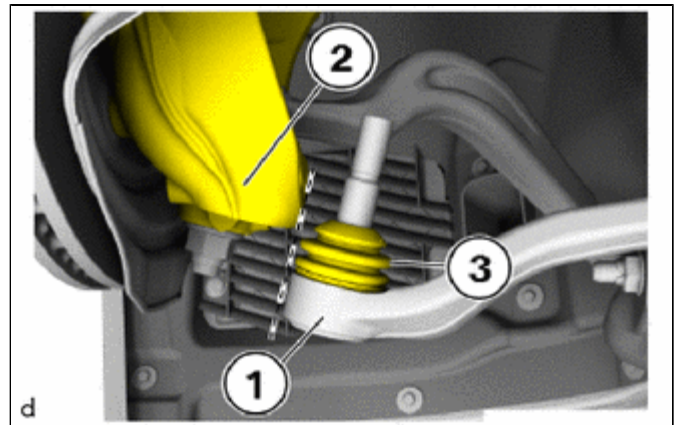
- (b) Loosen the nut (1), if necessary, counter-hold the T40 "TORX" socket wrench.



(c) Make sure that the front lower suspension arm assembly (1) is not in contact with the steering knuckle (2).

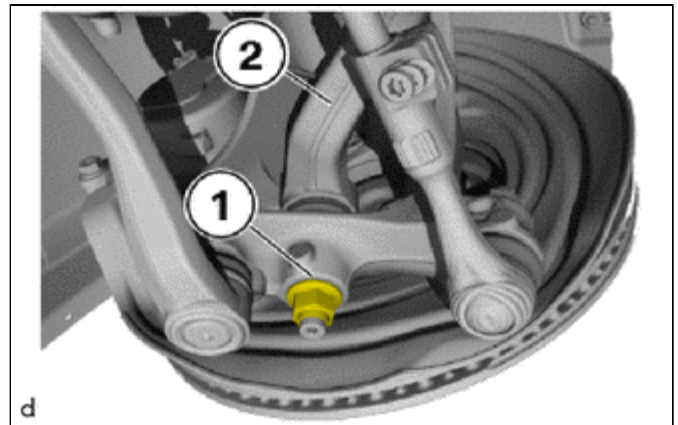
NOTICE:

- Otherwise, the rubber grommet (3) can be damaged. The components must not be touching.
- The rubber grommet (3) may be damaged by the steering knuckle (2).



12. SEPARATE FRONT UPPER SUSPENSION ARM ASSEMBLY

(a) Loosen the nut (1), if necessary, counter-hold the T40 "TORX" socket wrench.



(b) Release the front upper suspension arm assembly (2) from the steering knuckle.

13. REMOVE COWL VENT COVER LH (for LH Side)

Click here [INFO](#)

14. REMOVE COWL VENT COVER RH (for RH Side)

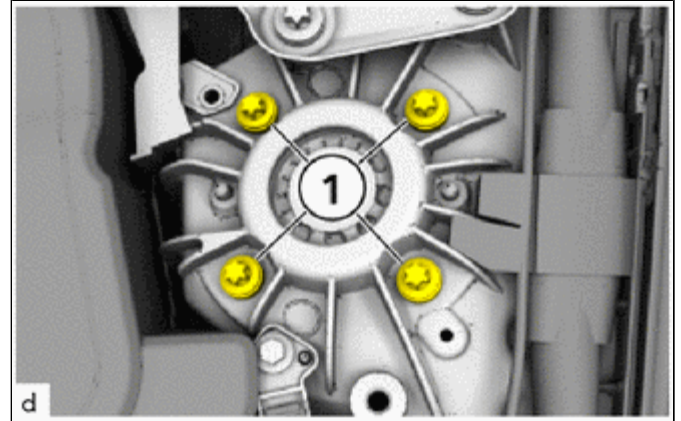
Click here [INFO](#)

15. REMOVE FRONT FENDER TO COWL SIDE SEAL

Click here [INFO](#)

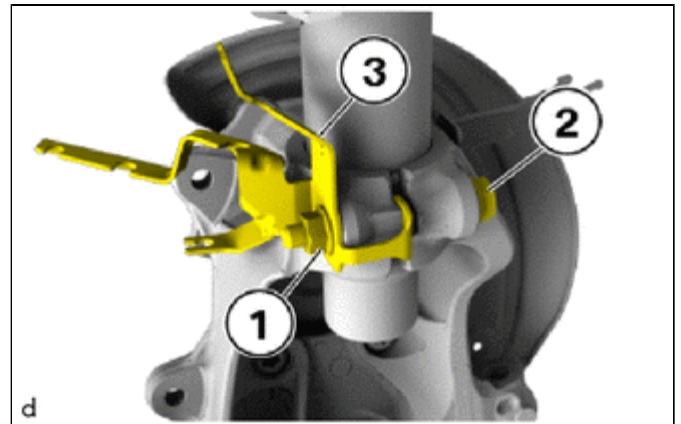
16. REMOVE FRONT SHOCK ABSORBER WITH COIL SPRING

(a) Loosen the bolts (1).



(b) Remove the front shock absorber with coil spring towards the bottom.

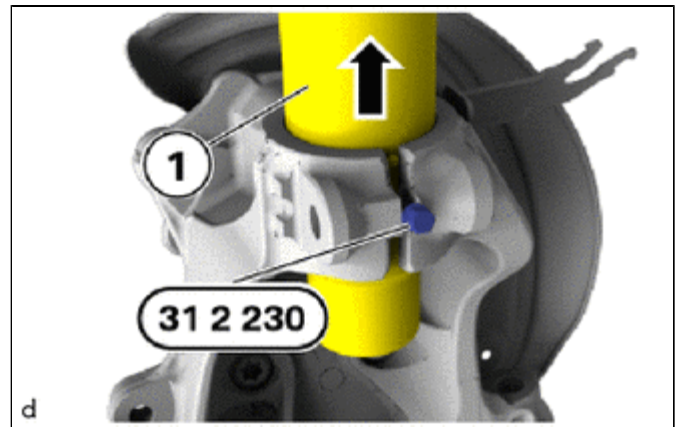
(c) Release the 16 mm nut (1) and 18 mm bolt (2).



(d) Remove the holder (3).

(e) Spread the steering knuckle with the special tool 0 494 541 (31 2 230).

SST: 09600-WA030



(f) Pull the front shock absorber with coil spring (1) from the steering knuckle in the direction of the arrow.

17. REMOVE FRONT COIL SPRING

NOTICE:

- Damage of the front coil spring.

Any use of faulty protections leads to front coil spring damage. Faulty protections may lead to a cracked front coil spring (corrosion).

- Check the protection for wear or damage and if necessary, replace the protections.

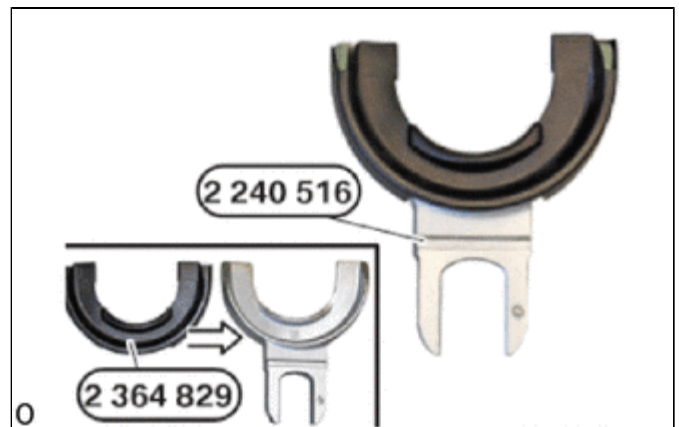
(a) Mount special tool 2 364 829 on special tool 2 240 516.

SST: 09700-WA230

SST: 09700-WA240

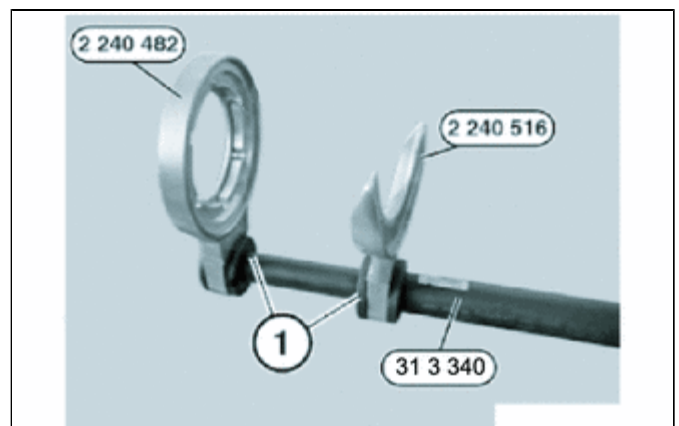
NOTICE:

The plate must be used with the protection.



(b) Clamp special tool 2 213 022 (31 3 340) into the vise.

SST: 09700-WA190



- (c) Position special tools 2 240 482 and 2 240 516 from above on special tool 2 213 022 (31 3 340) until the locking bolts (1) engage tactilely and audibly.

SST: 09700-WA200

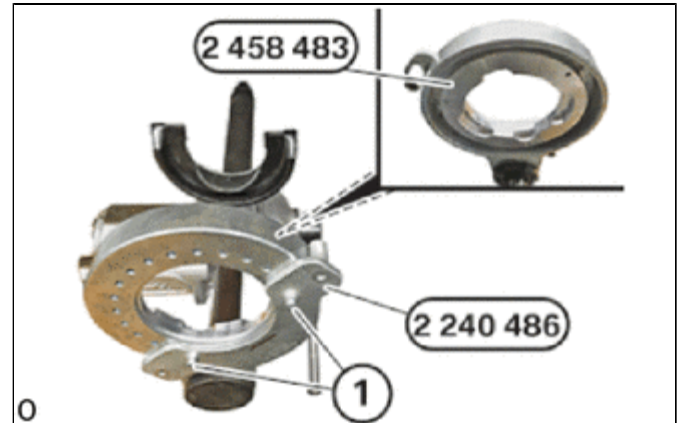
SST: 09700-WA230

HINT:

Check positions of special tools 2 240 482 and 2 240 516, and correct if necessary.

- (d) Position centering mount 2 458 483 in the mounting plate.

SST: 09700-WA220



- (e) Position counter holder 2 240 486 on the mounting plate.

SST: 09700-WA200

HINT:

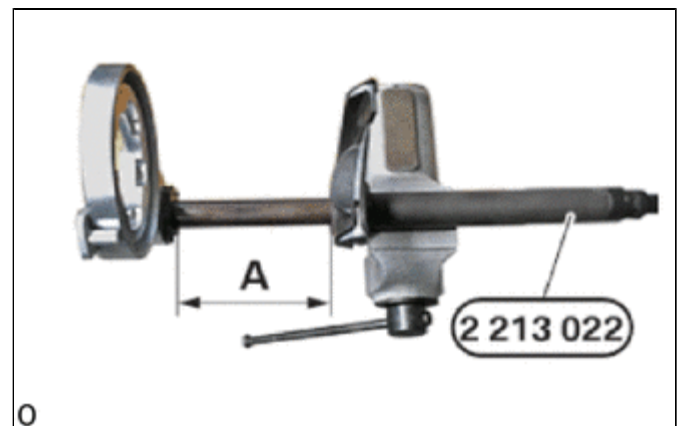
The parts will be screwed together via holes 4 and 16.

- (f) Turn centering mount 2 458 483 until the counter holder 2 240 486 can be attached by screws in the specified position.
- (g) Install and hand-tighten the screws (1) into the specified holes to attach counter holder 2 240 486 to the centering mount 2 458 483.

- (h) Set special tool 2 213 022 (31 3 340) to dimension (A).

Dimension (A):

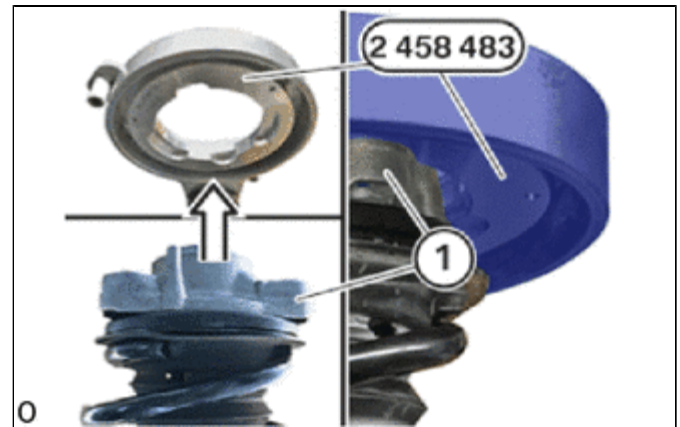
220 mm (8.66 in.)



- (i) Clean away any dirt or foreign matter from the front coil spring.

- (j) Insert front shock absorber with coil spring into spring tensioner and position front suspension support sub-assembly (1) on centering mount 2 458 483.

SST: 09700-WA220



- (k) The front suspension support sub-assembly (1) must rest completely on the centering mount 2 458 483, if necessary, tighten the spring tensioner by hand.

NOTICE:

The lower turn of the front coil spring must lie completely in the recess of the special tool 2 240 516.

- (l) The plate 2 240 487 must be used with the protection 2 412 607.

SST: 09700-WA200

SST: 09700-WA210

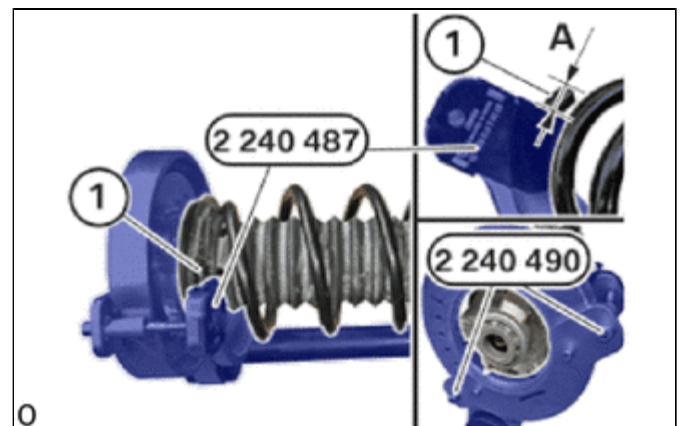


- (m) Position the plate 2 240 487 with the screws 2 240 490.

SST: 09700-WA200

NOTICE:

The rubberized side of the plate 2 240 487 must rest against the upper turn of the front coil spring.



- (n) Position the front shock absorber with coil spring so that the front coil spring end (1) protrudes with dimension (A) on the plate 2 240 487.

Dimension (A):

5.0 mm (0.197 in.)

(o) Tighten screws 2 240 490 evenly.

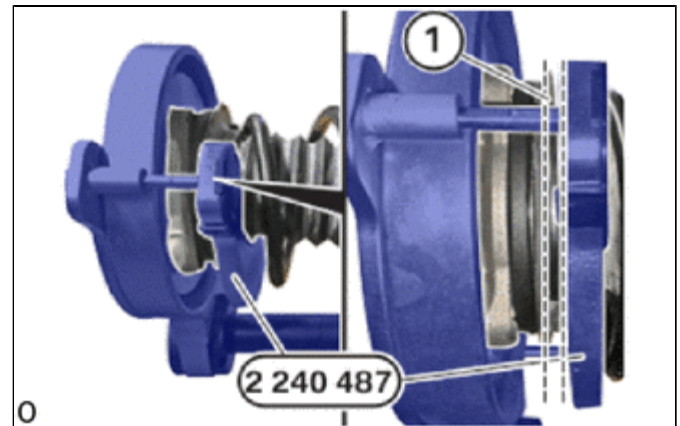
Torque:

8.0 N·m { 82 kgf·cm, 71 in·lbf }

(p) plate 2 240 487 must rest parallel to (1) the upper turn of the front coil spring.

NOTICE:

- The clamping process must be stopped immediately if the front coil spring end begins to rotate relative to the plate 2 240 487.
- The correct seating of the plate 2 240 487 must be checked and the rubberized protection and the plate 2 240 487 checked for wear.



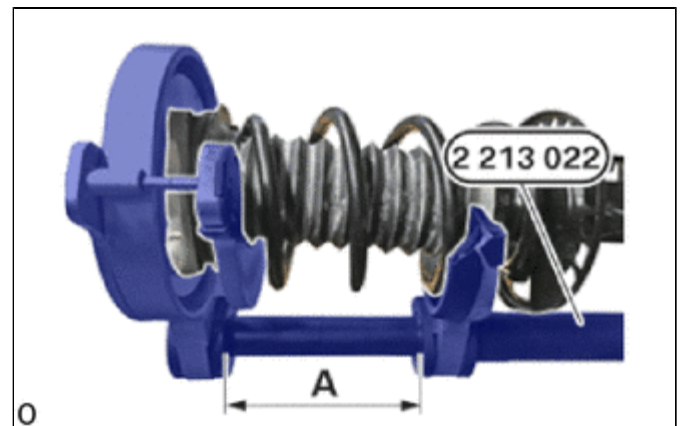
(q) Apply tension to the front coil spring until dimension (A) on special tool 2 213 022 (31 3 340) is reached.

Dimension (A):

120 mm (4.72 in.)

NOTICE:

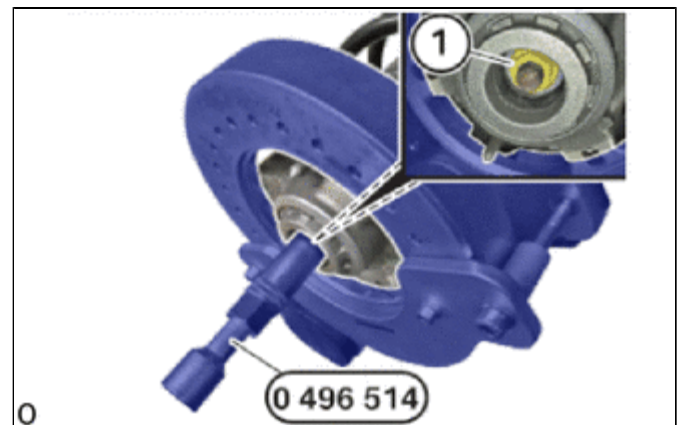
It is imperative to ensure that dimension (A) is not undershot.



(r) Release the front support to front shock absorber nut (1) with special tool 0 496 514 (33 0 040).

NOTICE:

Do not operate special tool with an impact wrench.



(s) Feed front shock absorber with front lower coil spring insulator and front spring bumper out of the tensioned front coil spring and remove.

(t) Relieve tension on front coil spring.

NOTICE:

Do not operate special tool with an impact wrench.

(u) Release spring tensioner.

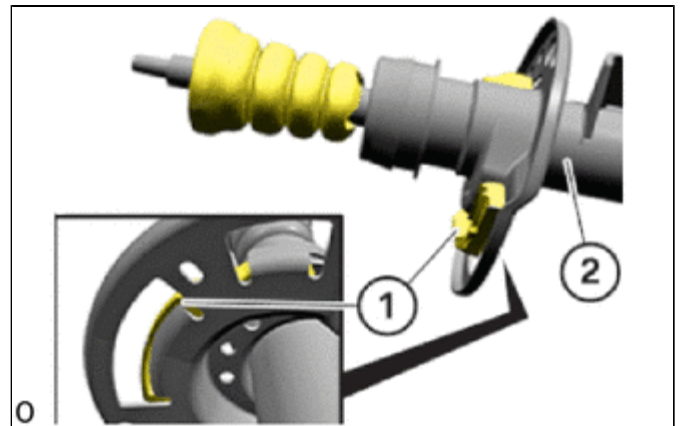
18. REMOVE FRONT SPRING BUMPER

(a) Remove the front spring bumper (1).



19. REMOVE FRONT LOWER COIL SPRING INSULATOR

(a) Remove front lower coil spring insulator (1) from the front shock absorber assembly (2).



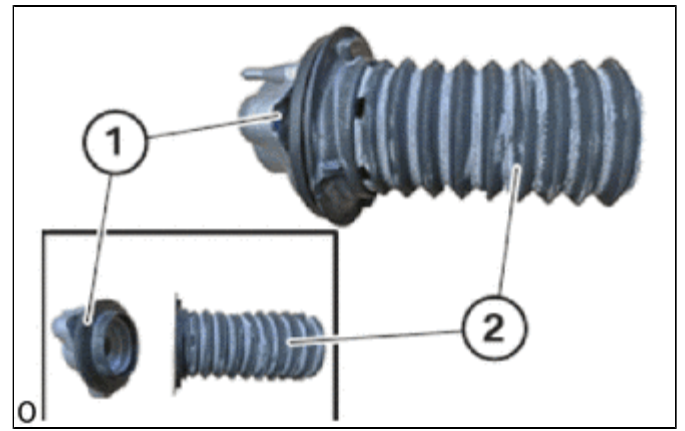
20. REMOVE FRONT SUSPENSION SUPPORT SUB-ASSEMBLY

HINT:

Perform this procedure only when replacement of the front suspension support sub-assembly and front No. 1 shock absorber dust cover is necessary.

(a) Pull down and remove front suspension support sub-assembly (1) from the front No. 1 shock absorber dust

cover (2).



TOYOTA

Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0F
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT SHOCK ABSORBER: INSTALLATION; 2020 MY Supra [03/2019 -]		

INSTALLATION

CAUTION / NOTICE / HINT

HINT:

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

PROCEDURE

1. INSTALL FRONT SUSPENSION SUPPORT SUB-ASSEMBLY

HINT:

Perform this procedure only when replacement of the front suspension support sub-assembly and front No. 1 shock absorber dust cover is necessary.

- Check front No. 1 shock absorber dust cover and replace if necessary.
- Slide front No. 1 shock absorber dust cover onto the front suspension support sub-assembly.

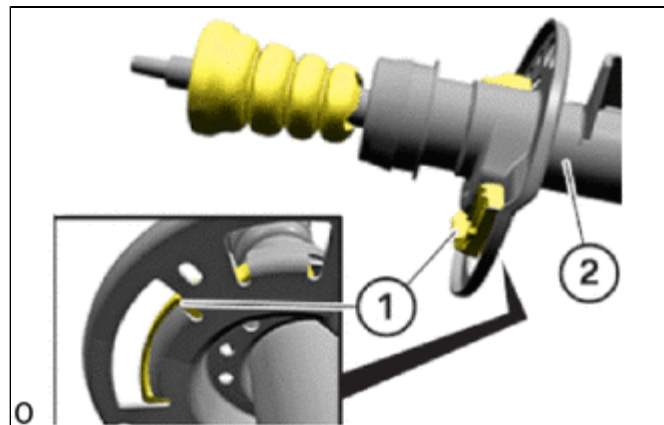
2. INSTALL FRONT LOWER COIL SPRING INSULATOR

- Check front lower coil spring insulator and replace if necessary.

- Mount front lower coil spring insulator (1) on the front shock absorber assembly (2).

HINT:

Make sure the front lower coil spring insulator (1) is positioned correctly.



3. INSTALL FRONT SPRING BUMPER

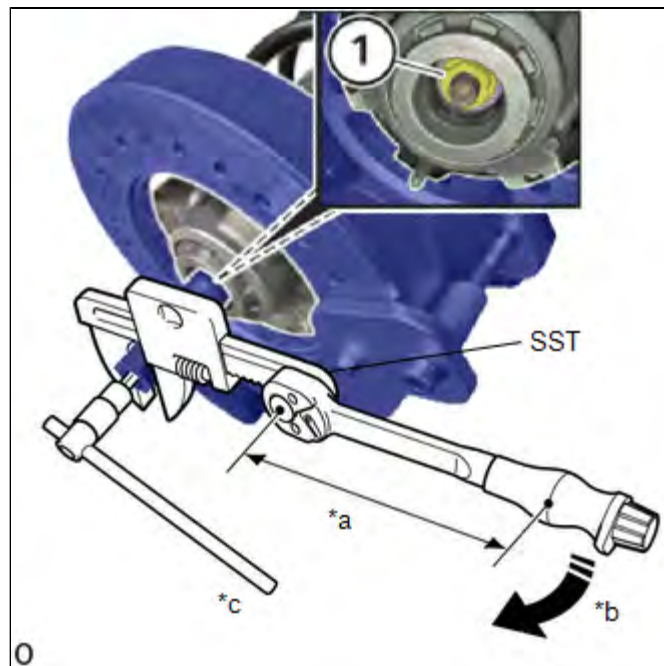
- Check front spring bumper and replace if necessary.
- Mount the front spring bumper on the front shock absorber assembly.

4. INSTALL FRONT COIL SPRING



Flattened end (1) of the front coil spring lies on the front suspension support sub-assembly.

A diagram of a shock absorber assembly. A blue shock absorber body is shown with a yellow label '1' pointing to it. The assembly includes a coil spring and a blue mounting bracket. The entire assembly is mounted on a blue frame, which is held in place by a black vise.



