

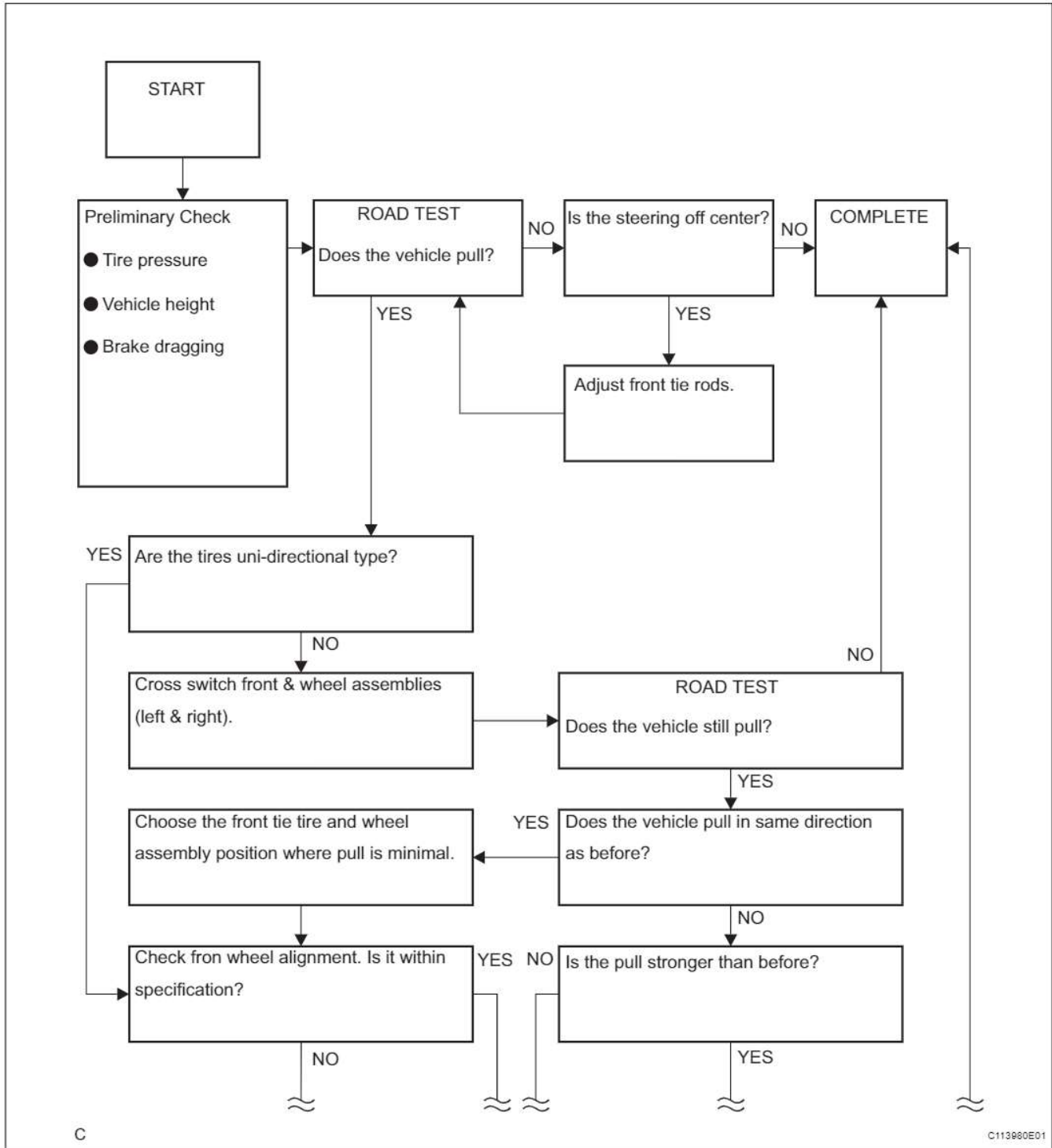
SP-6

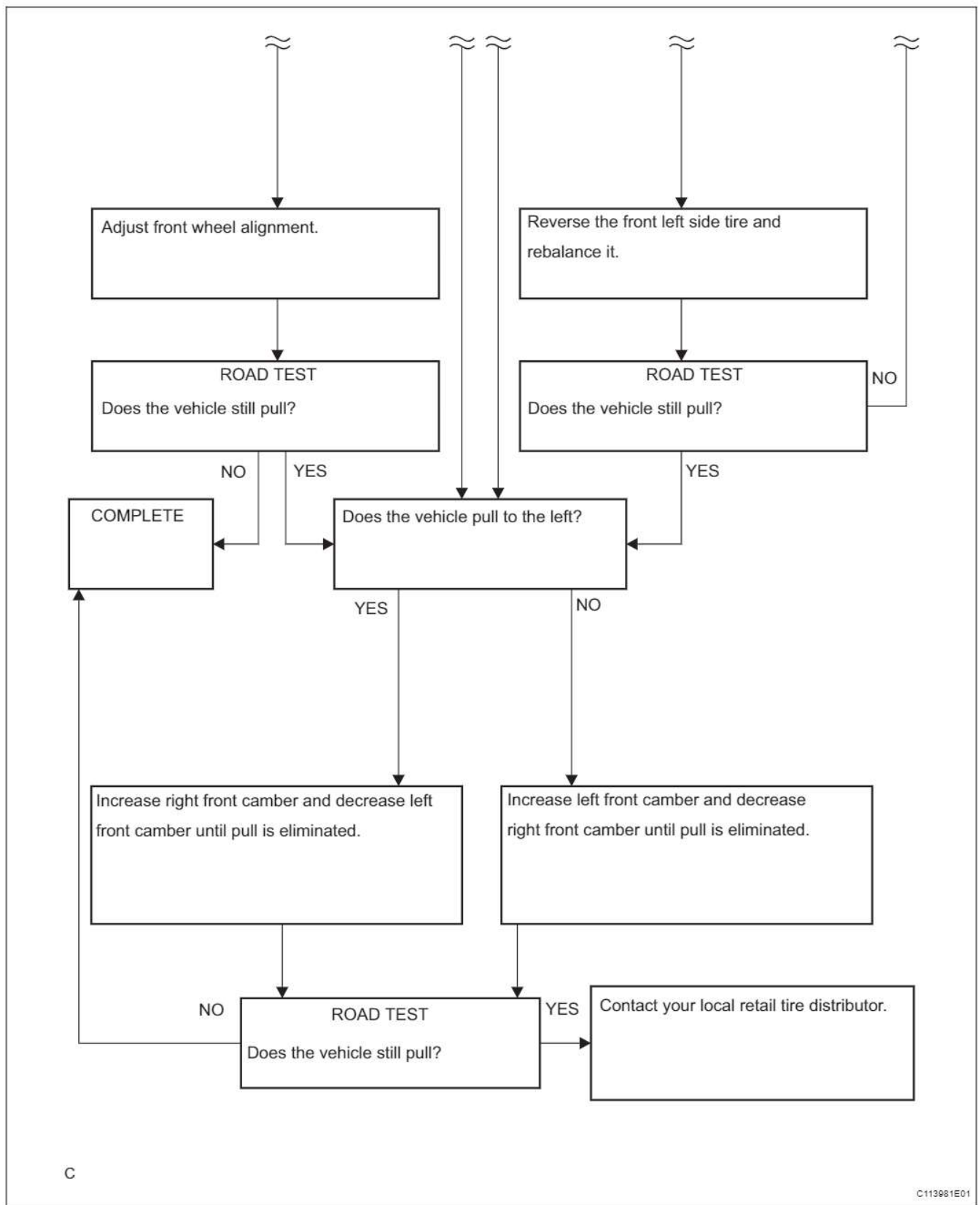
SUSPENSION – SUSPENSION SYSTEM

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

This is the repair procedure for vehicle pull.



SUSPENSION – SUSPENSION SYSTEM**SP-7****NOTICE:**

- Do not exceed 1° of cross camber.
- Do not exceed adjustment range.

SP-8

SUSPENSION – SUSPENSION SYSTEM

PROBLEM SYMPTOMS TABLE

Use the table below to help determine the cause of the problem. The numbers indicate the priority of the possible cause of the problem. Check each part in order. If necessary, replace these parts.