*a	Torque Wrench Fulcrum Length
*b	Turn

*c	Hold
----	------

(c) Using SST, tighten front support to front shock absorber nut (1).

SST: 09922-10010

Torque:

Specified tightening torque :

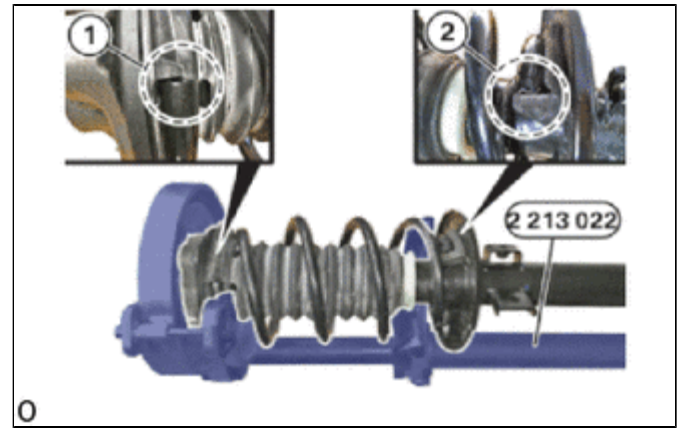
71 N·m {724 kgf·cm, 52 ft·lbf}

HINT:

- Calculate the torque wrench reading when changing the fulcrum length of the torque wrench.

[Click here](#) **INFO**

(d) Upper front coil spring end (1) abuts against the front upper coil spring insulator.



(e) Align front shock absorber with front lower coil spring insulator to lower front coil spring end (2).

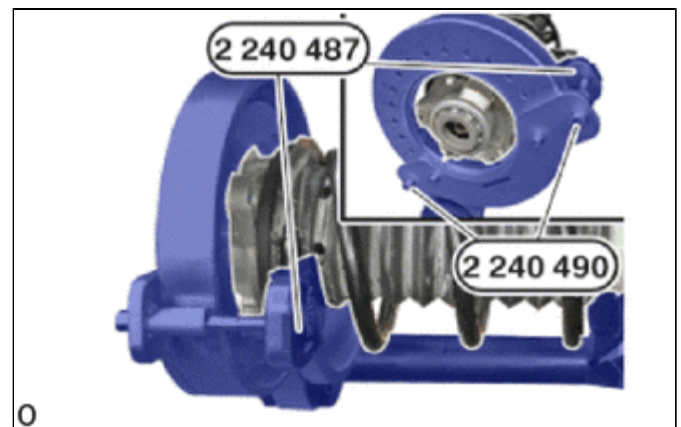
(f) Relax front coil spring tension with special tool 2 213 022 (31 3 340).

SST: 09700-WA190

(g) Check position of lower front coil spring end (2), and correct if necessary.

(h) Loosen the screws 2 240 490.

SST: 09700-WA200



(i) Remove the plate 2 240 487.

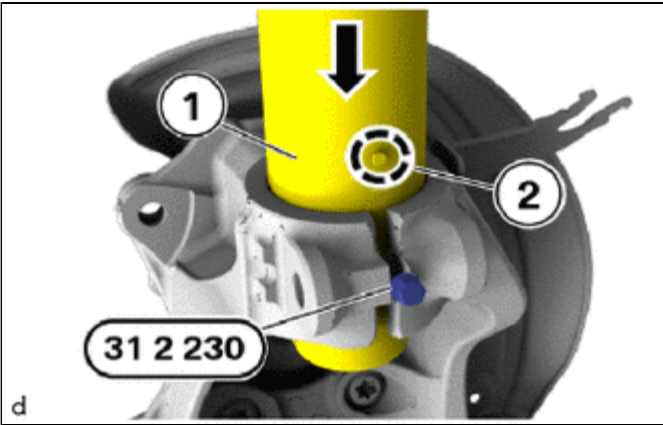
SST: 09700-WA200

(j) Remove the front shock absorber with coil spring from the spring tensioner.

5. INSTALL FRONT SHOCK ABSORBER WITH COIL SPRING

(a) Spread the steering knuckle with the special tool 0 494 541 (31 2 230).

SST: 09600-WA030



(b) Correctly align the positioning pin (2) on the front shock absorber with coil spring (1) with the steering knuckle and push it on up to the limit position in the direction of arrow.

(c) Position the holder on the steering knuckle.

(d) Replace the 18 mm bolt and 16 mm nut.

(e) Insert the 18 mm bolt and tighten the 16 mm nut.

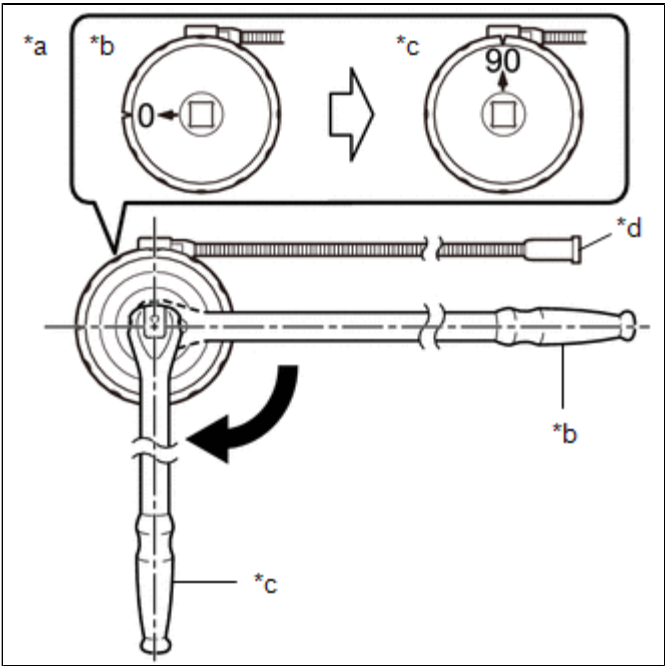
Torque:

56 N·m {571 kgf·cm, 41 ft·lbf}

(f) Using SST, tighten the 16 mm nut an additional 90°.

SST: 09900-WA010

HINT:

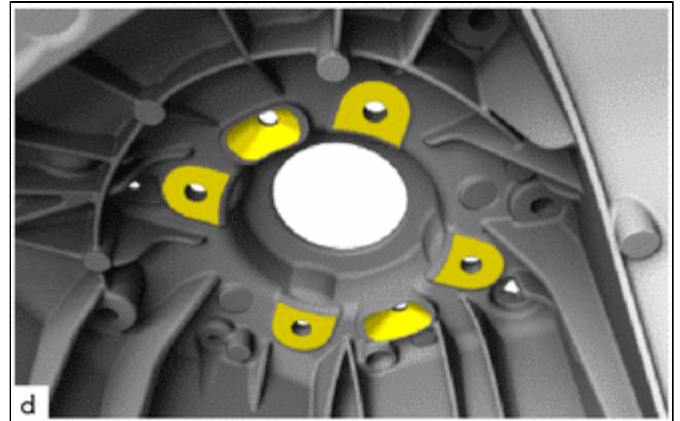


*a	Example
*b	Before Tightening

*c	After Tightening
*d	Magnetic Portion

- The magnetic portion is used to secure the gauge to the vehicle.
- After first adjusting the needle of the gauge to 0°, tighten to the specified angle.
- Perform the work procedure carefully so that the gauge, etc. does not become tilted.

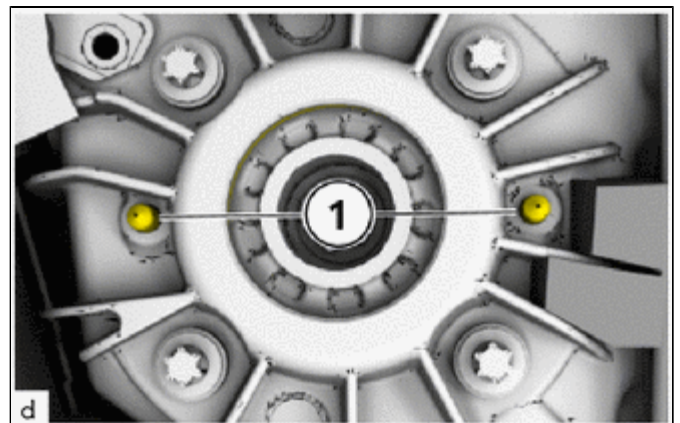
(g) Clean the inner contact surfaces on the front shock absorber dome.

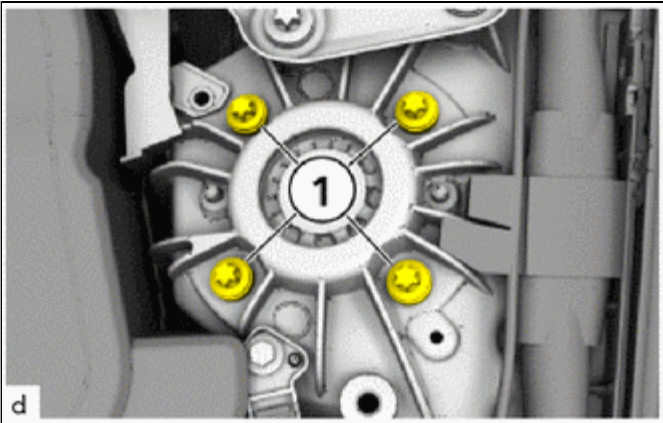


(h) Clean the inner contact surface on the front suspension support sub-assembly.



(i) Correctly align the front shock absorber with coil spring including steering knuckle with the bore holes on the front shock absorber dome using the centering pins (1) and insert towards the top.





(j) Replace the bolts (1).

(k) Tighten the bolts (1).

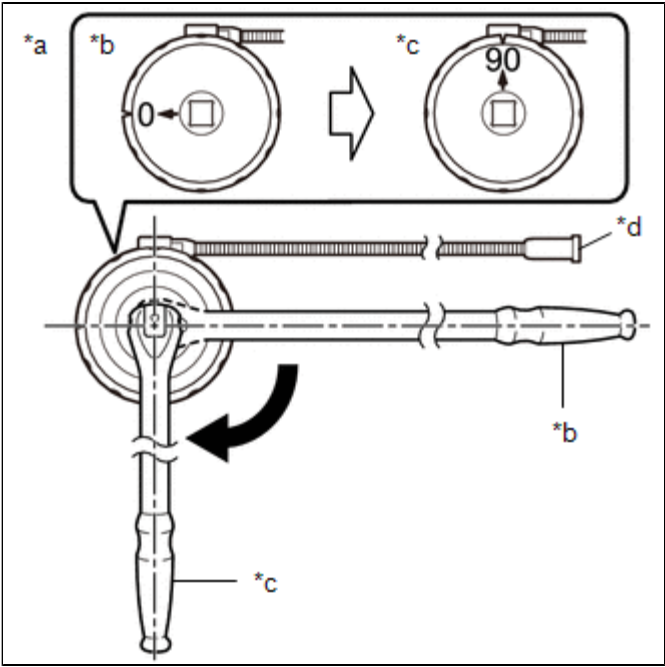
Torque:

28 N·m {286 kgf·cm, 21 ft·lbf}

(l) Using SST, tighten the bolts an additional 90°.

SST: 09900-WA010

HINT:



*a	Example
*b	Before Tightening
*c	After Tightening
*d	Magnetic Portion

- The magnetic portion is used to secure the gauge to the vehicle.
- After first adjusting the needle of the gauge to 0°, tighten to the specified angle.
- Perform the work procedure carefully so that the gauge, etc. does not become tilted.

6. INSTALL FRONT FENDER TO COWL SIDE SEAL

Click here [INFO](#)

7. INSTALL COWL VENT COVER LH (for LH Side)

Click here [INFO](#)

8. INSTALL COWL VENT COVER RH (for RH Side)

Click here [INFO](#)

9. INSTALL FRONT UPPER SUSPENSION ARM ASSEMBLY

- (a) Position the front upper suspension arm assembly to the steering knuckle.
- (b) Replace nut.
- (c) Tighten the nut, if necessary, counter support the T40 "TORX" socket wrench.

Torque:

175 N·m {1785 kgf·cm, 129 ft·lbf}

10. INSTALL FRONT LOWER SUSPENSION ARM ASSEMBLY

- (a) Replace nut.
- (b) Tighten the nut, if necessary, counter support the T40 "TORX" socket wrench.

Torque:

175 N·m {1785 kgf·cm, 129 ft·lbf}

- (c) for LH Side:

- (1) Clip in the front height control sensor link sub-assembly.

11. CONNECT TIE ROD END SUB-ASSEMBLY

Click here [INFO](#)

12. INSTALL FRONT STABILIZER LINK ASSEMBLY

- (a) Position the front stabilizer link assembly at the front shock absorber assembly.
- (b) Replace 16 mm nut.
- (c) Tighten the 16 mm nut, if necessary, counter support the T30 "TORX" socket wrench.

Torque:

56 N·m {571 kgf·cm, 41 ft·lbf}

13. INSTALL FRONT BRAKE DISC

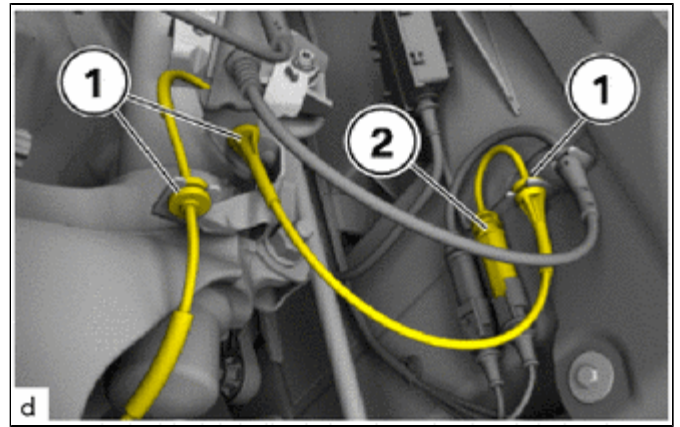
Click here [INFO](#)

14. INSTALL FRONT FLEXIBLE HOSE

- (a) Attach the front flexible hose to the holder.

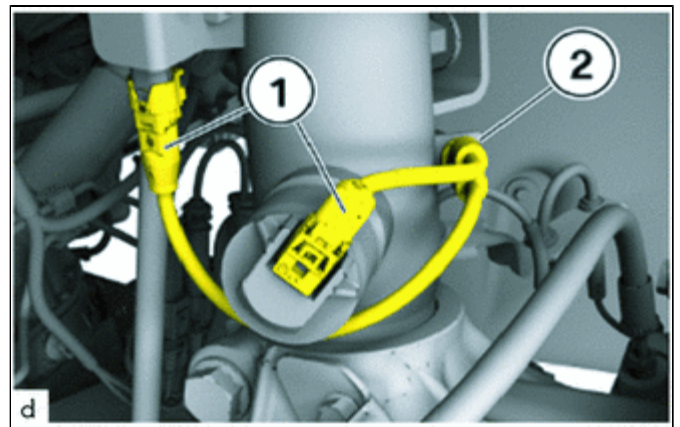
15. INSTALL FRONT SKID CONTROL SENSOR WIRE

- (a) Connect the front skid control sensor wire in the brackets
(1).



(b) Connect the connector (2) and lock.

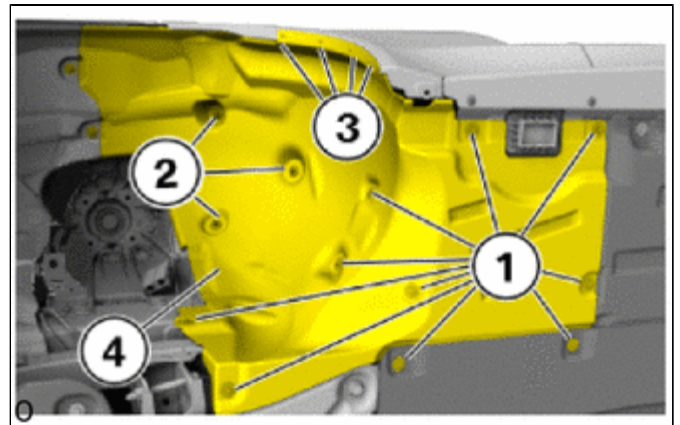
16. CONNECT SENSOR WIRE (w/ AVS)



(a) Attach the sensor wire in the holder (2).

(b) Connect the connectors (1) and lock.

17. INSTALL FRONT NO. 2 FENDER LINER



(a) Insert the front No. 2 fender liner (4).

(b) Tighten the screws (1) and nuts (2).

Torque:

Screw :

2.6 N·m { 27 kgf·cm, 23 in·lbf }

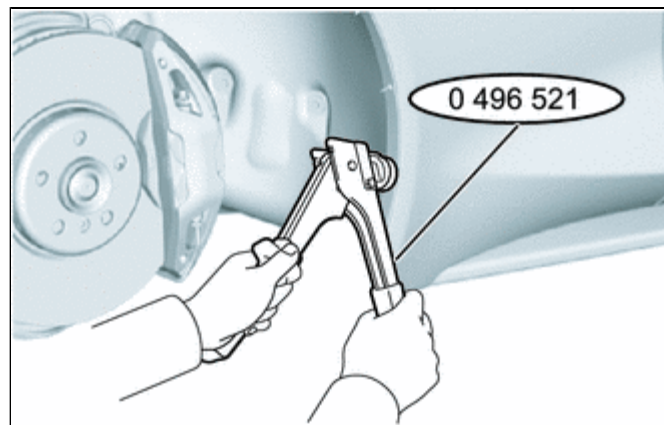
Nut :

2.6 N·m { 27 kgf·cm, 23 in·lbf }

(c) Replace the plastic rivet (3).

(d) Set the plastic rivet with the special tool 0 496 521 (00 2 230).

SST: 09900-WA100

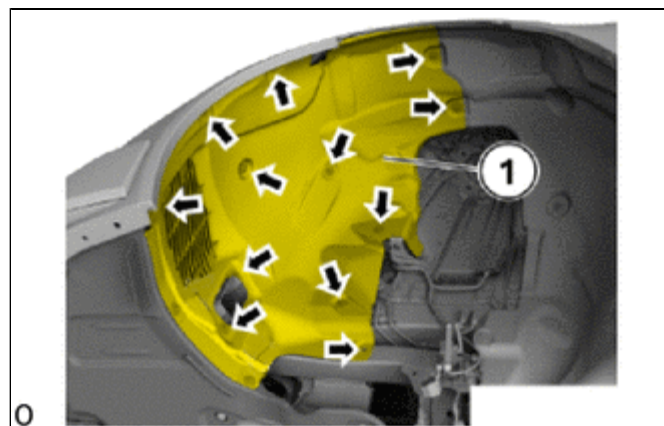


18. INSTALL FRONT FENDER LINER

(a) Position the front fender liner (1) and tighten the screws (arrows).

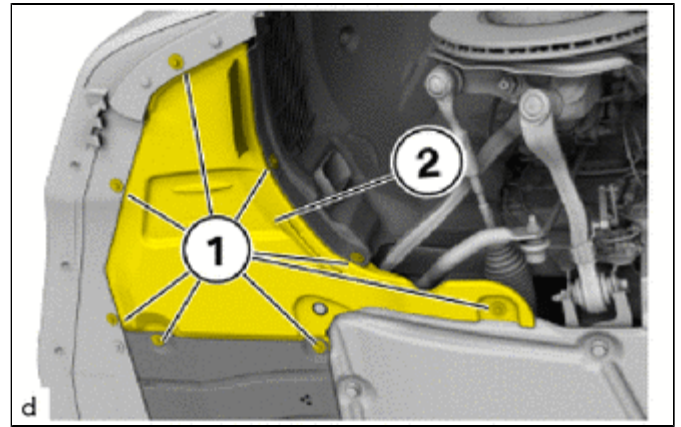
Torque:

2.6 N·m { 27 kgf·cm, 23 in·lbf }



19. INSTALL FRONT FENDER SPLASH FRONT SHIELD

(a) Insert the front fender splash front shield (2) at the side.



(b) Tighten the screws (1).

Torque:

2.6 N·m { 27 kgf·cm, 23 in·lbf }

20. INSTALL FRONT WHEEL

Click here [INFO](#)

21. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT

Click here [INFO](#)

Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0G
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT SHOCK ABSORBER: DISPOSAL; 2020 MY Supra [03/2019 -]		

DISPOSAL

CAUTION / NOTICE / HINT

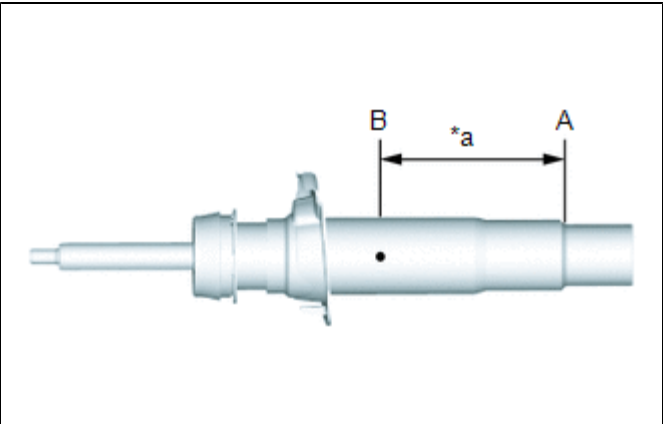
HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

PROCEDURE

1. DISPOSE OF FRONT SHOCK ABSORBER ASSEMBLY

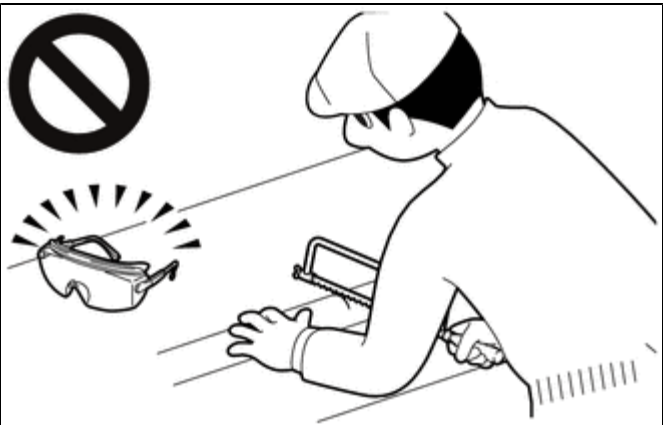
- (a) Fully extend the front shock absorber assembly.
- (b) Secure the front shock absorber assembly horizontally in a vise with the piston rod pulled out.
- (c) Wearing protective glasses, extend the piston rod and cover it with a cloth. At position B, located 140 mm (5.51 in.) from position A shown in the illustration, use a metal saw to cut a hole and release the gas.



*a	140 mm (5.51 in.)
----	-------------------

CAUTION:

Always use proper safety equipment and be careful when drilling because shards of metal way fly about.



HINT:

The gas is colorless, odorless and non-poisonous.



	N*m (kgf*cm, ft.*lbf): Specified torque	•	Non-reusable part
---	---	--	-------------------

Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC00
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT STABILIZER BAR: REMOVAL; 2020 MY Supra [03/2019 -]		

REMOVAL

CAUTION / NOTICE / HINT

CAUTION:

- Vehicle may slip off the vehicle hoist if the vehicle hoist is handled incorrectly.

Danger! Life-threatening injuries!

- Observe safety information on raising the vehicle using a vehicle hoist.
- For additional information see:

Click here [INFO](#)

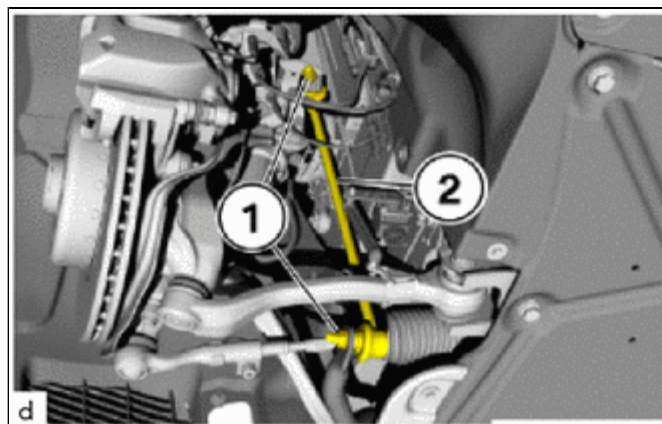
PROCEDURE

1. REMOVE FRONT SUSPENSION MEMBER LOWER PROTECTOR

Click here [INFO](#)

2. REMOVE FRONT STABILIZER LINK ASSEMBLY LH

- (a) Unscrew the 16 mm nuts (1) and use the T30 "TORX" socket wrench for counter support as needed.



- (b) Remove the front stabilizer link assembly LH (2).

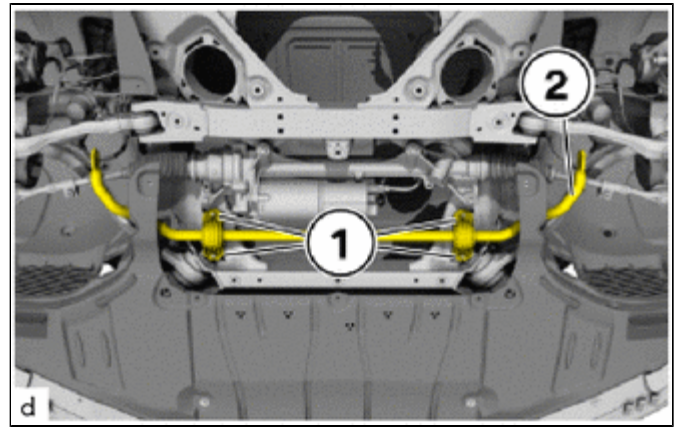
3. REMOVE FRONT STABILIZER LINK ASSEMBLY RH

HINT:

Use the same procedure as for the LH side.

4. REMOVE FRONT STABILIZER BAR

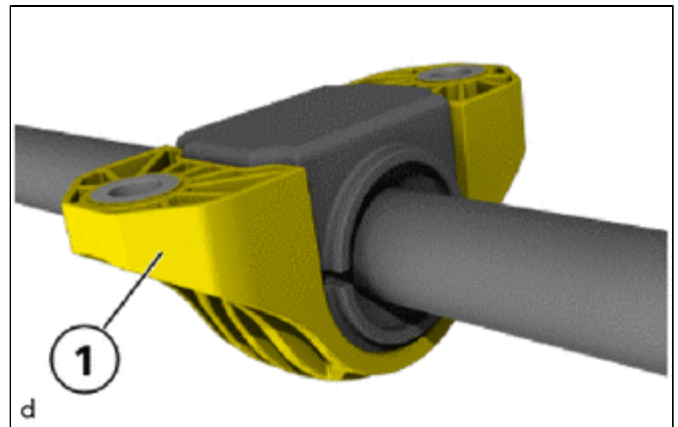
(a) Loosen nuts (1).



(b) Guide out and remove the front stabilizer bar (2).

5. REMOVE FRONT NO. 1 STABILIZER BRACKET LH

(a) Remove the front No. 1 stabilizer bracket LH (1).



6. REMOVE FRONT NO. 1 STABILIZER BRACKET RH

HINT:

Use the same procedure as for the LH side.

Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0P
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT STABILIZER BAR: INSTALLATION; 2020 MY Supra [03/2019 -]		

INSTALLATION

PROCEDURE

1. INSTALL FRONT NO. 1 STABILIZER BRACKET LH

- (a) Mount the front No. 1 stabilizer bracket LH on the front stabilizer bar.

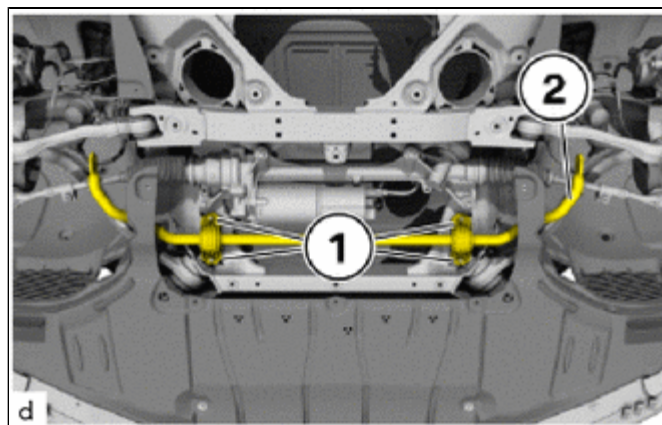
2. INSTALL FRONT NO. 1 STABILIZER BRACKET RH

HINT:

Use the same procedure as for the LH side.

3. INSTALL FRONT STABILIZER BAR

- (a) Guide in the front stabilizer bar (2).



- (b) Replace nuts (1).

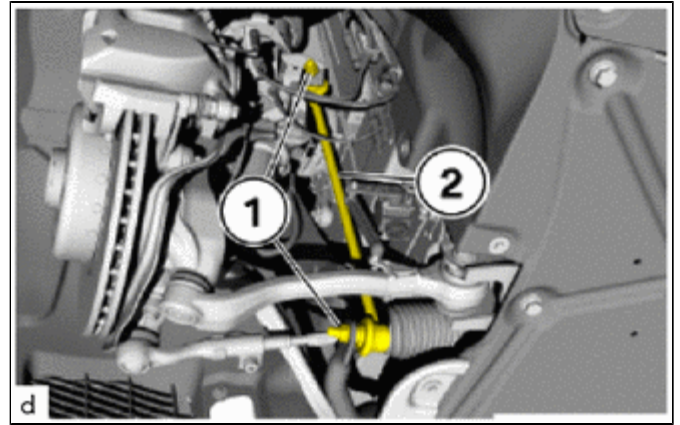
- (c) Tighten nuts (1).

Torque:

19 N·m {194 kgf·cm, 14 ft·lbf}

4. INSTALL FRONT STABILIZER LINK ASSEMBLY LH

- (a) Position the front stabilizer link assembly LH (2) on the front stabilizer bar and front shock absorber assembly.



(b) Replace the 16 mm nuts (1).

(c) Tighten the 16 mm nuts (1) and use the T30 "TORX" socket wrench for counter support as needed.

Torque:

56 N·m {571 kgf·cm, 41 ft·lbf}

5. INSTALL FRONT STABILIZER LINK ASSEMBLY RH

HINT:

Use the same procedure as for the LH side.

6. INSTALL FRONT SUSPENSION MEMBER LOWER PROTECTOR

Click here [INFO](#)

7. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT

Click here [INFO](#)

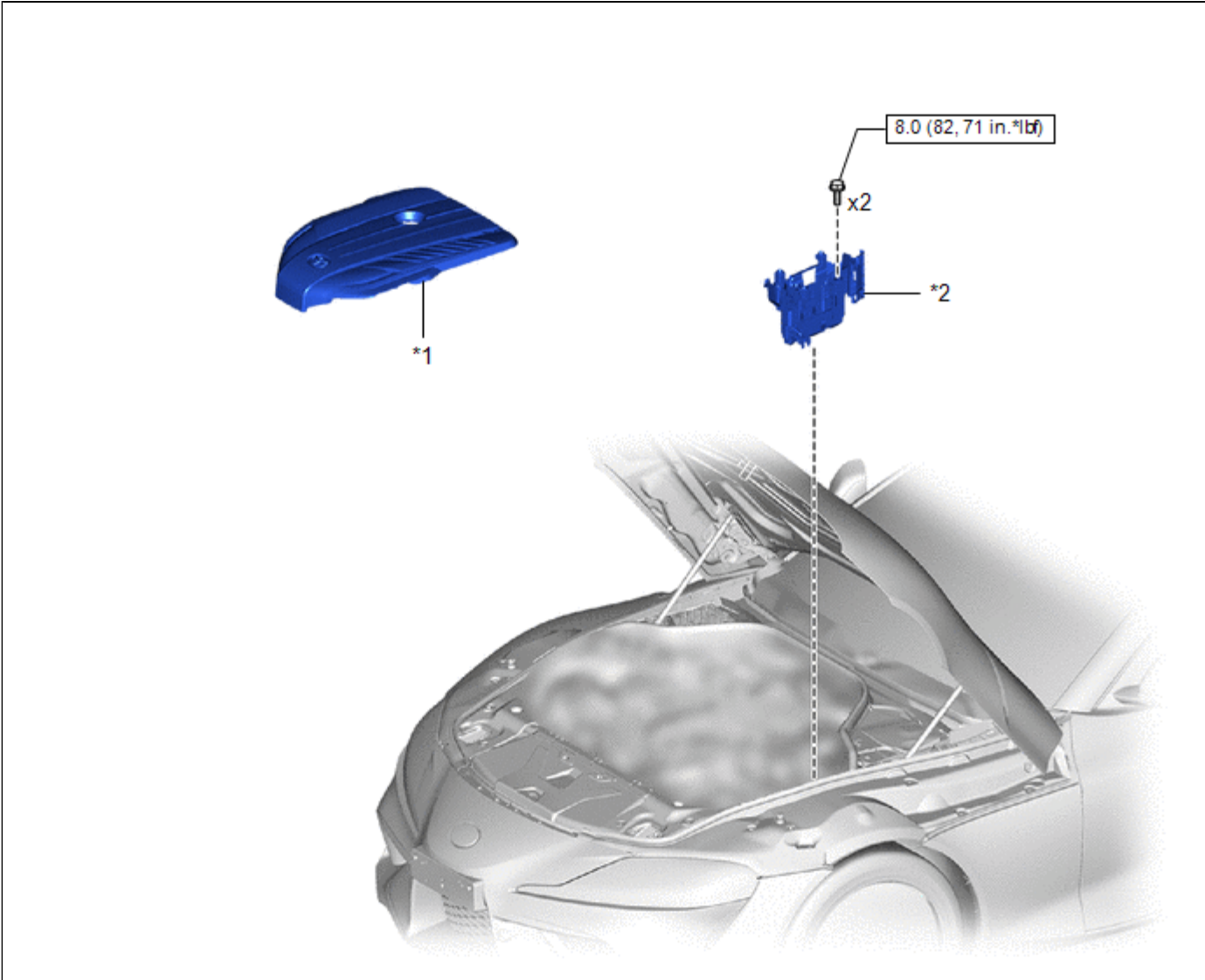


TOYOTA

Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0A
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT SUSPENSION MEMBER: COMPONENTS; 2020 MY Supra [03/2019 -]		

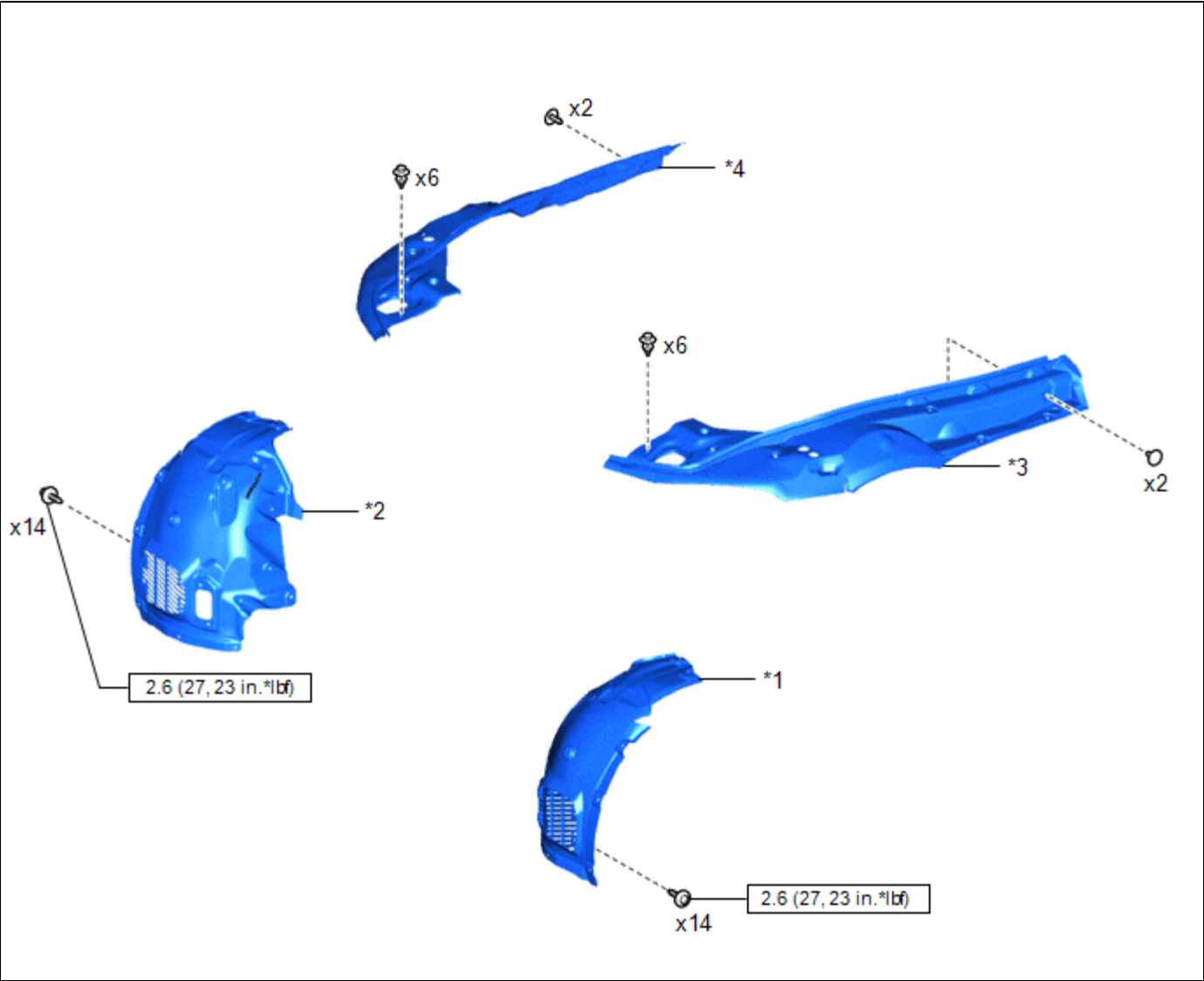
COMPONENTS

ILLUSTRATION



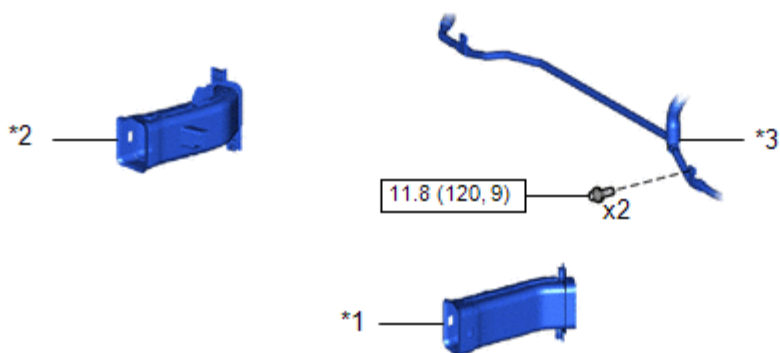
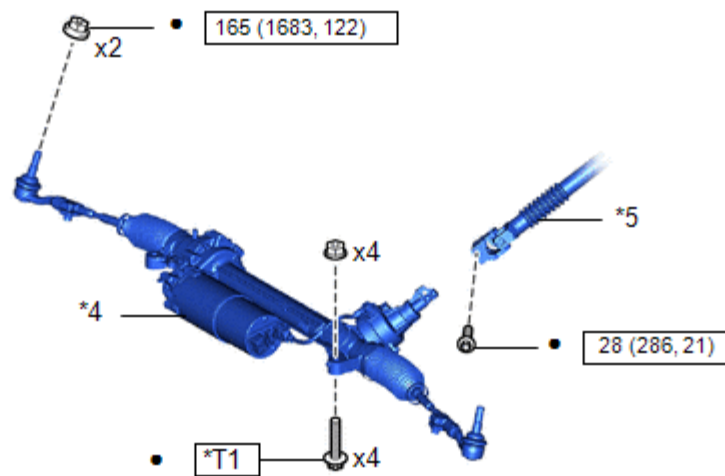
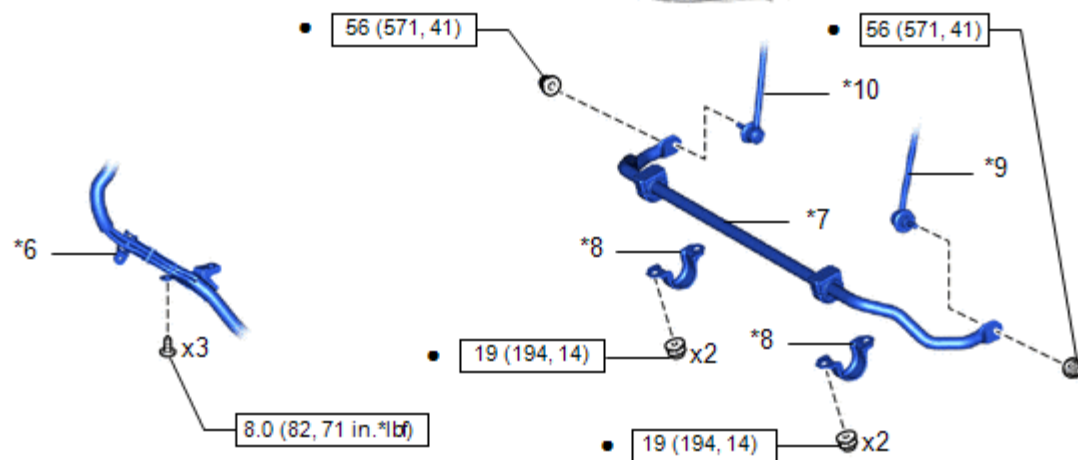
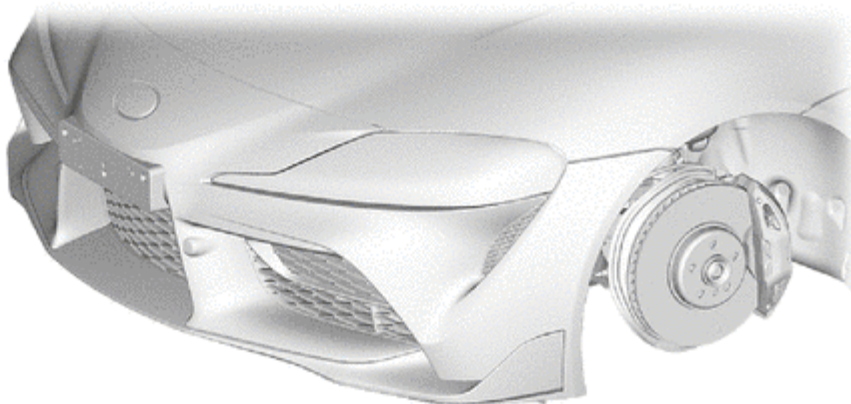
*1	NO. 1 ENGINE COVER SUB-ASSEMBLY	*2	ENGINE ROOM ECU BOX
----	---------------------------------	----	---------------------

ILLUSTRATION



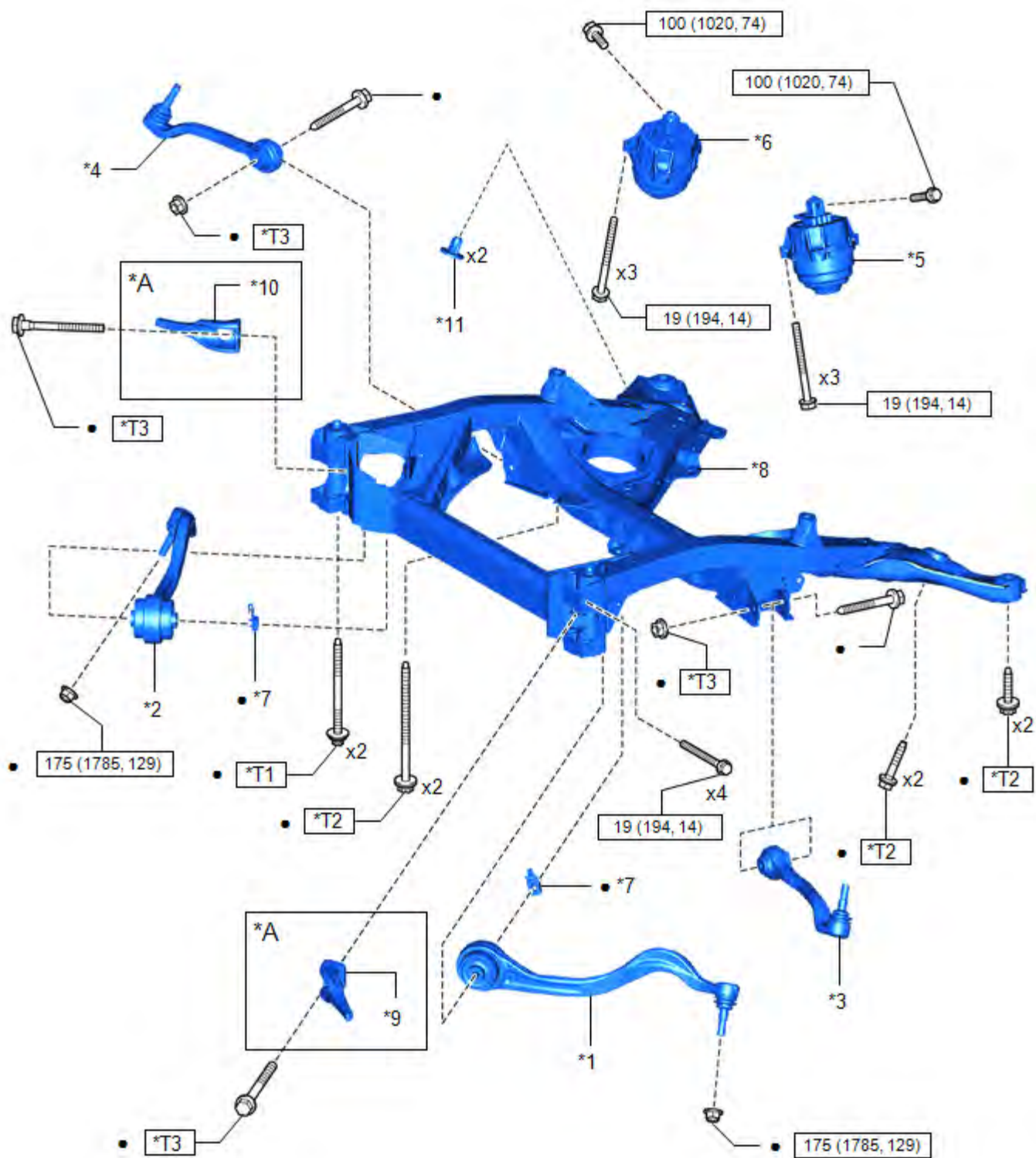
*1	FRONT FENDER LINER LH	*2	FRONT FENDER LINER RH
*3	FRONT FENDER UPPER PROTECTOR LH	*4	FRONT FENDER UPPER PROTECTOR RH
	N*m (kgf*cm, ft.*lbf): Specified torque	-	-

ILLUSTRATION



*1	AIR INTAKE DUCT LH	*2	AIR INTAKE DUCT RH
*3	COOLANT HOSE	*4	STEERING LINK ASSEMBLY
*5	STEERING INTERMEDIATE SHAFT ASSEMBLY	*6	WIRE HARNESS
*7	FRONT STABILIZER BAR	*8	FRONT NO. 1 STABILIZER BRACKET
*9	FRONT STABILIZER LINK ASSEMBLY LH	*10	FRONT STABILIZER LINK ASSEMBLY RH
	N*m (kgf*cm, ft.*lbf): Specified torque	•	Non-reusable part
*T1	1st: 100 (1020, 74) 2nd: Turn 90°	-	-

ILLUSTRATION



*A	w/ Front Suspension Member Bracket	-	-
*1	FRONT UPPER SUSPENSION ARM ASSEMBLY LH	*2	FRONT UPPER SUSPENSION ARM ASSEMBLY RH
*3	FRONT LOWER SUSPENSION ARM ASSEMBLY LH	*4	FRONT LOWER SUSPENSION ARM ASSEMBLY RH

*5	FRONT ENGINE MOUNTING INSULATOR LH	*6	FRONT ENGINE MOUNTING INSULATOR RH
*7	CLIP NUT	*8	FRONT SUSPENSION CROSSMEMBER SUB-ASSEMBLY
*9	FRONT SUSPENSION MEMBER BRACKET SUB-ASSEMBLY LH	*10	FRONT SUSPENSION MEMBER BRACKET SUB-ASSEMBLY RH
*11	CLIP	-	-
	N*m (kgf*cm, ft.*lbf): Specified torque	•	Non-reusable part
*T1	1st: 56 (571, 41) 2nd: Turn 45°	*T2	1st: 108 (1101, 80) 2nd: Turn 45°
*T3	1st: 100 (1020, 74) 2nd: Turn 90°	-	-



Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0B
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT SUSPENSION MEMBER: REMOVAL; 2020 MY Supra [03/2019 -]		

REMOVAL

CAUTION / NOTICE / HINT

CAUTION:

- Motor vehicle may slip off the vehicle hoist where components are supported.

Danger! Life-threatening injuries!

- Secure the vehicle hoist against lowering and lifting.

- Vehicle may slip off the vehicle hoist if the vehicle hoist is handled incorrectly.

Danger! Life-threatening injuries!

- Observe safety information on raising the vehicle using a vehicle hoist.
- For additional information see:

Click here [INFO](#)

- Motor vehicle may slip off the vehicle hoist if the weight is distributed unevenly.

Danger! Life-threatening injuries!

- Ensure there is a specific weight compensation on the motor vehicle.