FRONT SUSPENSION SYSTEM

Symptom	Suspected area	See page
Bottoming	1. Vehicle (Overloaded)	-
	2. Spring (Weak)	SP-19
	3. Shock absorber (Worn)	SP-19
Sways/pitches	1. Tire (Worn or improperly inflated)	TW-4
	2. Stabilizer bar (Bent or broken)	SP-27
	3. Shock absorber (Worn)	SP-19
Front wheel shimmy	1. Tire (Worn or improperly inflated)	TW-4
	2. Wheel (Out of balance)	TW-4
	3. Shock absorber (Worn)	SP-19
	4. Front wheel alignment (Incorrect)	SP-9
	5. Rear wheel alignment (Incorrect)	SP-16
	6. Ball joint (Worn)	SP-25
	7. Hub bearing (Worn)	AH-1
	8. Steering linkage (Loose or worn)	-
Abnormal tire wear	1. Tire (Worn or improperly inflated)	TW-4
	2. Front wheel alignment (Incorrect)	SP-9
	3. Rear wheel alignment (Incorrect)	SP-16
	4. Shock absorber (Worn)	SP-19
	5. Suspension parts (Worn)	-
Vehicle pull	1. Tires	SP-5
	2. Tire pressure (incorrect)	SP-5
	3. Wheel alignment (Incorrect)	SP-5
	4. Brake (Dragging)	SP-5
	5. Steering wheel (Off center)	SP-5