PROCEDURE

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

Click here [INFO](#)

2. REMOVE AND INSTALL BONNET HOOD SUPPORT ASSEMBLY

Click here [INFO](#)

3. REMOVE NO. 1 ENGINE COVER SUB-ASSEMBLY

Click here [INFO](#)

4. REMOVE INTEGRATION RELAY (for Engine Room Side)

Click here [INFO](#)

5. REMOVE ENGINE ROOM ECU BOX

Click here [INFO](#)

6. REMOVE FRONT WHEEL

Click here [INFO](#)

7. REMOVE FRONT FENDER UPPER PROTECTOR LH

Click here [INFO](#)

8. REMOVE FRONT FENDER UPPER PROTECTOR RH

HINT:

Use the same procedure as for the LH side.

9. REMOVE FRONT SUSPENSION MEMBER LOWER PROTECTOR

Click here [INFO](#)

10. REMOVE FRONT FENDER LINER LH

Click here [INFO](#)

11. REMOVE FRONT FENDER LINER RH

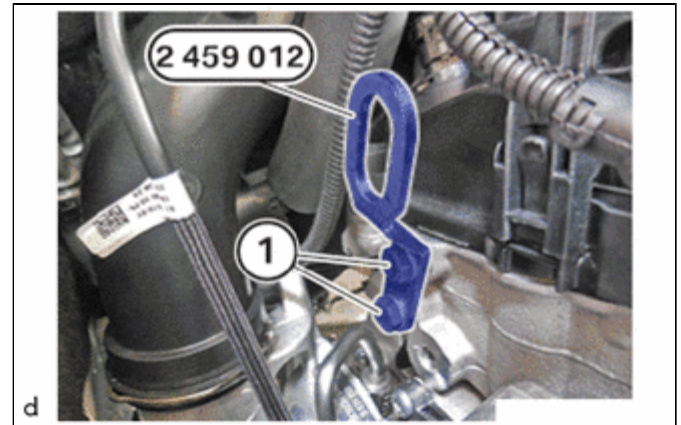
HINT:

Use the same procedure as for the LH side.

12. INSTALL ENGINE HANGER

- (a) Guide in and position special tool 2 459 012 on cylinder head sub-assembly.

SST: 09200-WA610



- (b) Tighten the bolts (1) of special tool 2 459 012.

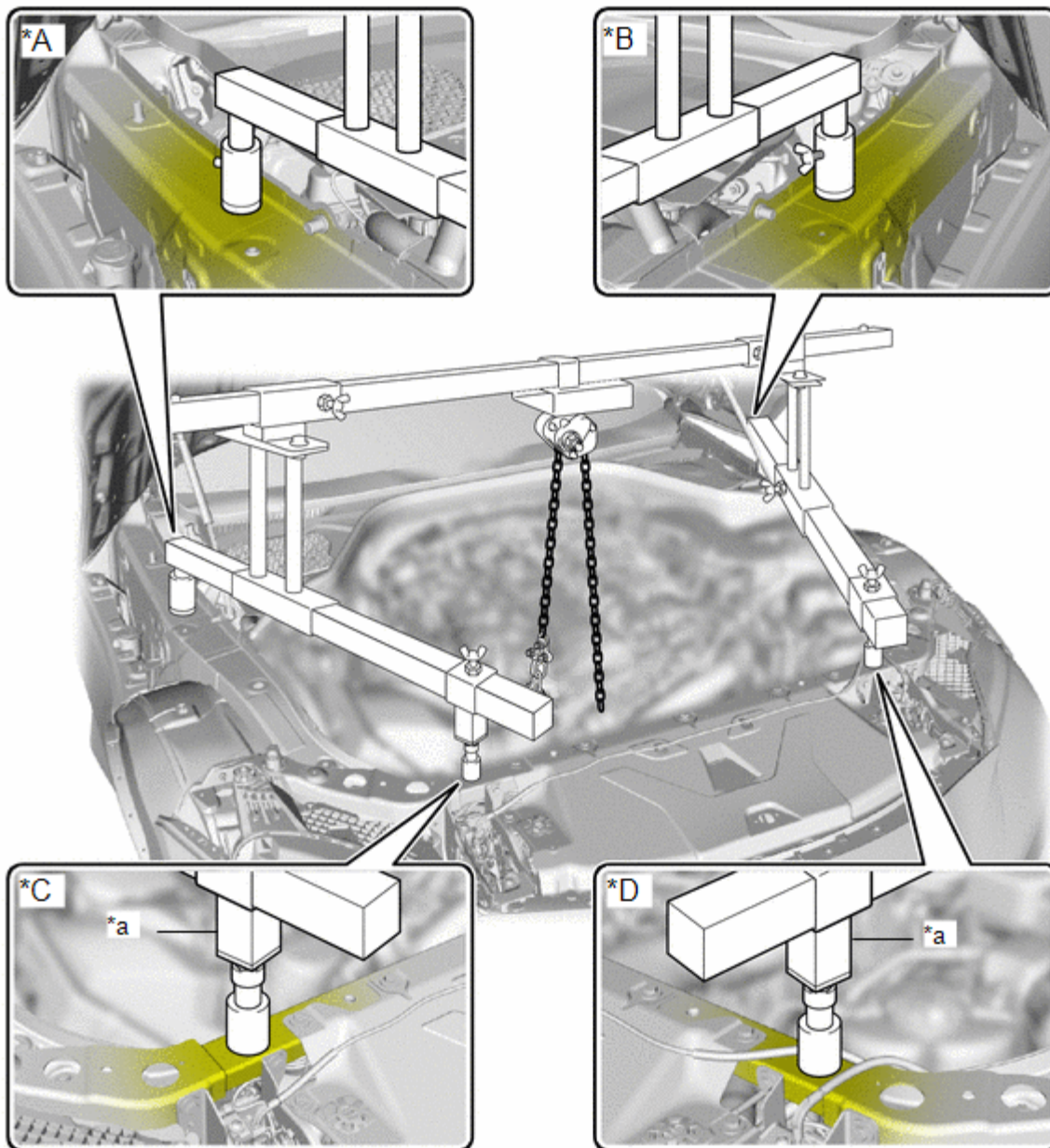
SST: 09200-WA610

Torque:

21.5 N·m {219 kgf·cm, 16 ft·lbf}

13. INSTALL ENGINE SUPPORT BRIDGE

- (a) Install SST to the vehicle body as shown in the illustration.

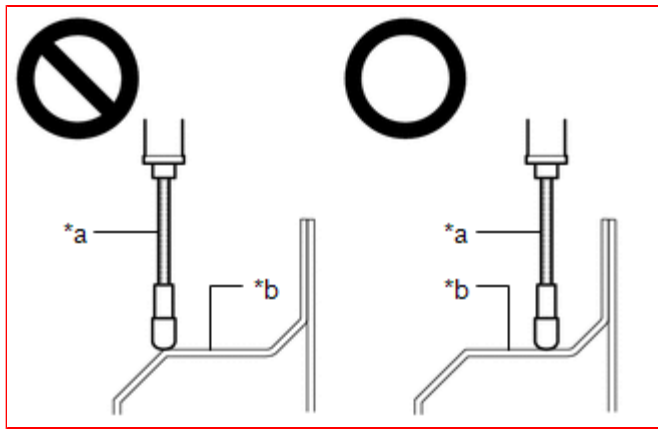


0

*A	Area A	*B	Area B
*C	Area C	*D	Area D
*a	Support Shaft	-	-

SST: 09940-10020
SST: 09940-10040
SST: 09940-10050
CAUTION:

- Make sure that no oil or grease is on the area A, B, C and D, and set the engine support bridge on the level surface of



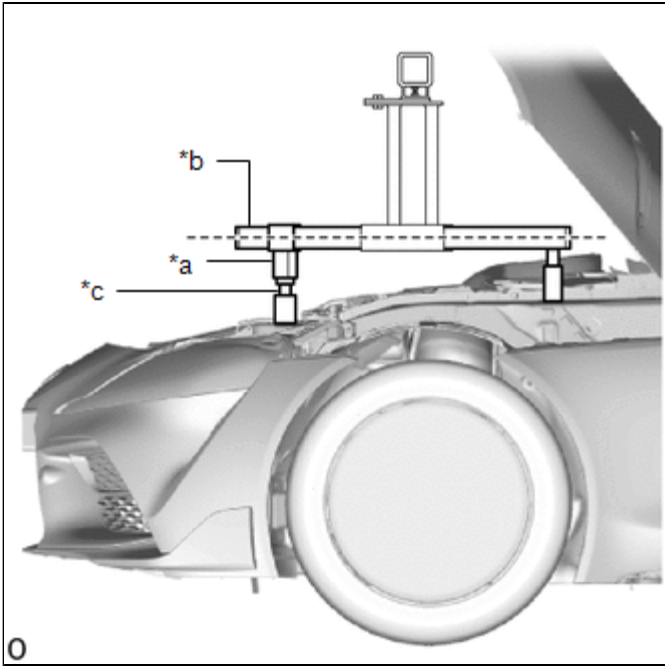
the area A, B, C and D.

*a	Support Shaft
*b	Area A, B, C and D

- The engine support bridge may fall off if any oil or grease is still on or it is installed on the unlevel surface.

NOTICE:

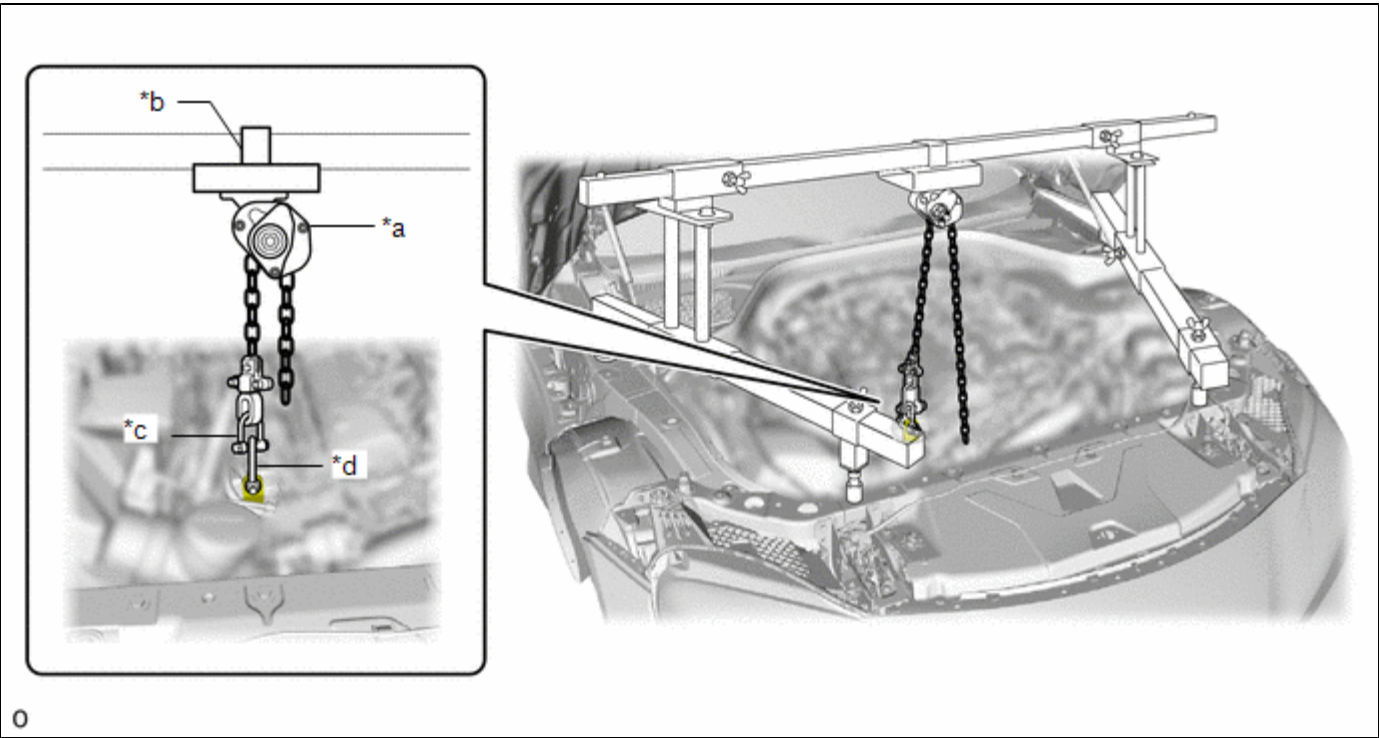
- Prevent SST from contacting the vehicle body exterior and windshield glass.
- To prevent damage to the engine hood, place pieces of cloth between the engine hood and SST.
- Lightly shake SST by hand to make sure it is securely installed before performing work.



*a	Support Shaft
*b	Sub Beam
*c	Threaded Portion

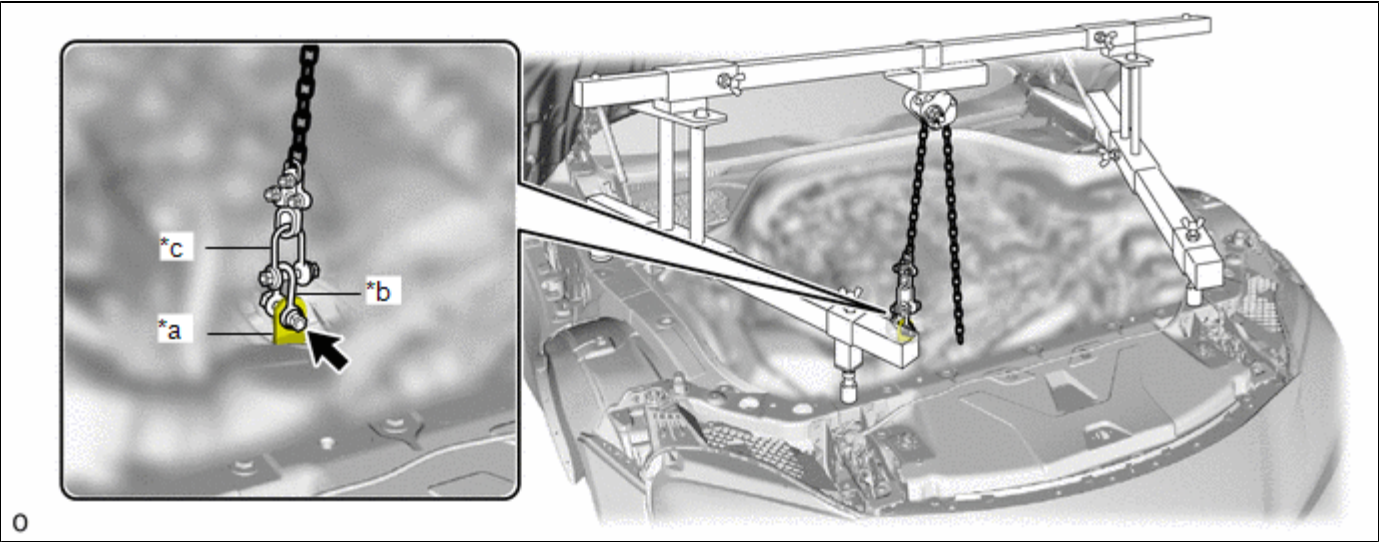
(b) Turn the threaded portion of each support shaft to adjust its height until the sub beams are parallel to the ground.

(c) Install the chain block to the sling bracket.



*a	Chain Block	*b	Sling Bracket
*c	Fuse Shackle	*d	Shackle

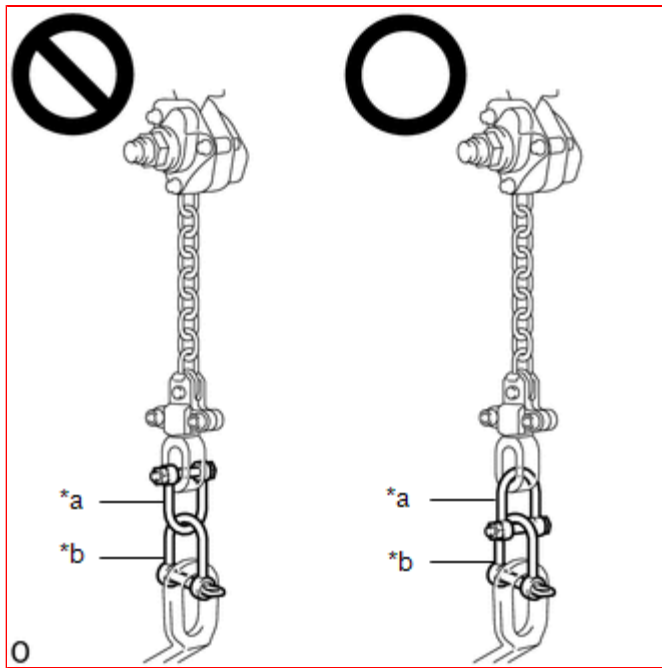
(d) Connect the shackle to the engine hanger.



*a	Engine Hanger	*b	Shackle
*c	Fuse Shackle	-	-

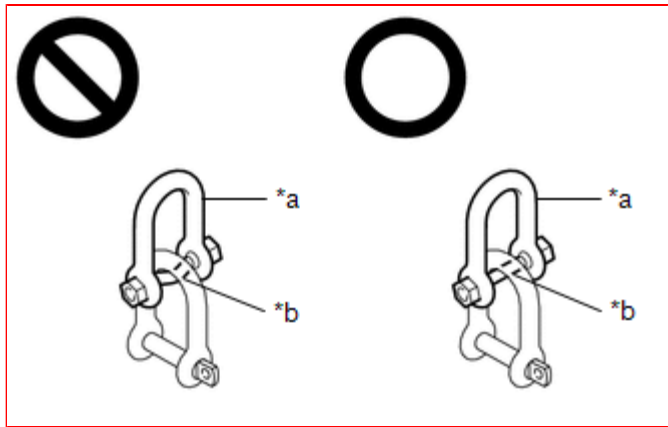
CAUTION:

- Make sure the fuse shackle is on the chain block side and the shackle is on the engine hanger side as shown in the illustration so that the fuse bolt is visible and can be checked for deformation easily.



*a	Fuse Shackle
*b	Shackle

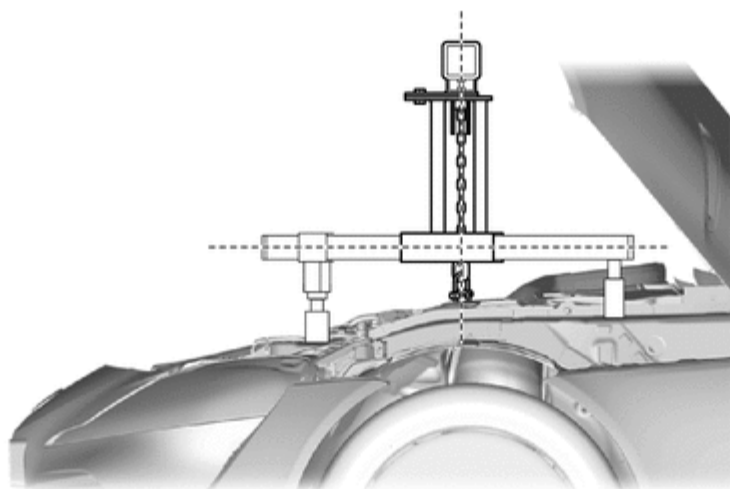
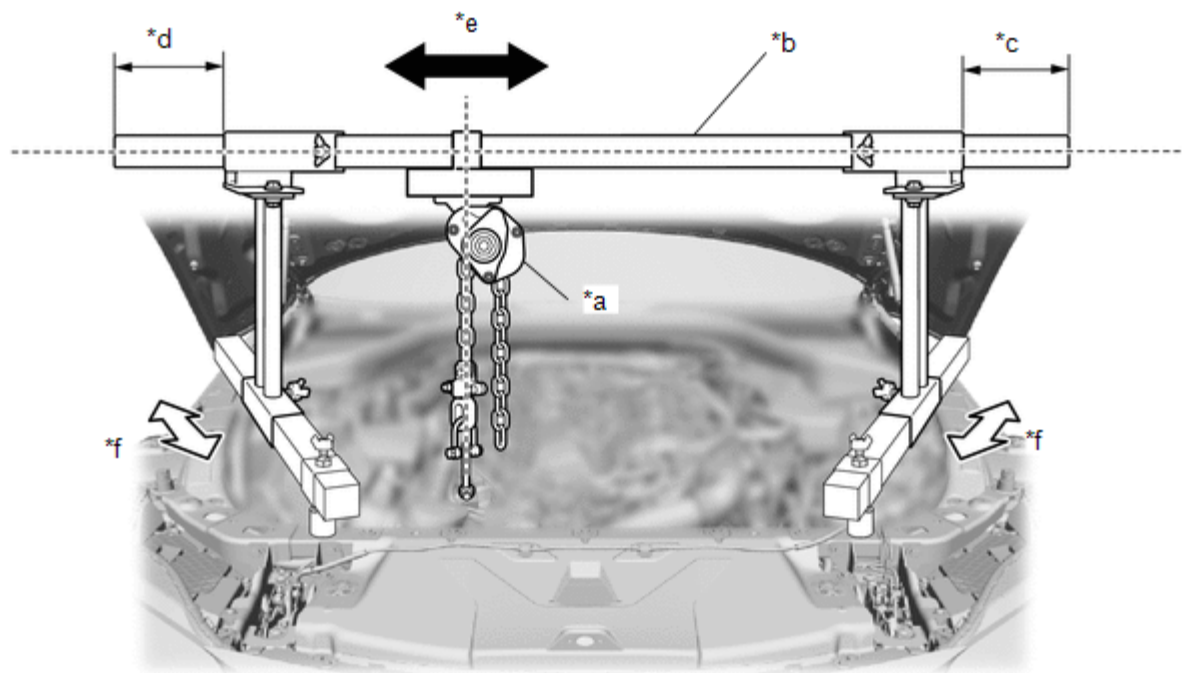
- If the fuse shackle is installed upside down, deformation of the fuse bolt will not be visible and cannot be used to tell if the load capacity of the engine support bridge has been exceeded. If the load capacity is exceeded, it may cause the engine support bridge to damage the vehicle and the engine assembly with automatic transmission assembly may fall.
- Make sure that the fuse bolt of the fuse shackle is free of damage, such as deformation or cracks. If damaged, replace



the fuse shackle.

*a	Fuse Shackle
*b	Fuse Bolt

- If a deformed fuse bolt is used, it cannot be used to tell if the load capacity of the engine support bridge has been exceeded. If the load capacity is exceeded, it may cause the engine support bridge to damage the vehicle and the engine assembly with automatic transmission assembly may fall.
- (e) Adjust the positions of the chain block assembly, support brackets and main beam so that the chain of the chain block assembly is perpendicular to the main beam and the length of the main beam on the outer side of the support bracket LH and RH is the same as shown in the illustration.

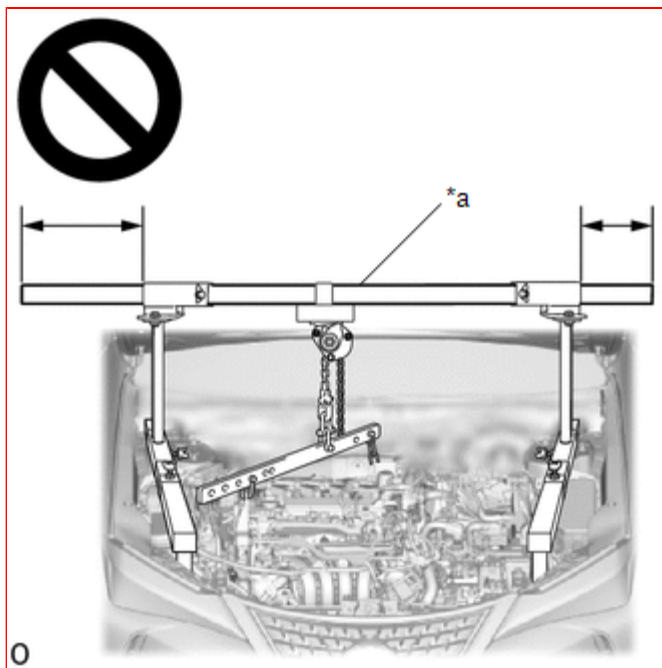


0

*a	Chain Block	*b	Main Beam
*c	Dimension (A)	*d	Dimension (B)
*e	Right to Left Adjustment	*f	Front to Rear Adjustment

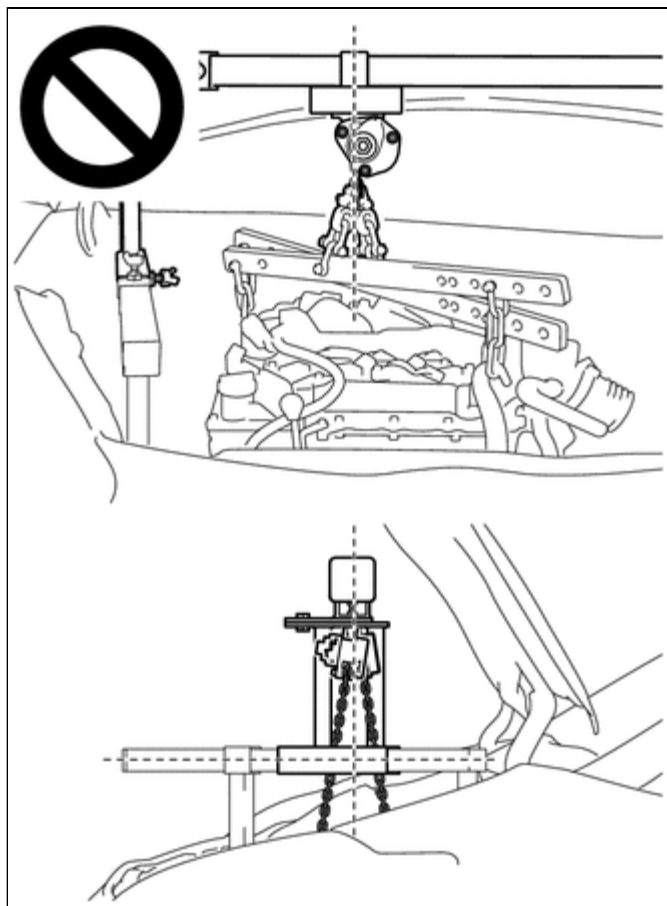
CAUTION:

- To prevent the engine assembly with automatic transmission assembly from falling, make sure that the length of dimension (A) and dimension (B) are equal.
- Do not perform any procedures if the length of dimension (A) and dimension (B) are not equal.



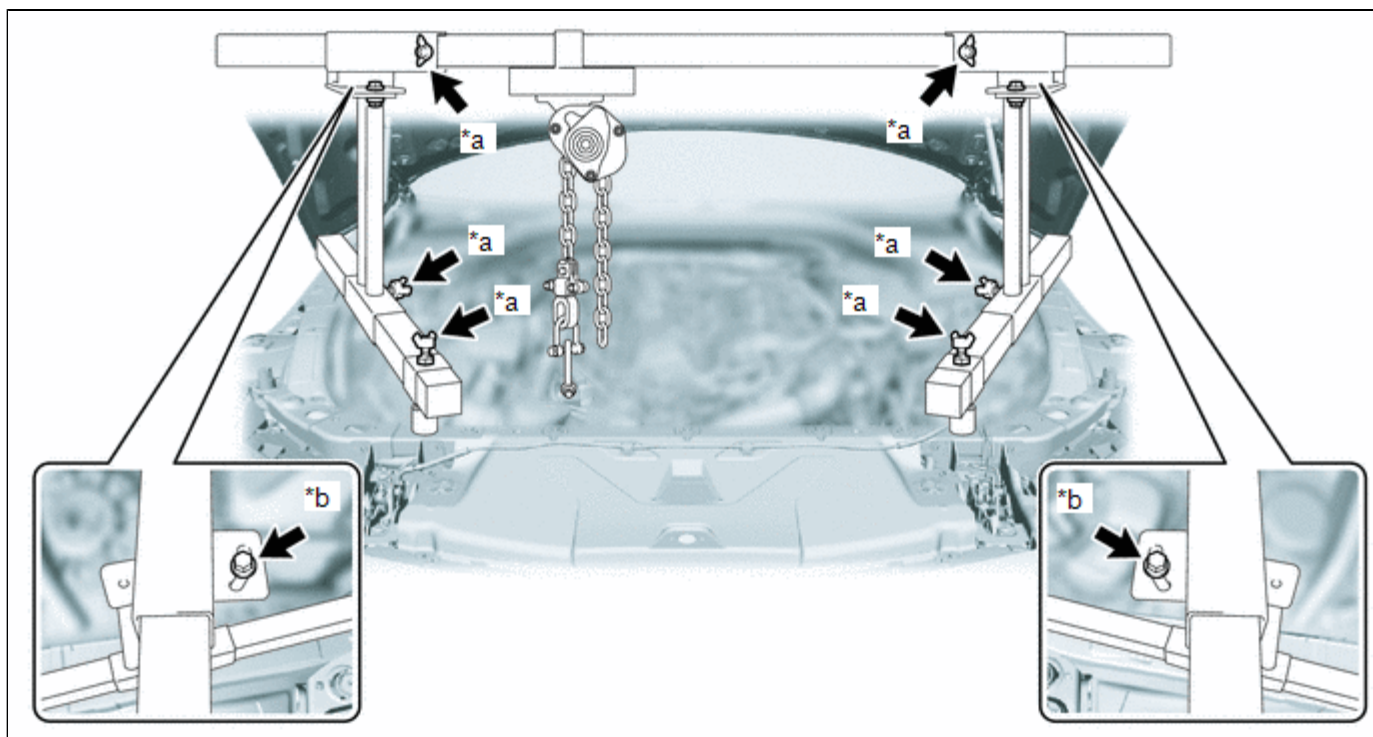
*a Main Beam

- Performing any procedure when the length of dimension (A) and dimension (B) are not equal may cause the engine assembly with automatic transmission assembly and engine support bridge to fall, possibly causing serious injury.



- Do not perform any procedures if the chain of the chain block assembly is not straight.
- When removing the engine mount, if the chain of the chain block assembly is not straight, the engine assembly or automatic transmission assembly may contact the vehicle body.

(f) Confirm the appropriate installation state of the engine support bridge and tighten the 6 wing bolts and 2 bolts.



*a	Wing Bolt	*b	Bolt
----	-----------	----	------

Torque:

Bolt :

30 N·m {306 kgf·cm, 22 ft·lbf}

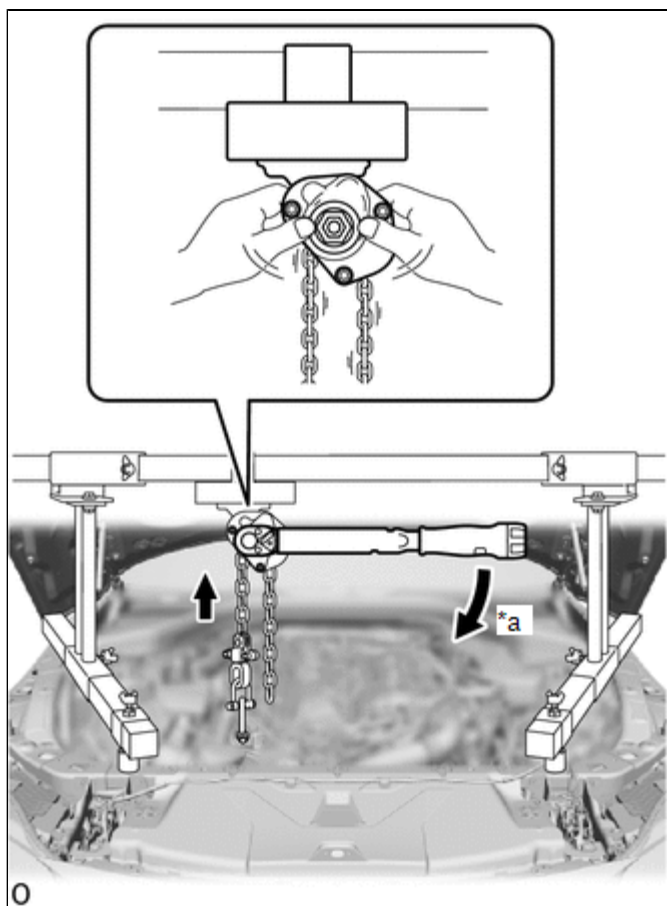
CAUTION:

- Do not perform any procedures before tightening the bolts to the specified torque.

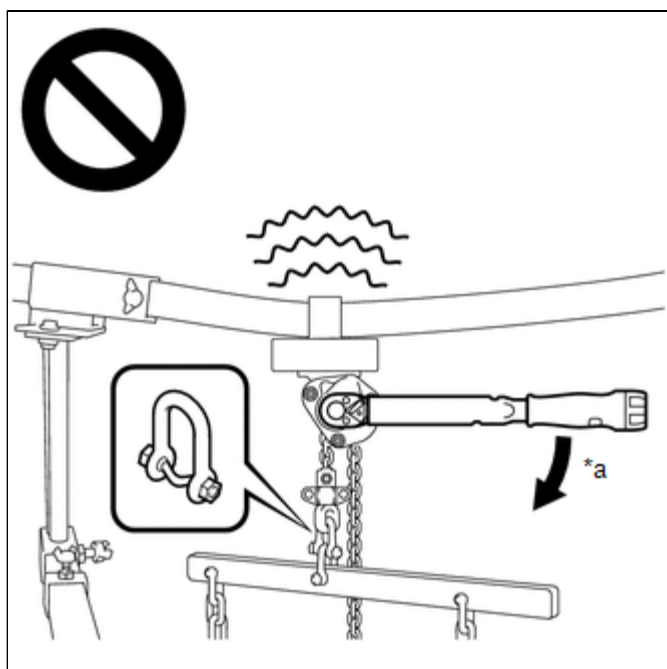


- Performing procedures without tightening the bolts to the specified torque, may cause the engine support bridge to fall.

(g) Tighten the chain block assembly until it cannot be moved any further by hand.



*a	Turn
----	------

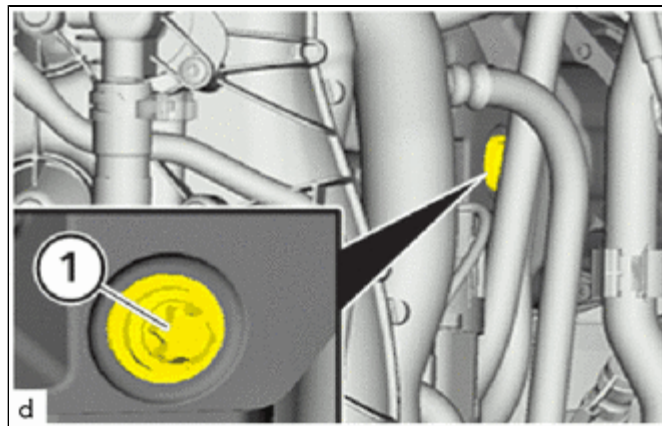


*a	41 N*m (418 kgf*cm, 30 ft.*lbf) or more
----	---

- When suspending the engine assembly with automatic transmission assembly, do not tighten the chain block assembly more than 41 N*m (418 kgf*cm, 30 ft.*lbf).
- Tightening the chain block assembly more than 41 N*m (418 kgf*cm, 30 ft.*lbf) will cause the load capacity (400 kg (881.8 lb.)) to be exceeded and may cause damage to the engine support bridge and vehicle body.

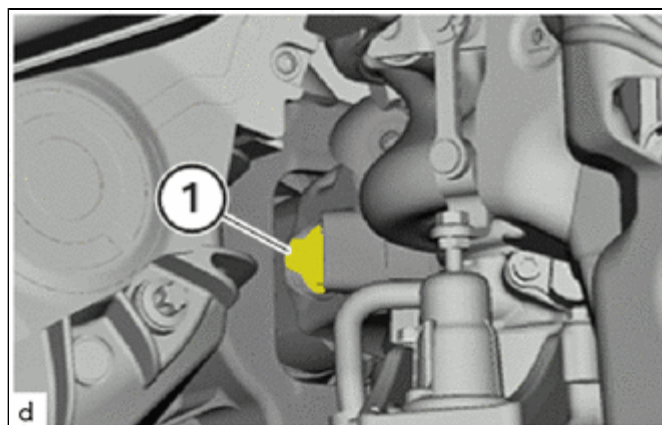
14. SEPARATE FRONT ENGINE MOUNTING INSULATOR LH

(a) Release the E14 bolt (1) from the top.



15. SEPARATE FRONT ENGINE MOUNTING INSULATOR RH

(a) Release the E14 bolt (1) from the top.

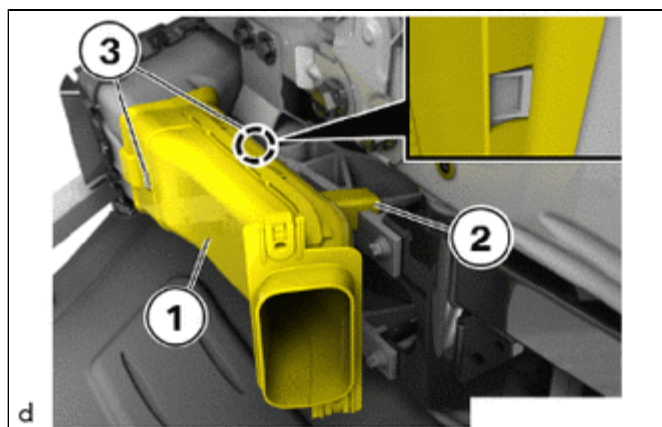


16. SUPPORT ENGINE ASSEMBLY

(a) Raise the engine by turning the chain block by 10 mm.

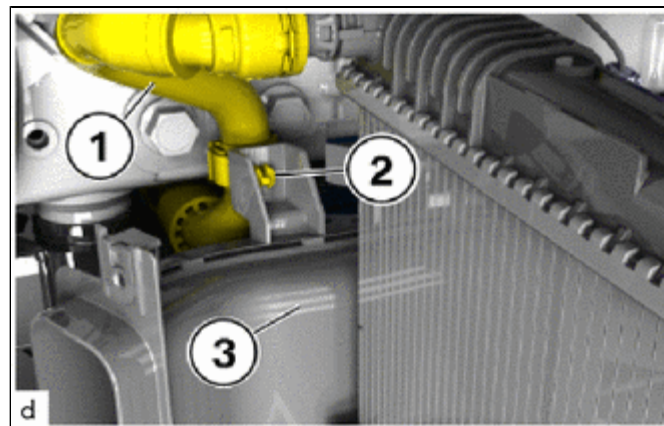
17. REMOVE AIR INTAKE DUCT LH

(a) Lift air intake duct LH (1) with the guide (2), detach it from the latch mechanisms (3) to the rear and remove.

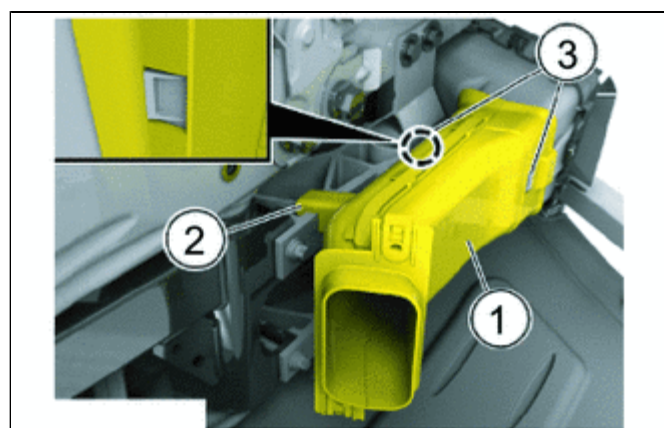


18. REMOVE AIR INTAKE DUCT RH

- (a) Unclip coolant line (1) and bracket (2) from the air intake duct RH (3).



- (b) Lift air intake duct RH (1) with the guide (2), detach it from the latch mechanisms (3) to the rear and remove.

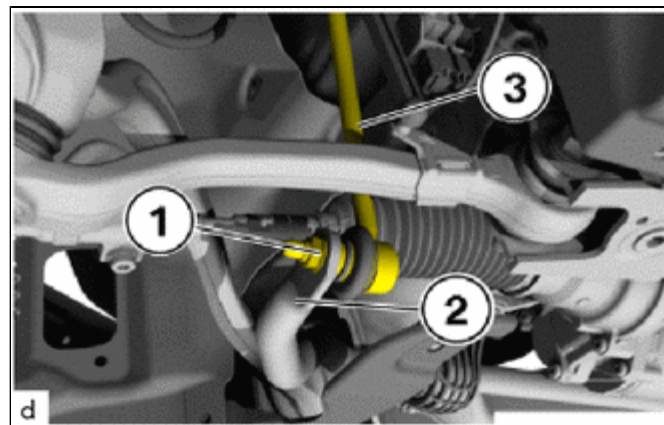


19. DISCONNECT STEERING INTERMEDIATE SHAFT ASSEMBLY

Click here [INFO](#)

20. SEPARATE FRONT STABILIZER LINK ASSEMBLY LH

- (a) Loosen the 16 mm nut (1), if necessary, counter hold the T30 "TORX" socket wrench.



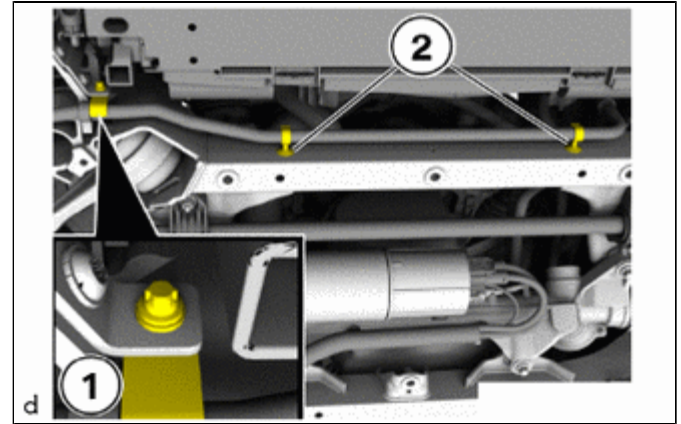
- (b) Loosen the front stabilizer link assembly LH (3) from the front stabilizer bar (2).

21. SEPARATE FRONT STABILIZER LINK ASSEMBLY RH

HINT:

Use the same procedure as for the LH side.

22. SEPARATE COOLANT HOSE



(a) Loosen E8 bolts (1).

(b) Release both holders (2) from the front suspension crossmember sub-assembly.

NOTICE:

- The coolant hose is not removed.
- The coolant circuit is not opened.

23. DISCONNECT TIE ROD END SUB-ASSEMBLY LH

Click here [INFO](#)

24. DISCONNECT TIE ROD END SUB-ASSEMBLY RH

HINT:

Use the same procedure as for the LH side.

25. REMOVE FRONT STABILIZER BAR

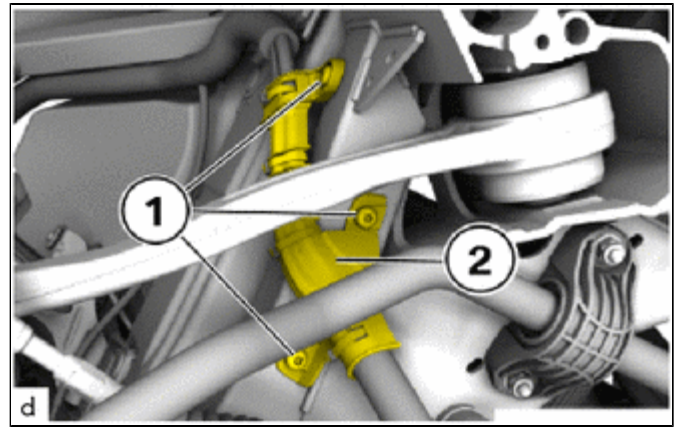
Click here [INFO](#)

26. REMOVE STEERING LINK ASSEMBLY

Click here [INFO](#)

27. SEPARATE WIRE HARNESS

(a) Loosen T25 screws (1).



(b) Remove the wire harness mounting (2) with wire harness, move it to the side and secure it in place.

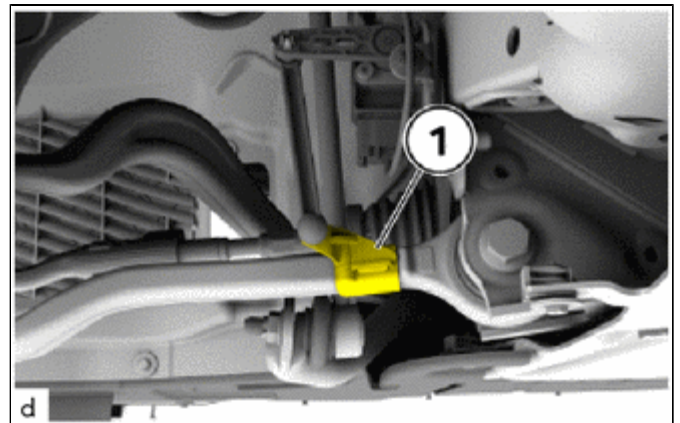
28. SEPARATE FRONT LOWER SUSPENSION ARM ASSEMBLY LH

NOTICE:

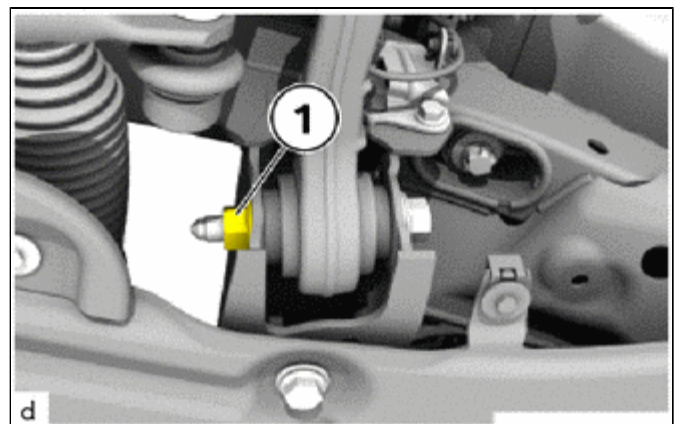
- Component damage caused by striking tools.
- Brute force can result in component damage.
- Only use those tools intended for the work.

(a) w/ Height Control Sensor:

- (1) Release the front height control sensor link sub-assembly (1) on the front lower suspension arm assembly LH.



- (b) Using a 18 mm deep socket wrench, unscrew the nut (1) and remove the 18 mm bolt to the rear.



(c) Release the front lower suspension arm assembly LH from the front suspension crossmember sub-assembly.

29. SEPARATE FRONT LOWER SUSPENSION ARM ASSEMBLY RH

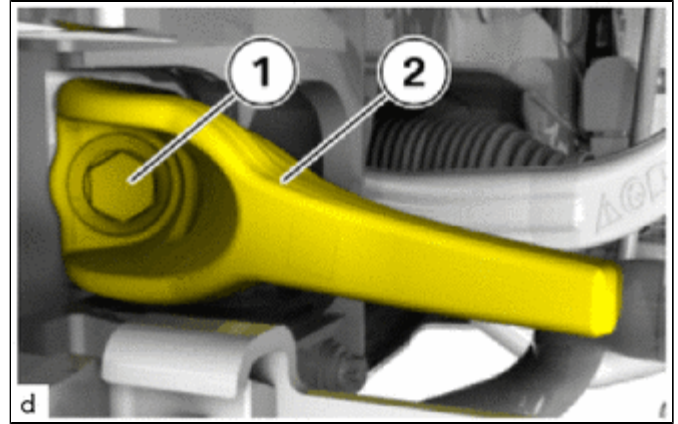
HINT:

Use the same procedure as for the LH side.

30. REMOVE FRONT UPPER SUSPENSION ARM ASSEMBLY LH

(a) w/ Front Suspension Member Bracket:

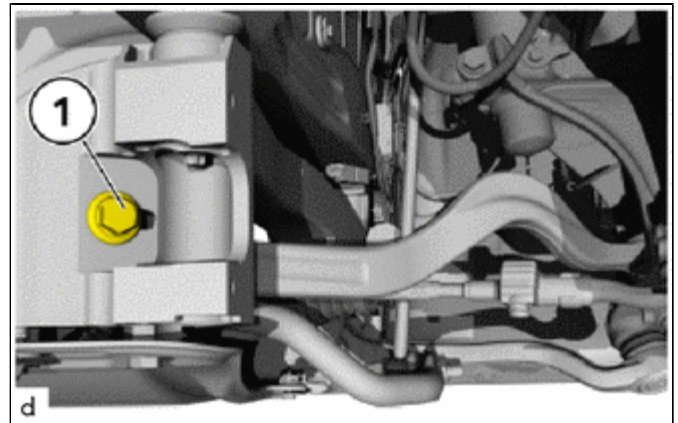
(1) Loosen 18 mm bolt (1).



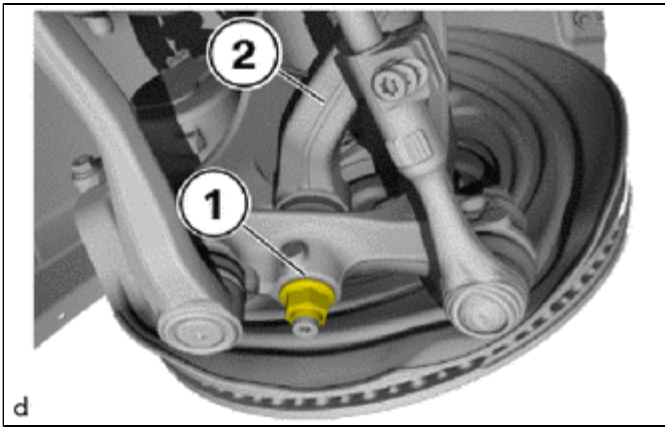
(2) Remove the front suspension member bracket sub-assembly LH (2).