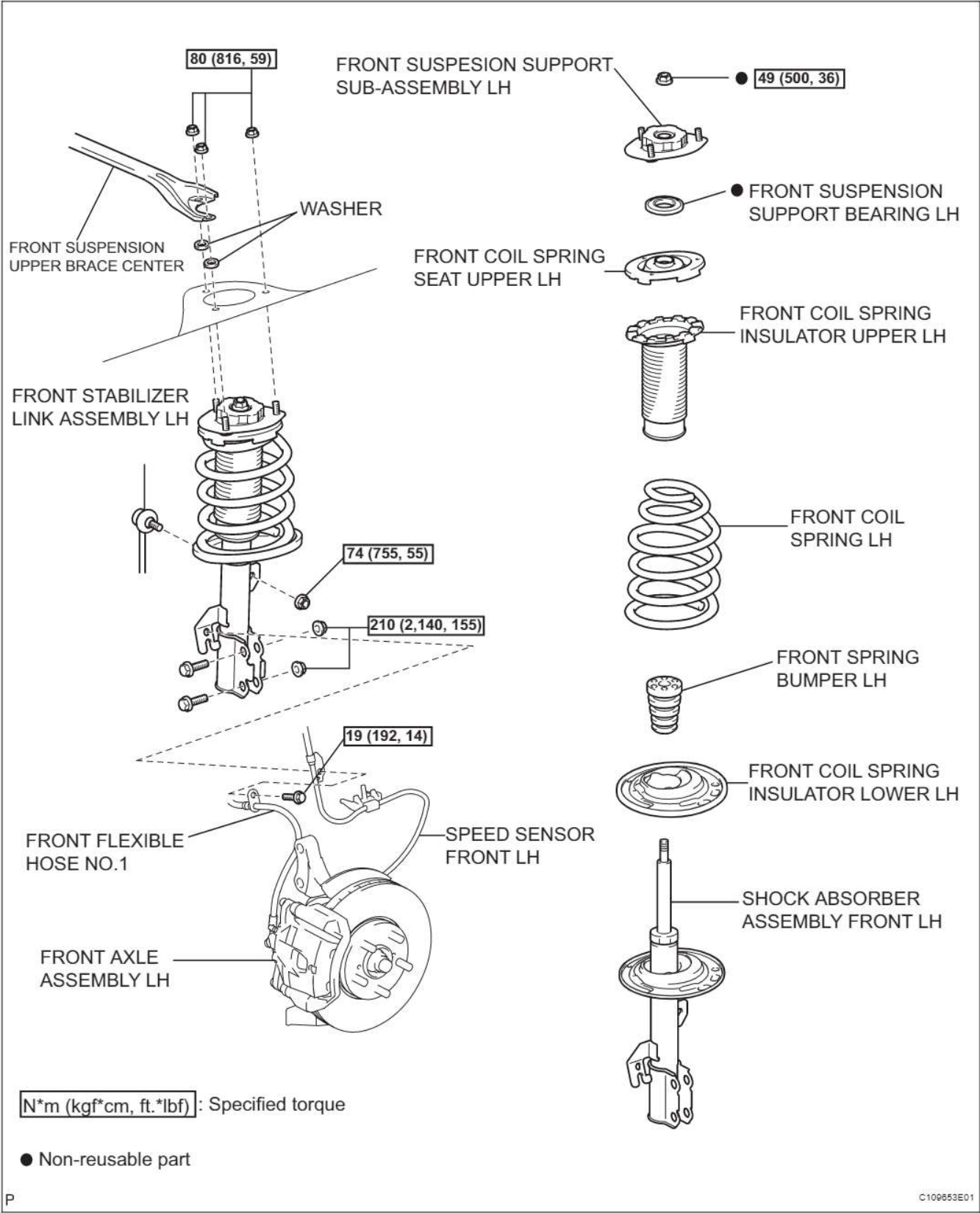
REAR SUSPENSION SYSTEM

Symptom	Suspected area	See page
Bottoming	1. Vehicle (Overloaded)	-
	2. Springs (Weak)	SP-32
	3. Shock absorbers (Worn)	SP-32
Sways/pitches	1. Tire (Worn or improperly inflated)	TW-4
	2. Stabilizer bar (Bent or broken)	SP-45
	3. Shock absorbers (Worn)	SP-32
Rear wheel shimmy	1. Tires (Worn or improperly inflated)	TW-4
	2. Wheels (Out of balance)	TW-4
	3. Shock absorbers (Worn)	SP-32
	4. Front wheel alignment (Incorrect)	SP-9
	5. Rear wheel alignment (Incorrect)	SP-16
	6. Hub bearing (Worn)	AH-1
Abnormal tire wear	1. Tires (Worn or improperly inflated)	TW-4
	2. Front wheel alignment (Incorrect)	SP-9
	3. Rear wheel alignment (Incorrect)	SP-16
	4. Shock absorbers (Worn)	SP-16
	5. Suspension parts (Worn)	-