(b) w/o Front Suspension Member Bracket:

(1) Loosen 18 mm bolt (1).



(c) Loosen the nut (1), if necessary, counter-hold the T40 "TORX" socket wrench.



(d) Remove front upper suspension arm assembly LH (2).

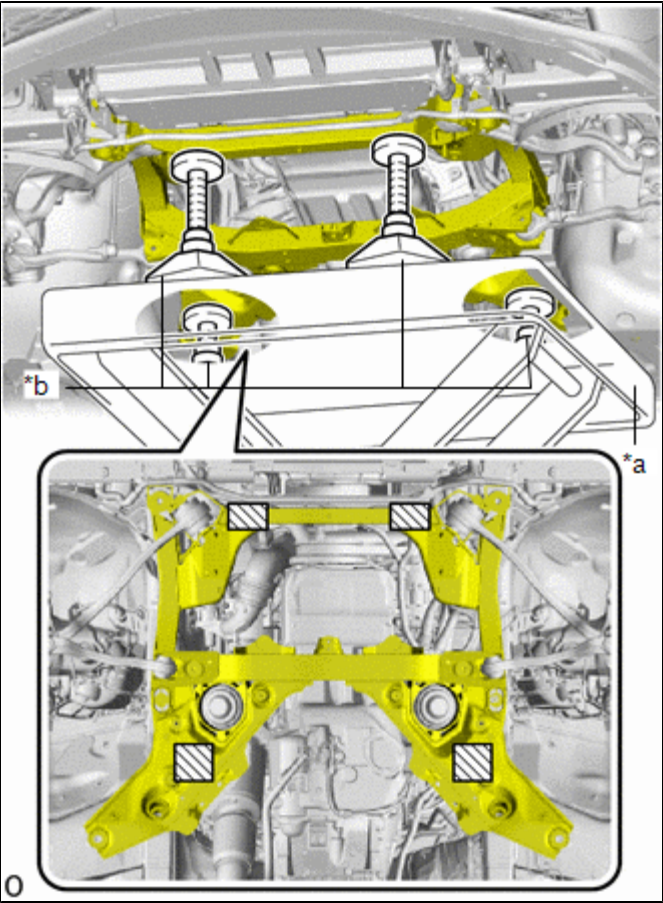
31. REMOVE FRONT UPPER SUSPENSION ARM ASSEMBLY RH

HINT:

Use the same procedure as for the LH side.

32. REMOVE FRONT SUSPENSION CROSSMEMBER SUB-ASSEMBLY

(a) Support the front suspension crossmember sub-assembly with an engine lifter using 4 attachments or equivalent tools as shown in the illustration.



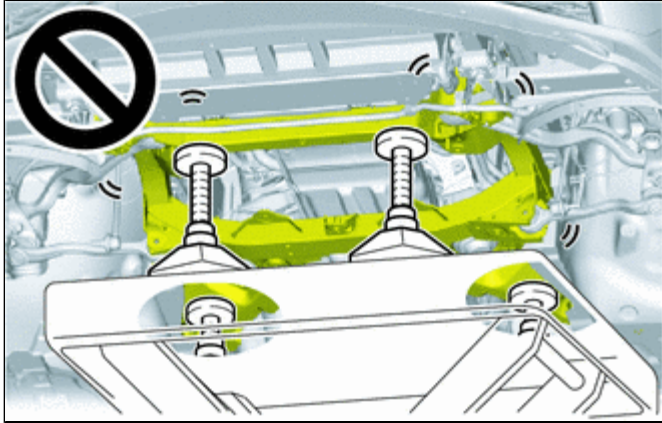
*a	Engine Lifter
*b	Attachment



Attachment placement location

CAUTION:

- The front suspension crossmember sub-assembly is a very heavy component. Make sure that it is supported securely.
- If the front suspension crossmember sub-assembly is not securely supported, it may drop, resulting in serious injury.



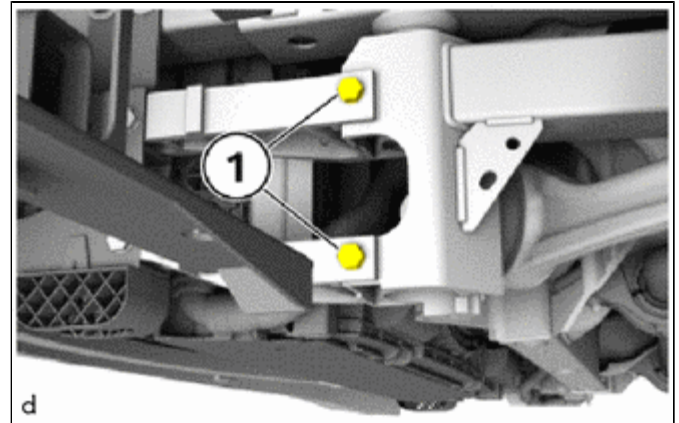
NOTICE:

Use attachments to keep the front suspension crossmember sub-assembly level.

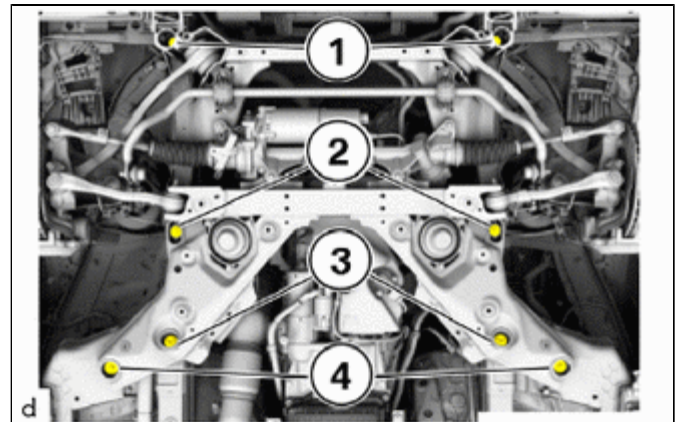
(b) Remove the E11 bolts (1).

HINT:

Perform the operations on the left and right side.



(c) Remove the E14 bolts (1), E18 bolts (2), bolts (3) and E18 bolts (4)



(d) Slowly lower the front suspension crossmember sub-assembly.

NOTICE:

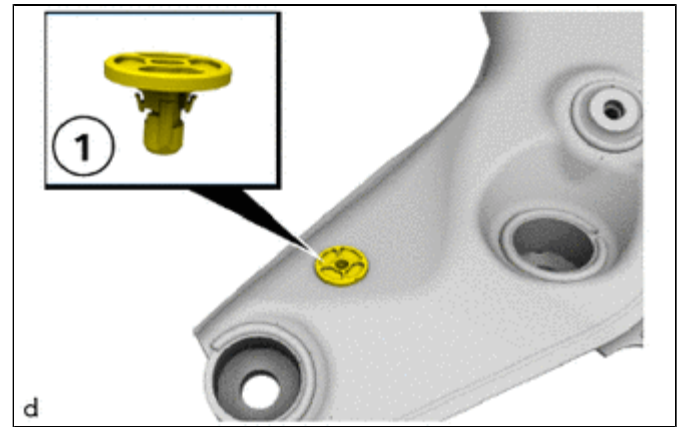
When lowering the front suspension crossmember sub-assembly, be careful not to damage the vehicle body or other components installed to the vehicle.

33. REMOVE CLIP

HINT:

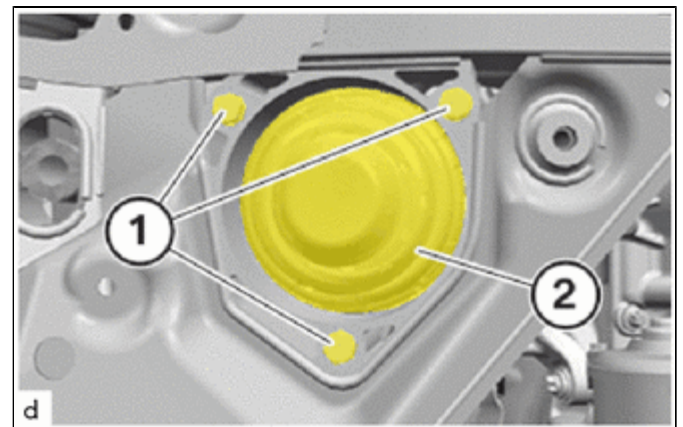
Perform the operations on the left and right side.

(a) Remove the clip (1).



34. REMOVE FRONT ENGINE MOUNTING INSULATOR LH

(a) Loosen the bolts (1).



(b) Remove the front engine mounting insulator LH (2).

35. REMOVE FRONT ENGINE MOUNTING INSULATOR RH

HINT:

Use the same procedure as for the LH side.

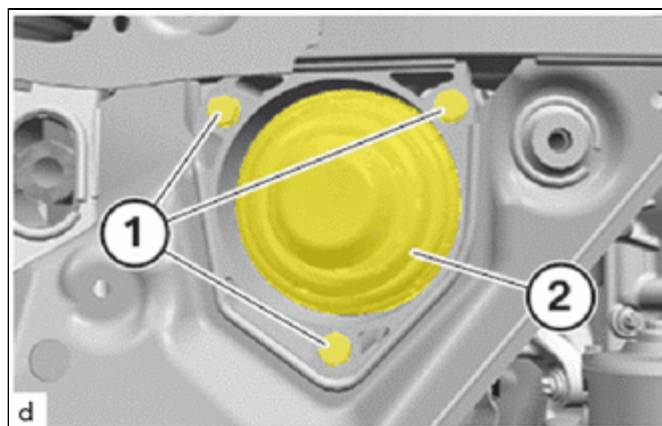
Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0C
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT SUSPENSION MEMBER: INSTALLATION; 2020 MY Supra [03/2019 -]		

INSTALLATION

PROCEDURE

1. INSTALL FRONT ENGINE MOUNTING INSULATOR LH

(a) Install the front engine mounting insulator LH (2).



(b) Tighten the bolts (1).

Torque:

19 N·m {194 kgf·cm, 14 ft·lbf}

2. INSTALL FRONT ENGINE MOUNTING INSULATOR RH

HINT:

Use the same procedure as for the LH side.

3. INSTALL CLIP

HINT:

Perform the operations on the left and right side.

(a) Replace the clip.

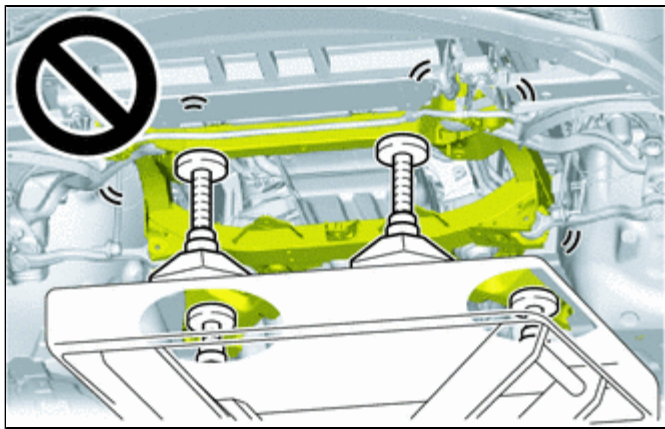
(b) Install clip.

4. INSTALL FRONT SUSPENSION CROSSMEMBER SUB-ASSEMBLY

(a) Slowly jack up the front suspension crossmember sub-assembly with an engine lifter using 4 attachments or equivalent tools.

CAUTION:

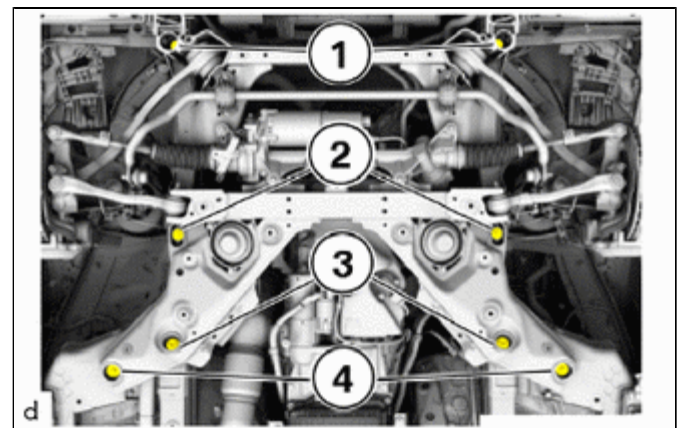
- The front suspension crossmember sub-assembly is a very heavy component. Make sure that it is supported securely.
- If the front suspension crossmember sub-assembly is not securely supported, it may drop, resulting in serious injury.



NOTICE:

Use attachments to keep the front suspension crossmember sub-assembly level.

(b) Replace bolts (1) to (4).



(c) Tighten the E14 bolts (1).

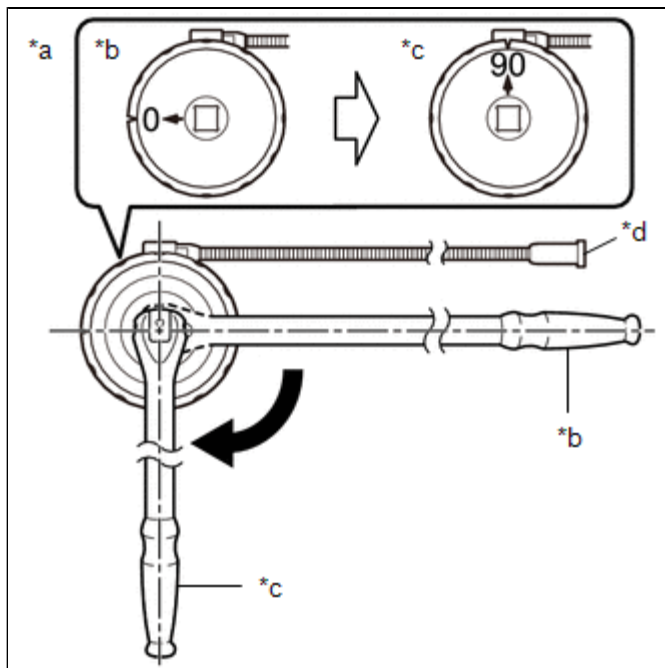
Torque:

56 N·m {571 kgf·cm, 41 ft·lbf}

(d) Using SST, tighten the E14 bolts (1) an additional 45°.

SST: 09900-WA010

HINT:



*a	Example
*b	Before Tightening
*c	After Tightening
*d	Magnetic Portion

- The magnetic portion is used to secure the gauge to the vehicle.
- After first adjusting the needle of the gauge to 0°, tighten to the specified angle.
- Perform the work procedure carefully so that the gauge, etc. does not become tilted.

(e) Tighten down E18 bolts (2).

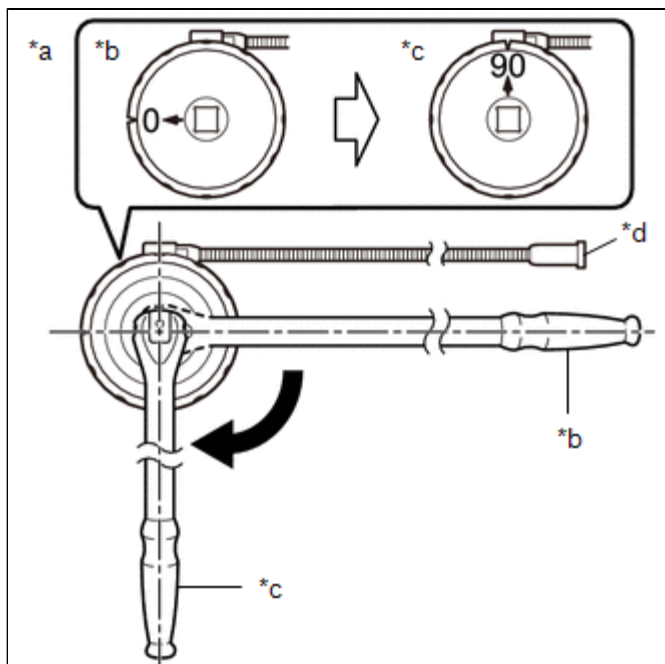
Torque:

108 N·m {1101 kgf·cm, 80 ft·lbf}

(f) Using SST, tighten the E18 bolts (2) an additional 45°.

SST: 09900-WA010

HINT:



*a	Example
*b	Before Tightening
*c	After Tightening
*d	Magnetic Portion

- The magnetic portion is used to secure the gauge to the vehicle.
- After first adjusting the needle of the gauge to 0°, tighten to the specified angle.
- Perform the work procedure carefully so that the gauge, etc. does not become tilted.

(g) Tighten down bolts (3).

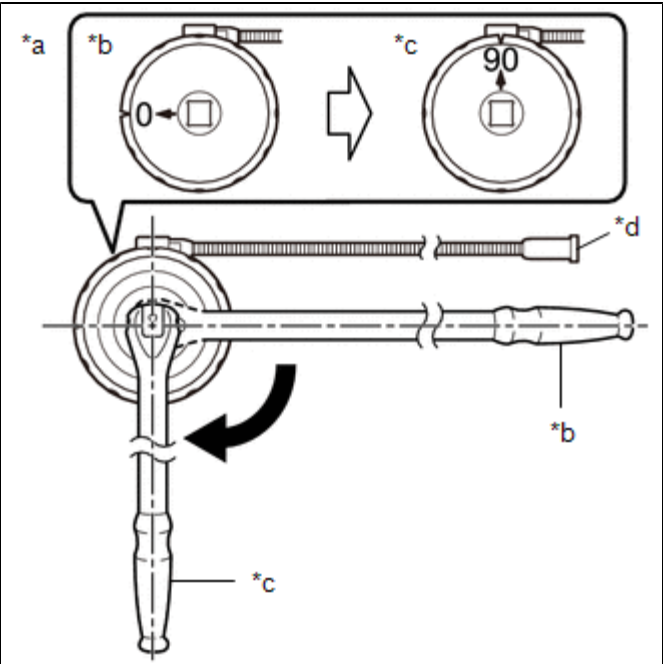
Torque:

108 N·m {1101 kgf·cm, 80 ft·lbf}

(h) Using SST, tighten the bolts (3) an additional 45°.

SST: 09900-WA010

HINT:



*a	Example
*b	Before Tightening
*c	After Tightening
*d	Magnetic Portion

- The magnetic portion is used to secure the gauge to the vehicle.
- After first adjusting the needle of the gauge to 0°, tighten to the specified angle.
- Perform the work procedure carefully so that the gauge, etc. does not become tilted.

(i) Tighten down E18 bolts (4).

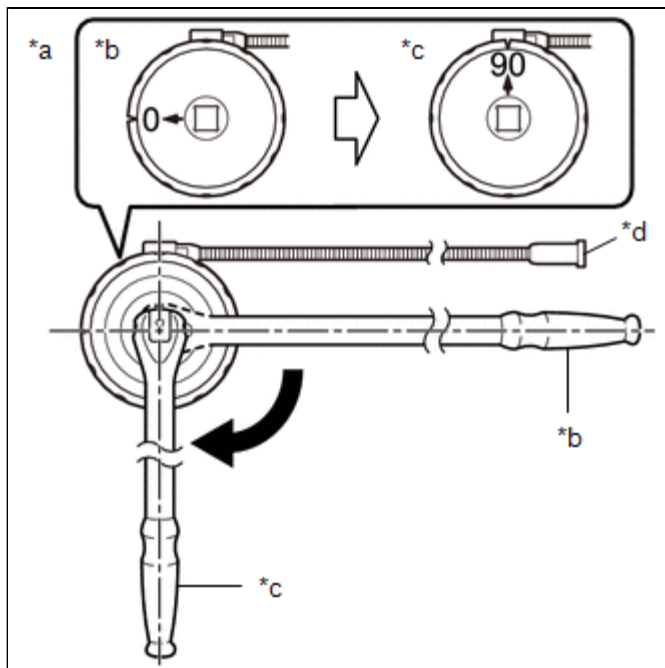
Torque:

108 N·m {1101 kgf·cm, 80 ft·lbf}

(j) Using SST, tighten the E18 bolts (4) an additional 45°.

SST: 09900-WA010

HINT:



*a	Example
*b	Before Tightening
*c	After Tightening
*d	Magnetic Portion

- The magnetic portion is used to secure the gauge to the vehicle.
- After first adjusting the needle of the gauge to 0°, tighten to the specified angle.
- Perform the work procedure carefully so that the gauge, etc. does not become tilted.

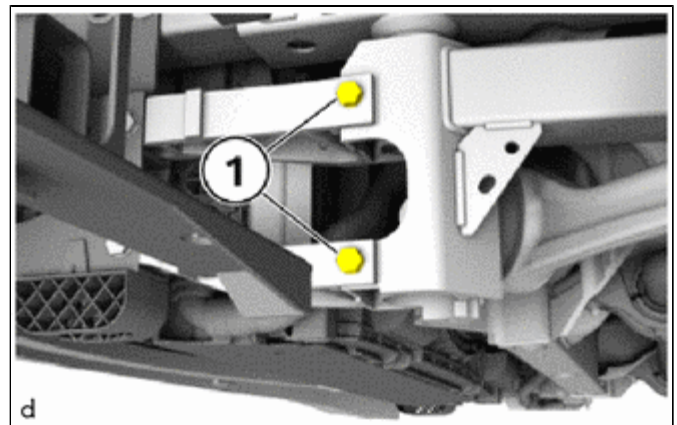
(k) Tighten the E11 bolts (1).

Torque:

19 N·m {194 kgf·cm, 14 ft·lbf}

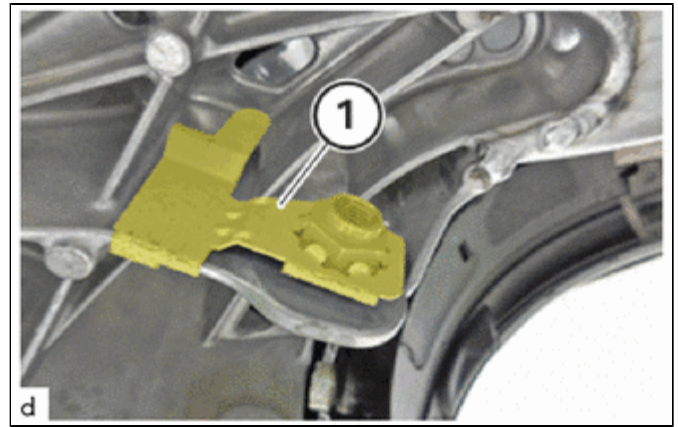
HINT:

Perform the operations on the left and right side.



(l) Lower the engine lifter.

5. INSTALL FRONT UPPER SUSPENSION ARM ASSEMBLY LH



(a) Replace the clip nut (1).

(b) Position front upper suspension arm assembly LH at the front suspension crossmember sub-assembly.

(c) Replace the 18 mm bolt.

(d) w/ Front Suspension Member Bracket:

(1) Position the front suspension member bracket sub-assembly LH and screw the 18 mm bolt in a few turns but do not tighten.

(e) w/o Front Suspension Member Bracket:

(1) Screw the 18 mm bolt in a few turns but do not tighten.

(f) Position front upper suspension arm assembly LH on steering knuckle.

(g) Replace nut.

(h) Tighten the nut, if necessary, counter support the T40 "TORX" socket wrench.

Torque:

175 N·m {1785 kgf·cm, 129 ft·lbf}

(i) Tighten 18 mm bolt.

Torque:

100 N·m {1020 kgf·cm, 74 ft·lbf}

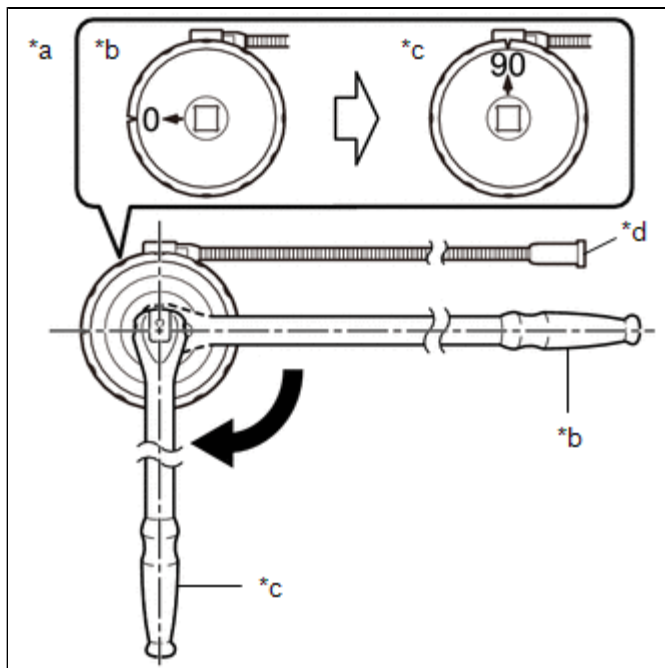
NOTICE:

Tighten the 18 mm bolt connection in the normal position.

(j) Using SST, tighten the 18 mm bolt an additional 90°.

SST: 09900-WA010

HINT:



*a	Example
*b	Before Tightening
*c	After Tightening
*d	Magnetic Portion

- The magnetic portion is used to secure the gauge to the vehicle.
- After first adjusting the needle of the gauge to 0°, tighten to the specified angle.
- Perform the work procedure carefully so that the gauge, etc. does not become tilted.

6. INSTALL FRONT UPPER SUSPENSION ARM ASSEMBLY RH

HINT:

Use the same procedure as for the LH side.

7. INSTALL FRONT LOWER SUSPENSION ARM ASSEMBLY LH

CAUTION:

- Component damage caused by striking tools.

Brute force can result in component damage.

- Only use those tools intended for the work.

(a) Install the front lower suspension arm assembly LH.

(b) Replace the 18 mm bolt and the 18 mm nut.

(c) Using a 18 mm deep socket wrench, tighten the 18 mm nut in the normal position.

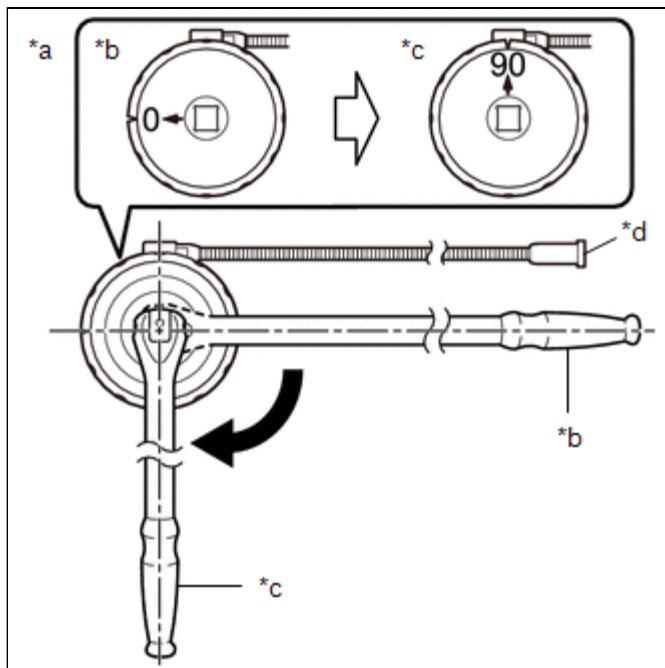
Torque:

100 N·m {1020 kgf·cm, 74 ft·lbf}

(d) Using SST and 18 mm deep socket wrench, tighten the 18 mm nut an additional 90°.

SST: 09900-WA010

HINT:



*a	Example
*b	Before Tightening
*c	After Tightening
*d	Magnetic Portion

- The magnetic portion is used to secure the gauge to the vehicle.
- After first adjusting the needle of the gauge to 0°, tighten to the specified angle.
- Perform the work procedure carefully so that the gauge, etc. does not become tilted.

(e) w/ Height Control Sensor:

(1) Clip in the front height control sensor link sub-assembly.

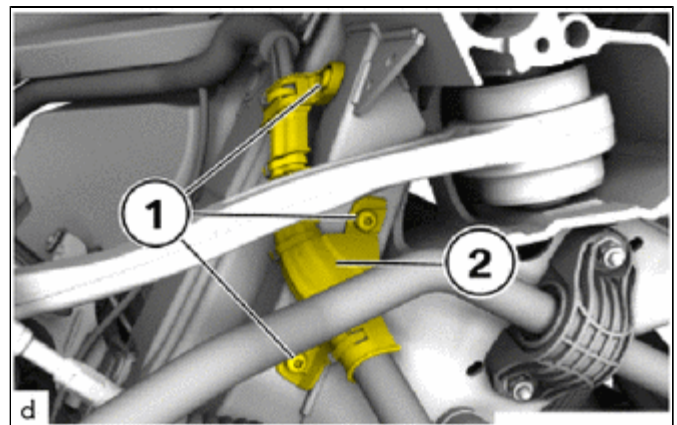
8. INSTALL FRONT LOWER SUSPENSION ARM ASSEMBLY RH

HINT:

Use the same procedure as for the LH side.

9. INSTALL WIRE HARNESS

(a) Position the wire harness mounting (2) with the wire harness.



(b) Tighten the T25 screws (1).

Torque:

8.0 N·m { 82 kgf·cm, 71 in·lbf }

10. INSTALL STEERING LINK ASSEMBLY

Click here [INFO](#)

11. CONNECT TIE ROD END SUB-ASSEMBLY LH

Click here [INFO](#)

12. CONNECT TIE ROD END SUB-ASSEMBLY RH

HINT:

Use the same procedure as for the LH side.

13. INSTALL FRONT STABILIZER BAR

Click here [INFO](#)

14. INSTALL FRONT STABILIZER LINK ASSEMBLY LH

- (a) Position the front stabilizer link assembly LH on the front stabilizer bar.
- (b) Replace 16 mm nut.
- (c) Tighten the 16 mm nut, if necessary, counter support the T30 "TORX" socket wrench.

Torque:

56 N·m { 571 kgf·cm, 41 ft·lbf }

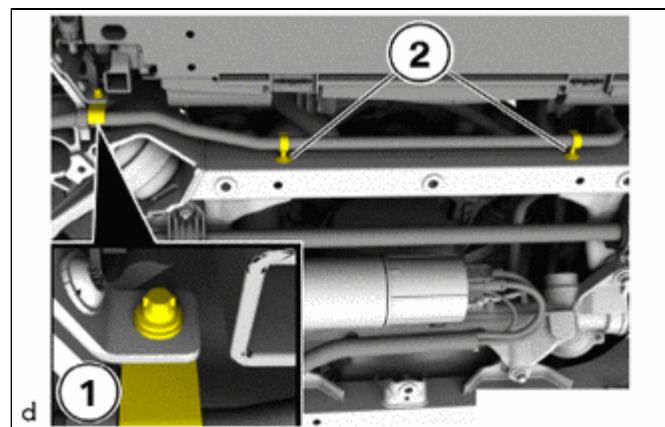
15. INSTALL FRONT STABILIZER LINK ASSEMBLY RH

HINT:

Use the same procedure as for the LH side.

16. INSTALL COOLANT HOSE

- (a) Position both holders (2) at the front suspension crossmember sub-assembly.



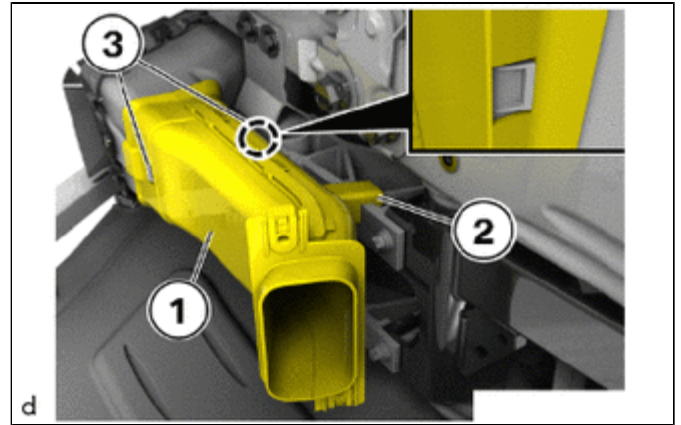
- (b) Tighten down E8 bolts (1).

Torque:

11.8 N·m { 120 kgf·cm, 9 ft·lbf }

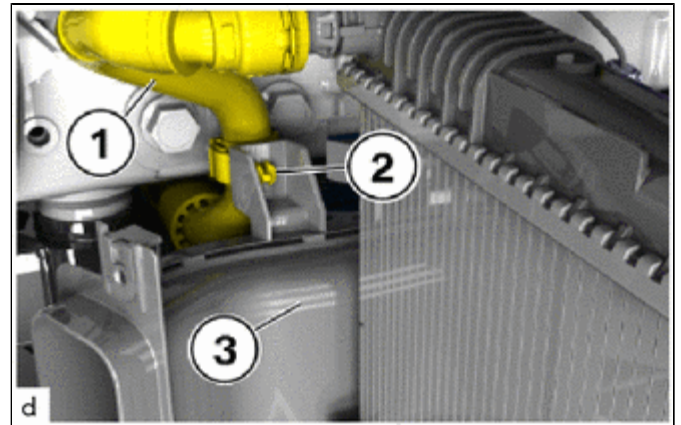
17. INSTALL AIR INTAKE DUCT LH

- (a) Position air intake duct LH (1) with the guide (2) correctly and clip into the latch mechanisms (3).

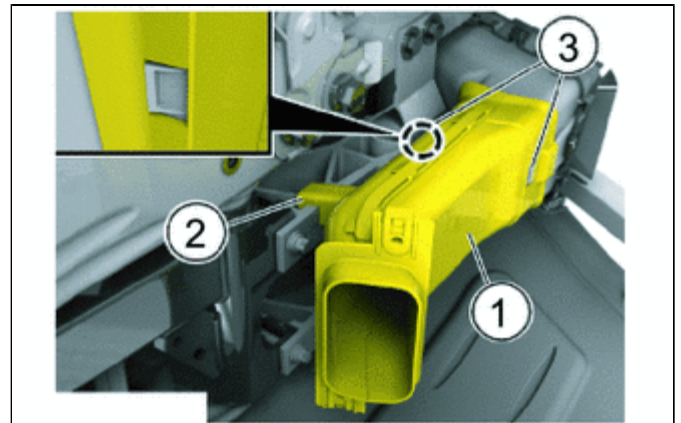


18. INSTALL AIR INTAKE DUCT RH

- (a) Clip in coolant line (1) with the bracket (2) in the air intake duct RH (3).



- (b) Position brake air duct RH (1) with the guide (2) correctly and clip into the latch mechanisms (3).



19. CONNECT STEERING INTERMEDIATE SHAFT ASSEMBLY

Click here [INFO](#)

20. REMOVE ENGINE SUPPORT BRIDGE

- (a) Turn the chain block to lower the engine until the engine support arms rest completely flat on the engine mounts.

(b) Remove the engine support bridge with the help from another person.

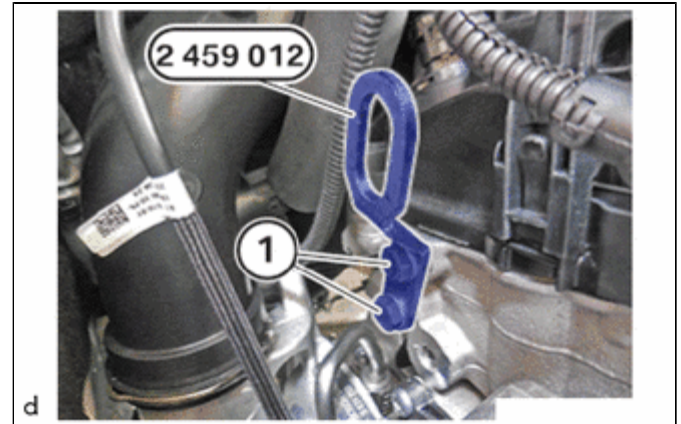
NOTICE:

Prevent SST from contacting the vehicle body or windshield glass.

21. REMOVE ENGINE HANGER

(a) Unscrew the bolts (1) of the special tool 2 459 012.

SST: 09200-WA610



(b) Feed out the special tool 2 459 012 at the cylinder head sub-assembly and remove.

SST: 09200-WA610

22. CONNECT FRONT ENGINE MOUNTING INSULATOR LH

NOTICE:

Lower the engine completely to prevent play before bolting down the front engine mounting insulator LH and front No. 1 engine mounting bracket LH.

(a) Tighten down E14 bolt.

Torque:

100 N·m {1020 kgf·cm, 74 ft·lbf}

23. CONNECT FRONT ENGINE MOUNTING INSULATOR RH

NOTICE:

Lower the engine completely to prevent play before bolting down the front engine mounting insulator RH and front No. 1 engine mounting bracket RH.

(a) Tighten down E14 bolt.

Torque:

100 N·m {1020 kgf·cm, 74 ft·lbf}

24. INSTALL FRONT FENDER LINER LH

Click here [INFO](#)

25. INSTALL FRONT FENDER LINER RH

HINT:

Use the same procedure as for the LH side.

26. INSTALL FRONT SUSPENSION MEMBER LOWER PROTECTOR

Click here [INFO](#)

27. INSTALL FRONT FENDER UPPER PROTECTOR LH

Click here [INFO](#)

28. INSTALL FRONT FENDER UPPER PROTECTOR RH

HINT:

Use the same procedure as for the LH side.

29. INSTALL ENGINE ROOM ECU BOX

Click here [INFO](#)

30. INSTALL INTEGRATION RELAY (for Engine Room Side)

Click here [INFO](#)

31. REMOVE AND INSTALL BONNET HOOD SUPPORT ASSEMBLY

Click here [INFO](#)

32. INSTALL NO. 1 ENGINE COVER SUB-ASSEMBLY

Click here [INFO](#)

33. INSTALL FRONT WHEEL

Click here [INFO](#)

34. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

Click here [INFO](#)

35. INSPECT AIRBAG FOR FUNCTION

Click here [INFO](#)

36. START-UP OF ELECTROMECHANICAL STEERING

Click here [INFO](#)

37. INSPECT STRAIGHT-AHEAD DRIVING POSITION OF THE STEERING WHEEL

Click here [INFO](#)

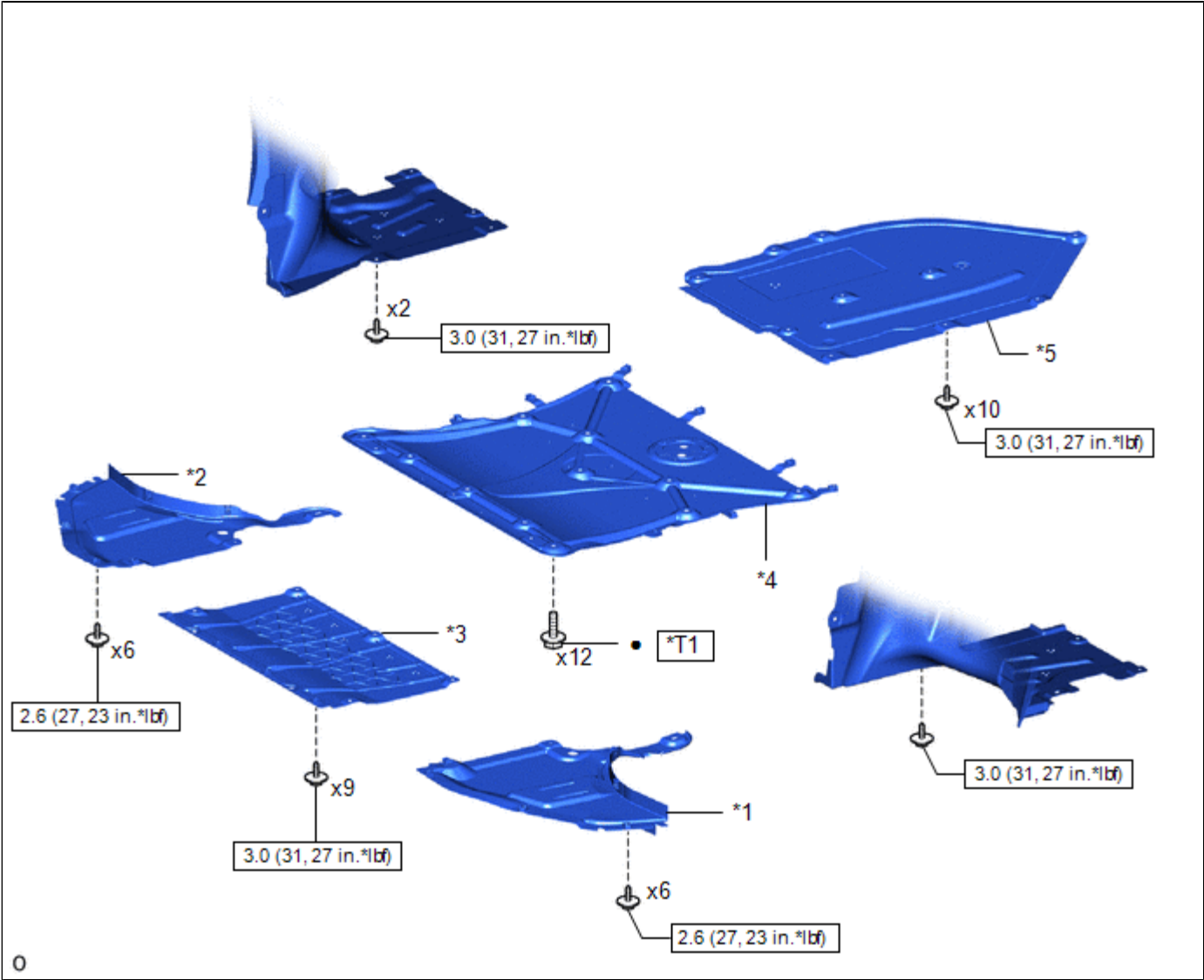
38. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT

Click here [INFO](#)

Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0Q
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT SUSPENSION MEMBER LOWER PROTECTOR: COMPONENTS; 2020 MY Supra [03/2019 -]		

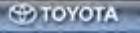
COMPONENTS

ILLUSTRATION



*1	FRONT FENDER SPLASH FRONT SHIELD LH	*2	FRONT FENDER SPLASH FRONT SHIELD RH
*3	NO. 1 ENGINE UNDER COVER ASSEMBLY	*4	FRONT SUSPENSION MEMBER LOWER PROTECTOR
*5	FRONT FLOOR COVER	-	-
	N*m (kgf*cm, ft.*lbf): Specified torque		Non-reusable part
*T1	1st: 56 (571, 41)	-	-

2nd: Turn 45°



TOYOTA

Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0R
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT SUSPENSION MEMBER LOWER PROTECTOR: REMOVAL; 2020 MY Supra [03/2019 -]		

REMOVAL

CAUTION / NOTICE / HINT

CAUTION:

- Vehicle may slip off the vehicle hoist if the vehicle hoist is handled incorrectly.

Danger! Life-threatening injuries!

- Observe safety information on raising the vehicle using a vehicle hoist.
- For additional information see:

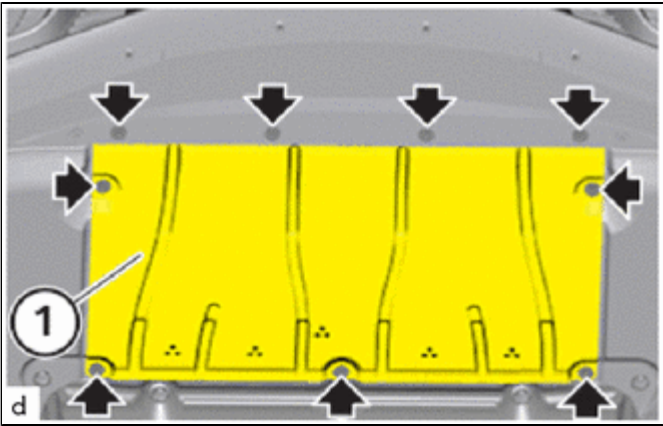
Click here [INFO](#)

NOTICE:

Driving without front suspension member lower protector is not permissible.

PROCEDURE

1. REMOVE NO. 1 ENGINE UNDER COVER ASSEMBLY

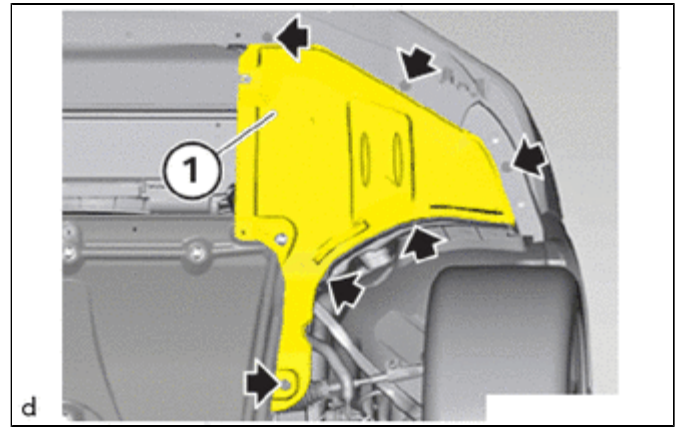


(a) Remove screws (arrows).

(b) Remove the No. 1 engine under cover assembly (1).

2. REMOVE FRONT FENDER SPLASH FRONT SHIELD LH

(a) Remove screws (arrows).



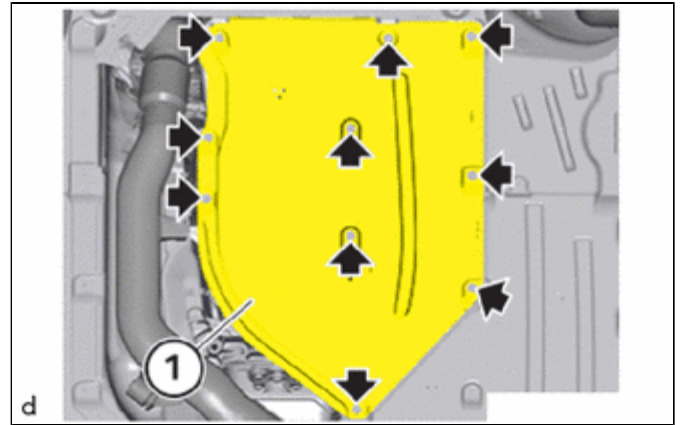
(b) Feed out the front fender splash front shield LH (1) to the side and remove.

3. REMOVE FRONT FENDER SPLASH FRONT SHIELD RH

HINT:

Use the same procedure as for the LH side.

4. REMOVE FRONT FLOOR COVER

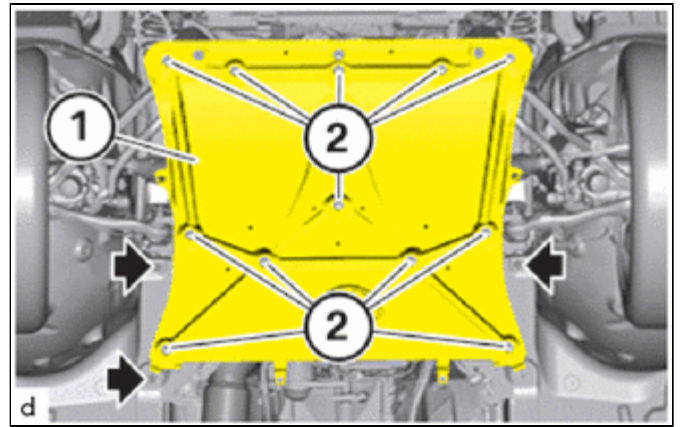


(a) Remove screws (arrows).

(b) Remove the front floor cover (1).

5. REMOVE FRONT SUSPENSION MEMBER LOWER PROTECTOR

(a) Remove screws (arrows).



(b) Loosen the 16 mm bolts (2).

(c) Remove the front suspension member lower protector (1).

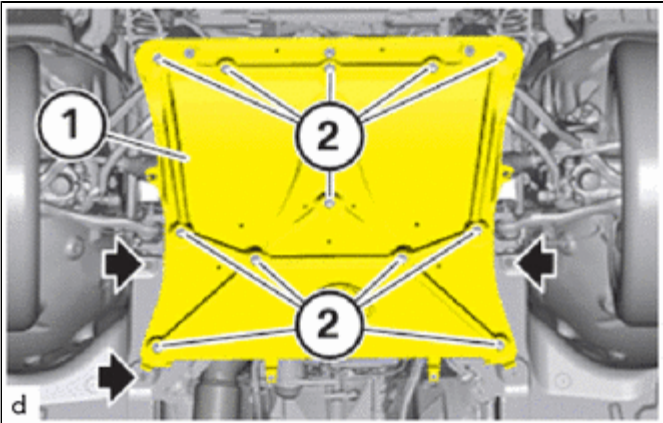
Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0S
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT SUSPENSION MEMBER LOWER PROTECTOR: INSTALLATION; 2020 MY Supra [03/2019 -]		

INSTALLATION

PROCEDURE

1. INSTALL FRONT SUSPENSION MEMBER LOWER PROTECTOR

(a) Position front suspension member lower protector (1).



(b) Replace 16 mm bolts (2).

(c) Tighten the 16 mm bolts (2).