SUSPENSION SYSTEM

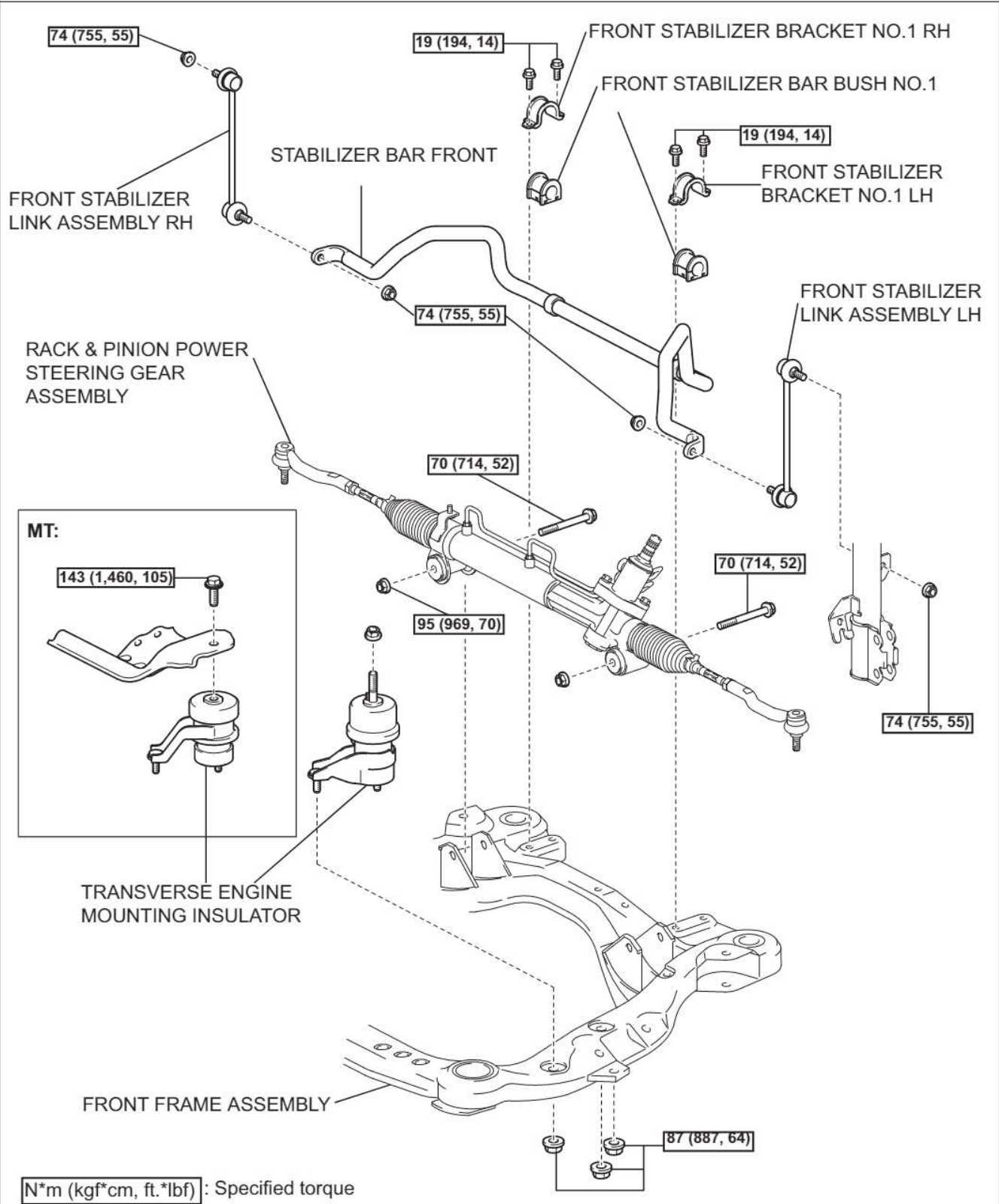
COMPONENTS

SP



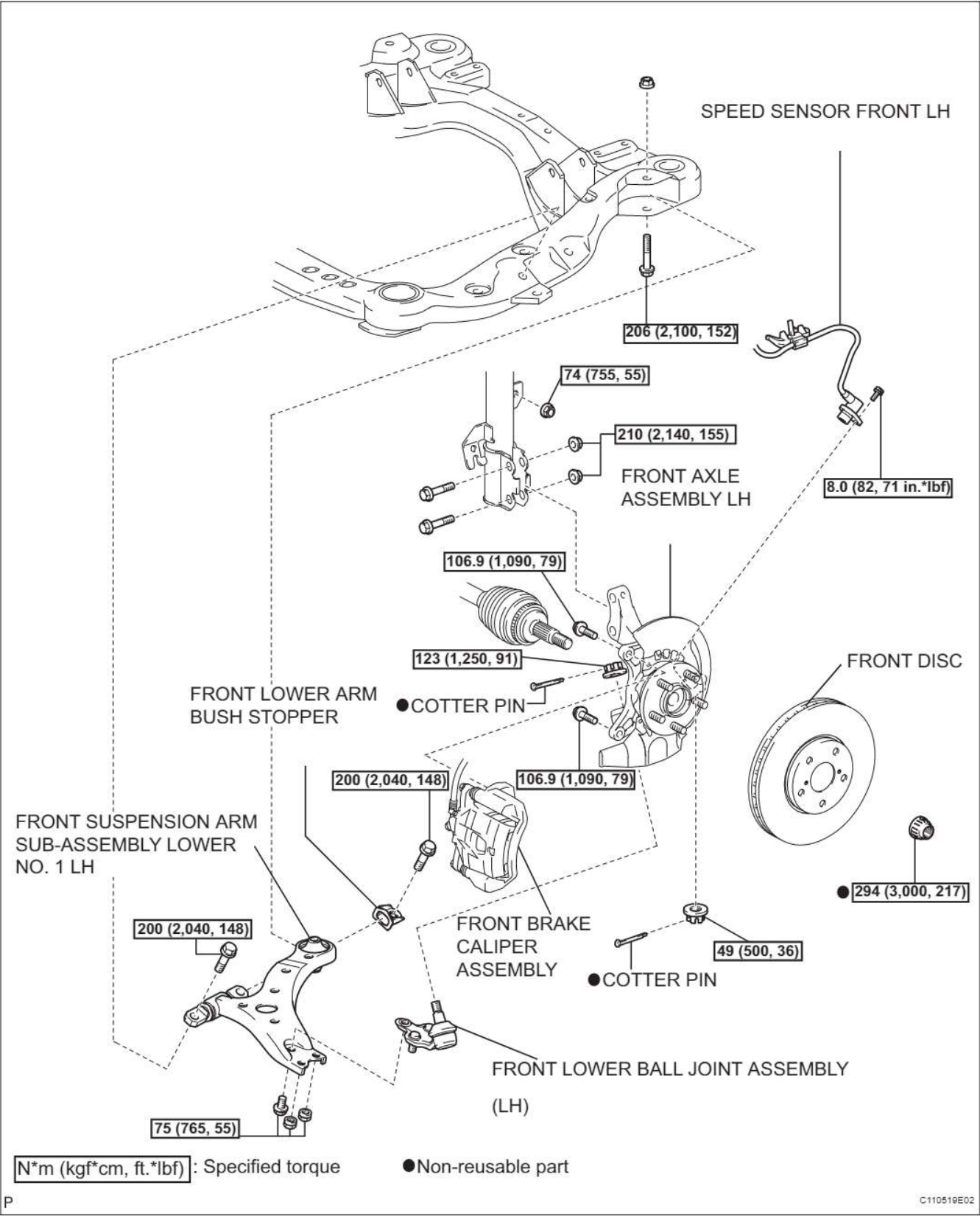
SP-2

SUSPENSION – SUSPENSION SYSTEM



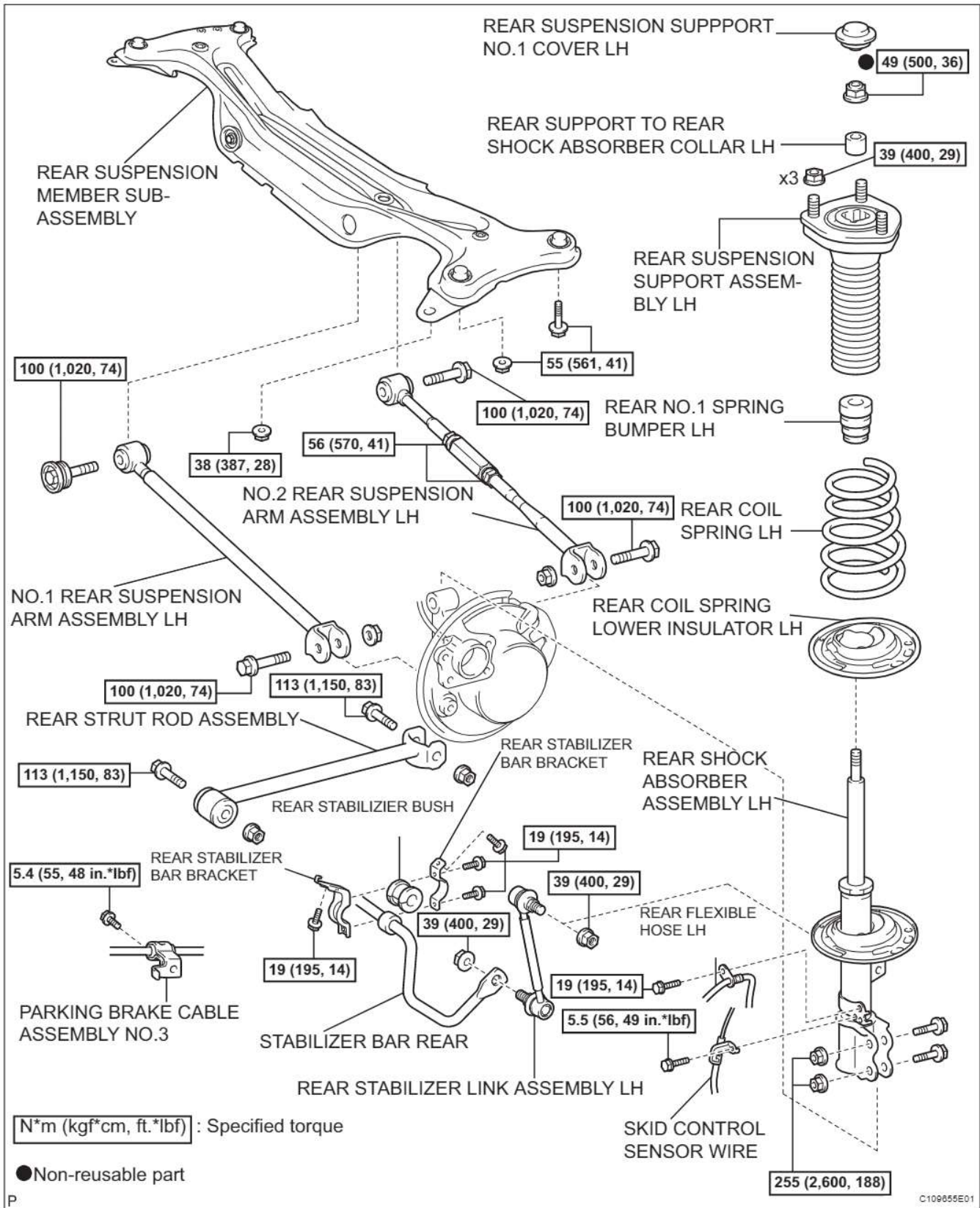
SUSPENSION – SUSPENSION SYSTEM

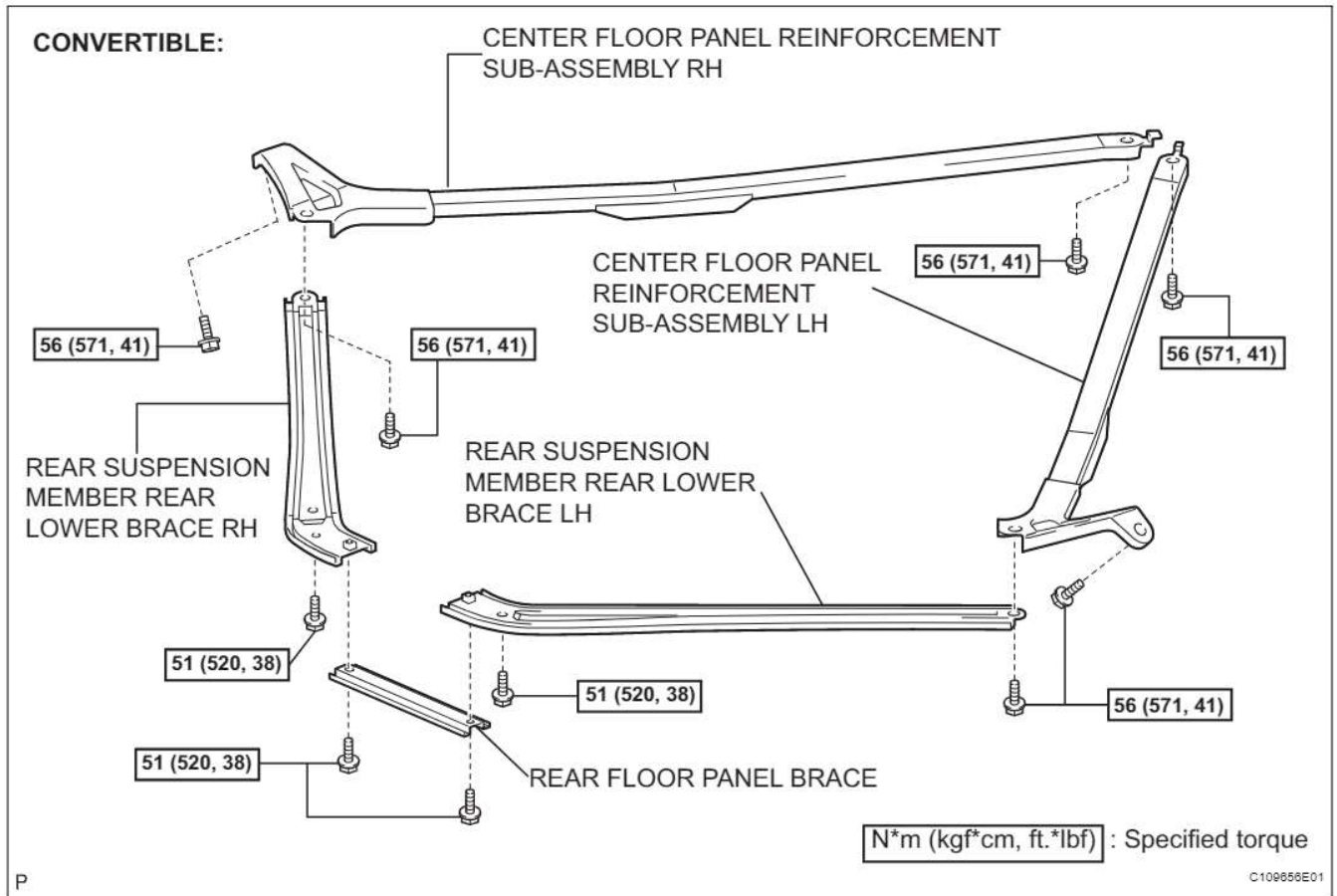
SP



SP-4

SUSPENSION – SUSPENSION SYSTEM





FRONT WHEEL ALIGNMENT

ADJUSTMENT

1. INSPECT TIRES

HINT:
See page TW-4

2. MEASURE VEHICLE HEIGHT

Vehicle height:
Vehicle height:
2AZ-FE Except SPORT

Front (A - B)	Rear (D - C)
121 mm (4.76 in.)	55 mm (2.17 in.)

2AZ-FE SPORT

Front (A - B)	Rear (D - C)
123 mm (4.84 in.)	55 mm (2.17 in.)

3MZ-FE Except SPORT 17 inch

Front (A - B)	Rear (D - C)
124 mm (4.88 in.)	57 mm (2.24 in.)

3MZ-FE Except SPORT 16 inch

Front (A - B)	Rear (D - C)
124 mm (4.88 in.)	56 mm (2.20 in.)

3MZ-FE SPORT

Front (A - B)	Rear (D - C)
125 mm (4.92 in.)	58 mm (2.28 in.)

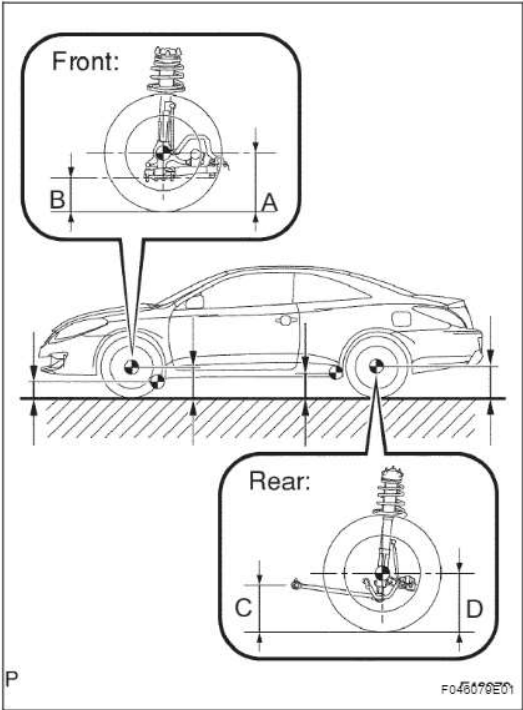