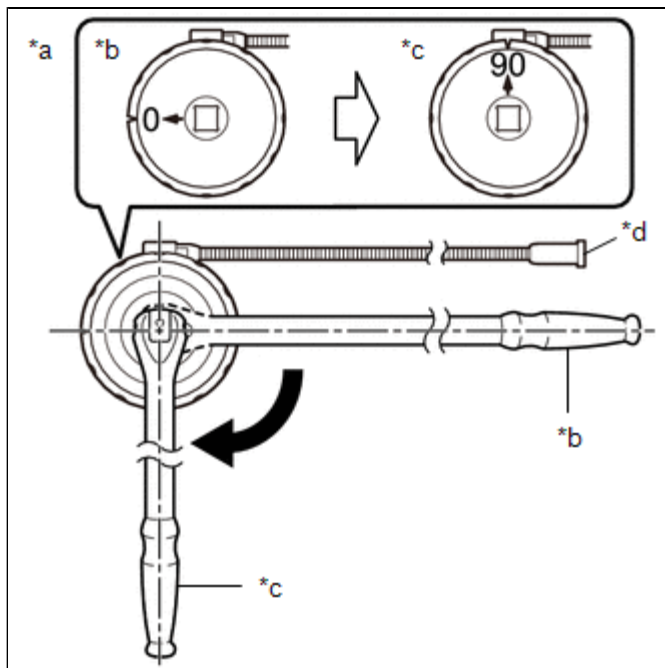
Torque:

56 N·m {571 kgf·cm, 41 ft·lbf}

(d) Using SST, tighten the 16 mm bolts (2) an additional 45°.

SST: 09900-WA010

HINT:



*a	Example
*b	Before Tightening
*c	After Tightening
*d	Magnetic Portion

- The magnetic portion is used to secure the gauge to the vehicle.
- After first adjusting the needle of the gauge to 0°, tighten to the specified angle.
- Perform the work procedure carefully so that the gauge, etc. does not become tilted.

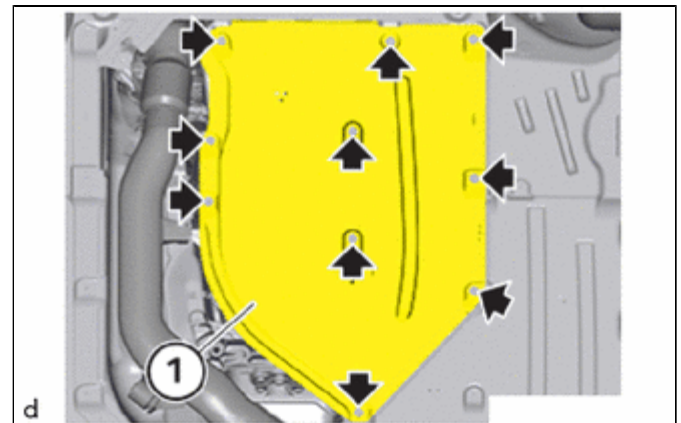
(e) Tighten screws (arrows).

Torque:

3.0 N·m {31 kgf·cm, 27 in·lbf}

2. INSTALL FRONT FLOOR COVER

(a) Position front floor cover (1).



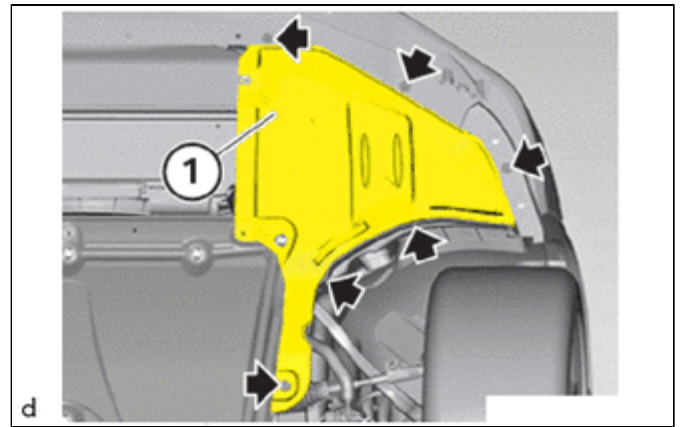
(b) Tighten screws (arrows).

Torque:

3.0 N·m {31 kgf·cm, 27 in·lbf}

3. INSTALL FRONT FENDER SPLASH FRONT SHIELD LH

(a) Insert the front fender splash front shield LH (1) at the side.



(b) Tighten screws (arrows).

Torque:

2.6 N·m {27 kgf·cm, 23 in·lbf}

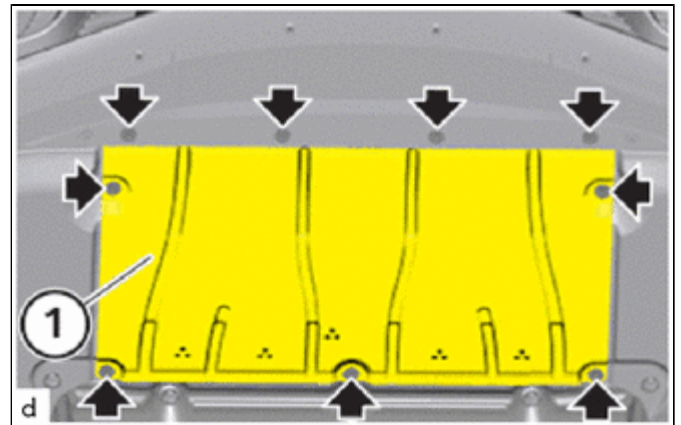
4. INSTALL FRONT FENDER SPLASH FRONT SHIELD RH

HINT:

Use the same procedure as for the LH side.

5. INSTALL NO. 1 ENGINE UNDER COVER ASSEMBLY

(a) Guide the No. 1 engine under cover assembly (1) in and position it.



(b) Tighten screws (arrows).

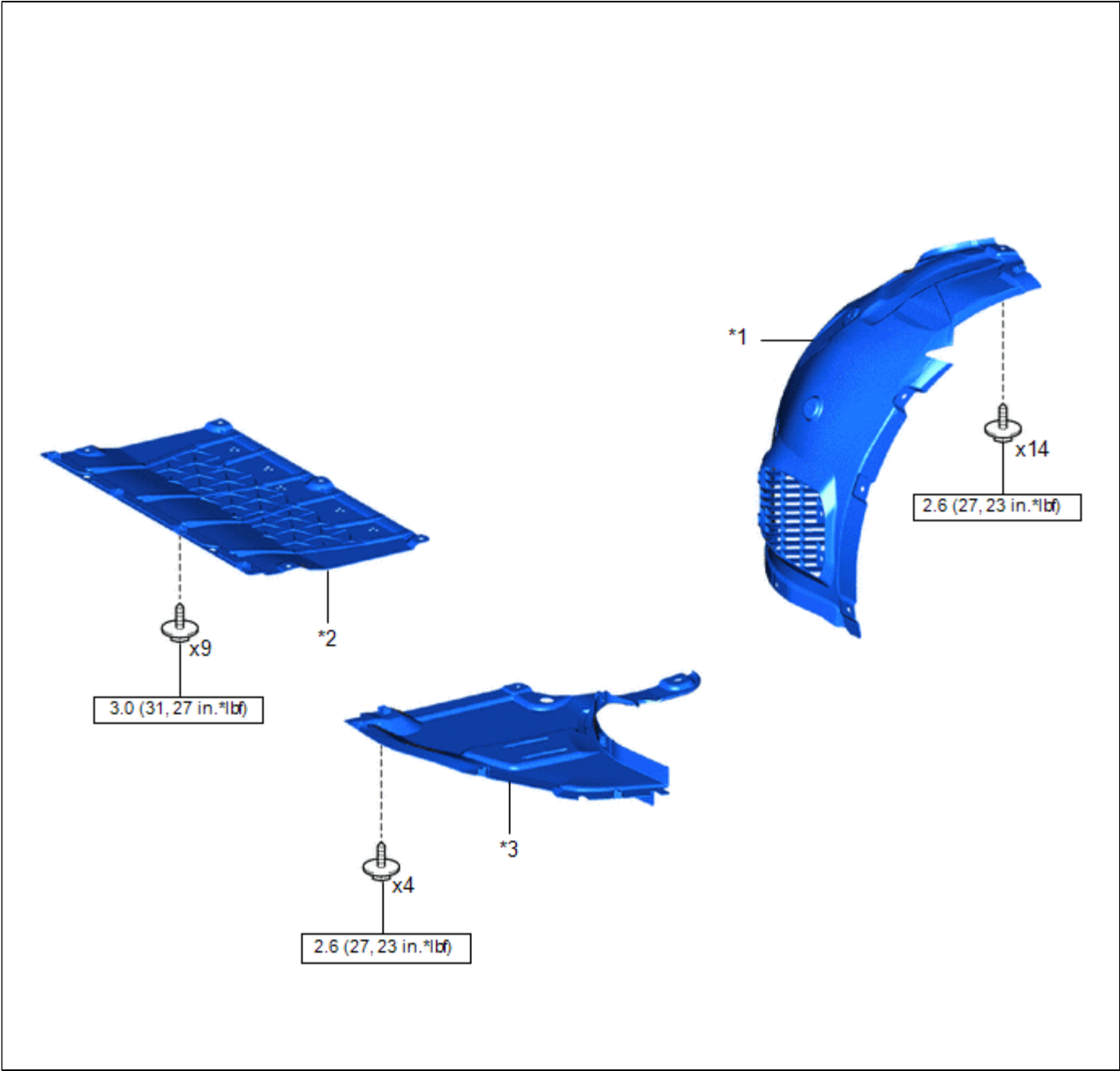
Torque:

3.0 N·m {31 kgf·cm, 27 in·lbf}

Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0K
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT UPPER SUSPENSION ARM: COMPONENTS; 2020 MY Supra [03/2019 -]		

COMPONENTS

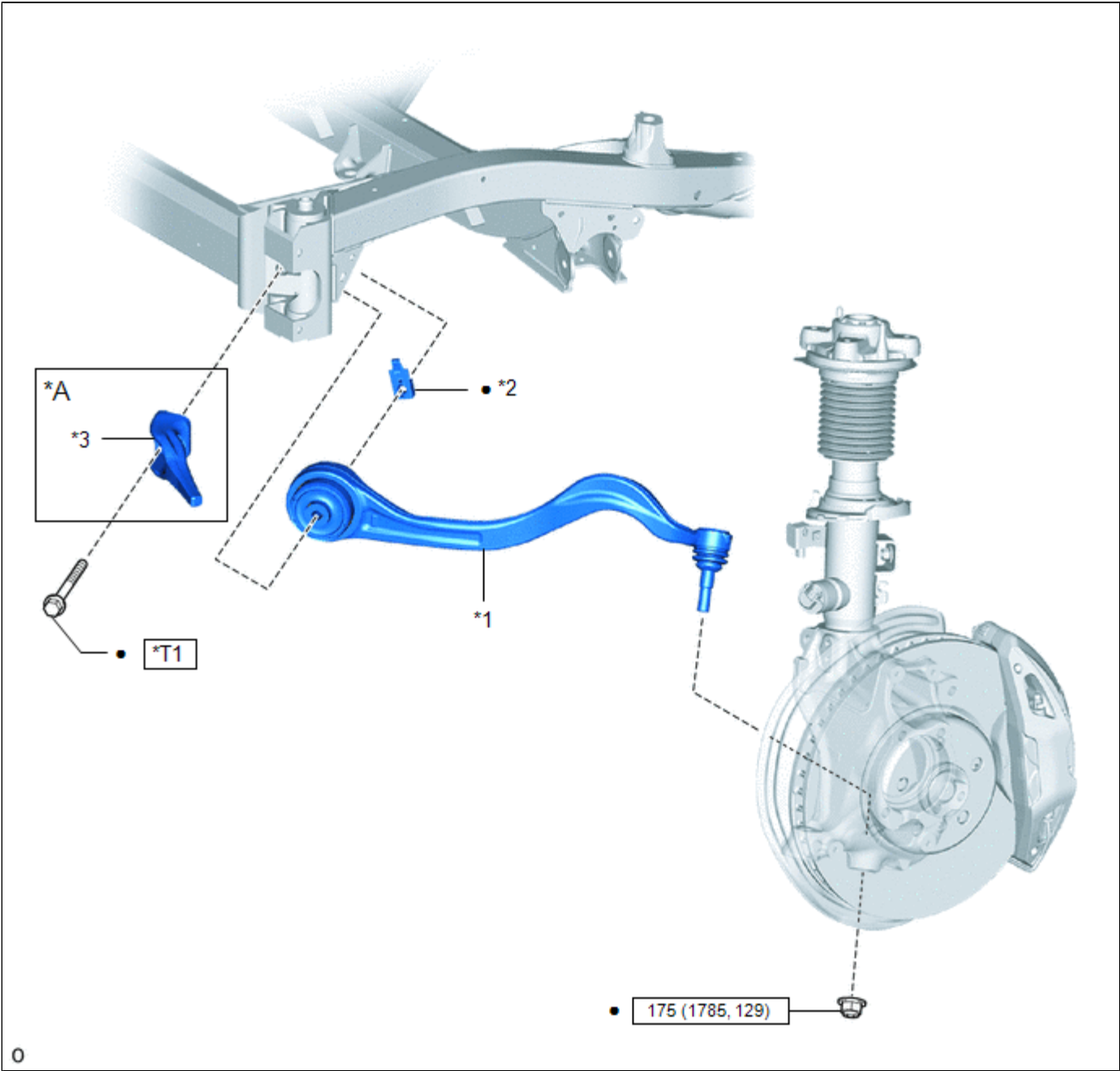
ILLUSTRATION



*1	FRONT FENDER LINER	*2	NO. 1 ENGINE UNDER COVER ASSEMBLY
*3	FRONT FENDER SPLASH FRONT SHIELD	-	-
	N*m (kgf*cm, ft.*lbf): Specified	-	-

	torque		
-------------	--------	--	--

ILLUSTRATION



*A	w/ Front Suspension Member Bracket	-	-
*1	FRONT UPPER SUSPENSION ARM ASSEMBLY	*2	CLIP NUT
*3	FRONT SUSPENSION MEMBER BRACKET	-	-
	N*m (kgf*cm, ft.*lbf): Specified torque	●	Non-reusable part

*T1	1st: 100 (1020, 74) 2nd: Turn 90°	-	-
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Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0L
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT UPPER SUSPENSION ARM: REMOVAL; 2020 MY Supra [03/2019 -]		

REMOVAL

CAUTION / NOTICE / HINT

CAUTION:

- Vehicle may slip off the vehicle hoist if the vehicle hoist is handled incorrectly.

Danger! Life-threatening injuries!

- Observe safety information on raising the vehicle using a vehicle hoist.
- For additional information see:

Click here [INFO](#)

HINT:

- Do not mix up the left and right.
- Use the same procedure for the RH side and LH side.
- The following procedure is for the LH side.

PROCEDURE

1. REMOVE FRONT WHEEL

Click here [INFO](#)

2. REMOVE FRONT FENDER LINER

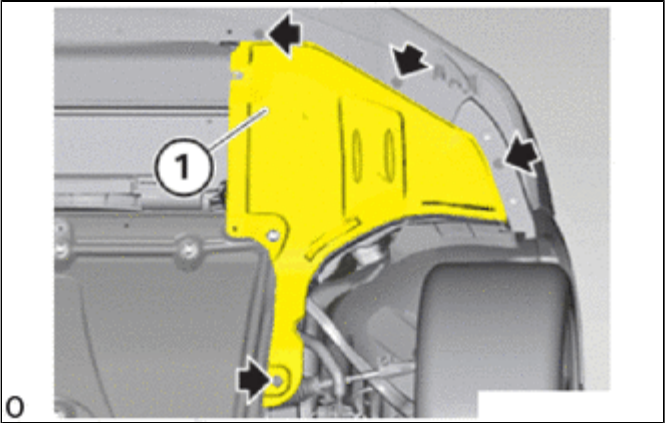
Click here [INFO](#)

3. REMOVE NO. 1 ENGINE UNDER COVER ASSEMBLY

Click here [INFO](#)

4. REMOVE FRONT FENDER SPLASH FRONT SHIELD

(a) Remove screws (arrows).

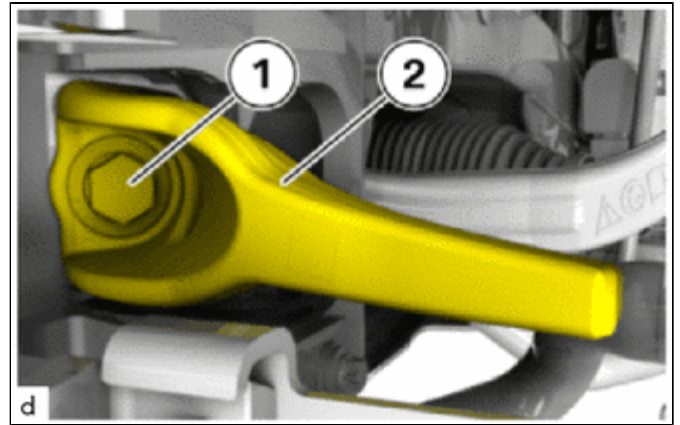


(b) Feed out the front fender splash front shield (1) to the side and remove.

5. REMOVE FRONT UPPER SUSPENSION ARM ASSEMBLY

(a) w/ Front Suspension Member Bracket:

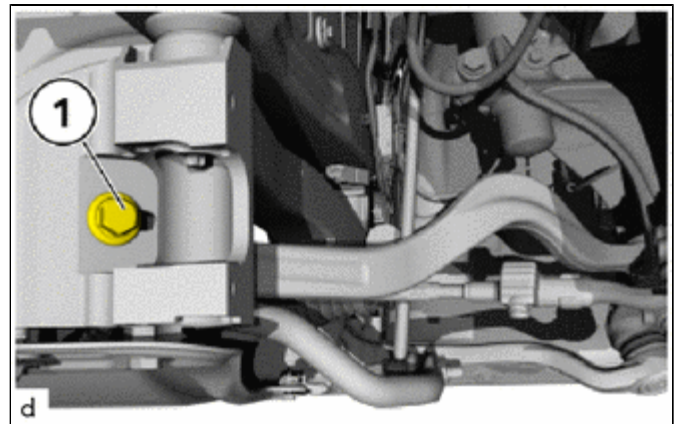
(1) Loosen 18 mm bolt (1).



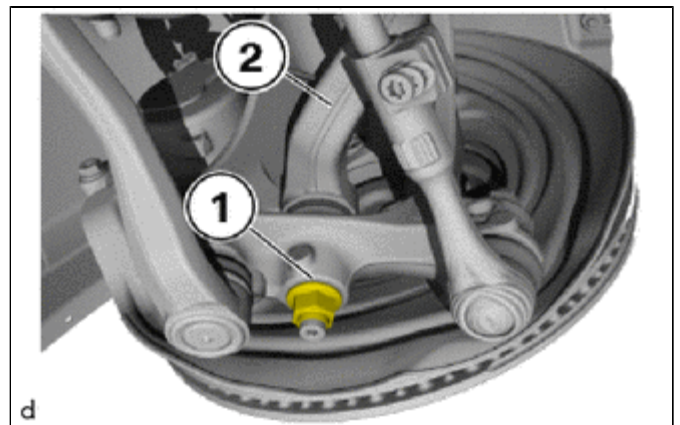
(2) Remove the front suspension member bracket sub-assembly (2).

(b) w/o Front Suspension Member Bracket:

(1) Loosen 18 mm bolt (1).



(c) Loosen the nut (1), if necessary, counter-hold the T40 "TORX" socket wrench.



(d) Remove front upper suspension arm assembly (2).

Last Modified: 09-05-2019	6.9:8.0.49	Doc ID: RM100000001JC0M
Model Year Start: 2020	Model: Supra	Prod Date Range: [03/2019 -]
Title: FRONT SUSPENSION: FRONT UPPER SUSPENSION ARM: INSTALLATION; 2020 MY Supra [03/2019 -]		

INSTALLATION

CAUTION / NOTICE / HINT

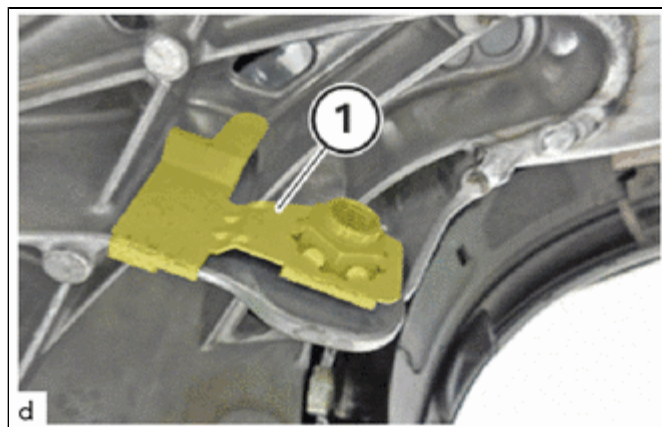
HINT:

- Do not mix up the left and right.
- Use the same procedure for the RH side and LH side.
- The following procedure is for the LH side.

PROCEDURE

1. INSTALL FRONT UPPER SUSPENSION ARM ASSEMBLY

(a) Replace the clip nut (1).



(b) Position front upper suspension arm assembly at the front suspension crossmember sub-assembly.

(c) Replace the 18 mm bolt.

(d) w/ Front Suspension Member Bracket:

(1) Position the front suspension member bracket sub-assembly and screw the 18 mm bolt in a few turns but do not tighten.

(e) w/o Front Suspension Member Bracket:

(1) Screw the 18 mm bolt in a few turns but do not tighten.

(f) Position front upper suspension arm assembly on steering knuckle.

(g) Replace nut.

(h) Tighten the nut, if necessary, counter support the T40 "TORX" socket wrench.

Torque:

175 N·m {1785 kgf·cm, 129 ft·lbf}

(i) Tighten 18 mm bolt.

Torque:

100 N·m {1020 kgf·cm, 74 ft·lbf}

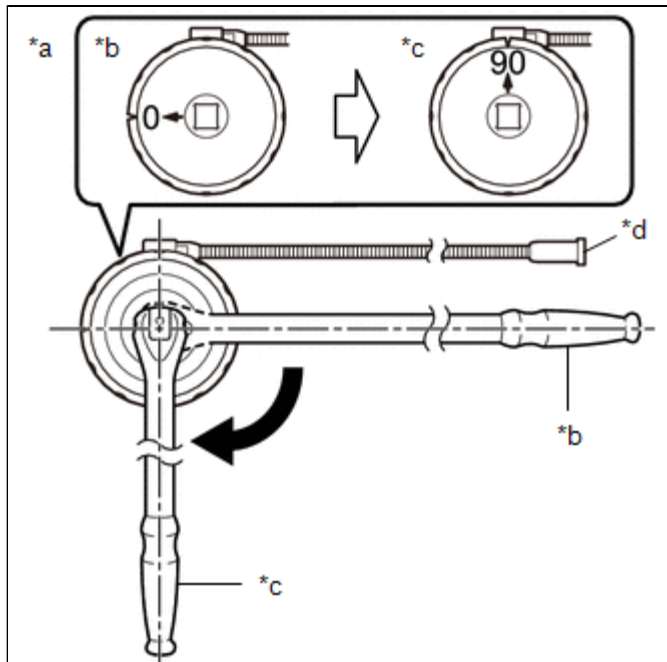
NOTICE:

Tighten the 18 mm bolt connection in the normal position.

(j) Using SST, tighten the 18 mm bolt an additional 90°.

SST: 09900-WA010

HINT:

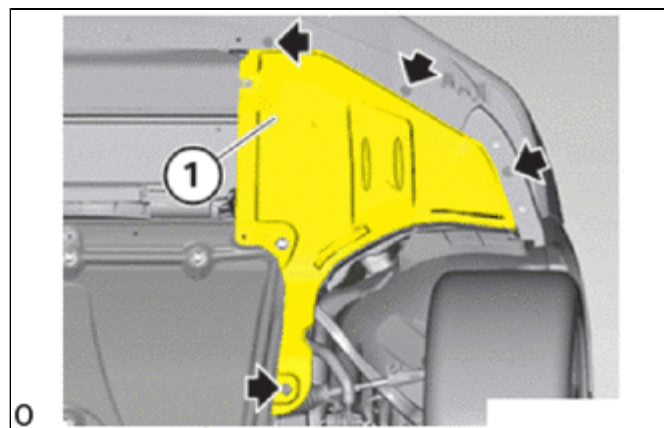


*a	Example
*b	Before Tightening
*c	After Tightening
*d	Magnetic Portion

- The magnetic portion is used to secure the gauge to the vehicle.
- After first adjusting the needle of the gauge to 0°, tighten to the specified angle.
- Perform the work procedure carefully so that the gauge, etc. does not become tilted.

2. INSTALL FRONT FENDER SPLASH FRONT SHIELD

(a) Insert the front fender splash front shield (1) at the side.



(b) Tighten screws (arrows).

Torque:

2.6 N·m {27 kgf·cm, 23 in·lbf}

3. INSTALL NO. 1 ENGINE UNDER COVER ASSEMBLY

Click here [INFO](#)

4. INSTALL FRONT FENDER LINER

Click here [INFO](#)

5. INSTALL FRONT WHEEL

Click here [INFO](#)

6. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT

Click here [INFO](#)