CONVERTIBLE

Front (A - B)	Rear (D - C)
123 mm (4.84 in.)	55 mm (2.17 in.)

- Measuring points:
- A: Ground clearance of front wheel center
 - B: Ground clearance of front suspension arm sub-assembly lower No. 2 set bolt head center
 - C: Ground clearance of strut rod set bolt center
 - D: Ground clearance of rear wheel center

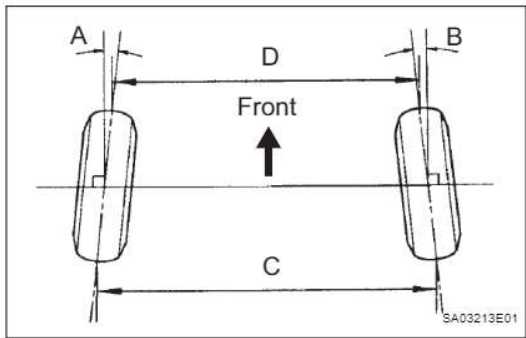
NOTICE:
Before inspecting the wheel alignment, adjust the vehicle height to the specified value.

HINT:
Bounce the vehicle at the corners up and down to stabilize the suspension and inspect the vehicle height.



SP-10

SUSPENSION – FRONT WHEEL ALIGNMENT



3. INSPECT TOE-IN

(a) Inspect toe-in.

Toe-in:

Toe-in (total)	A + B: 0° +/- 12' (0° +/- 0.2°) C - D: 0 +/- 2 mm (0 +/- 0.08 in.)
----------------	---

HINT:

- Measure "C - D" only when "A + B" cannot be measured.
- If toe-in is not within the specified range, adjust it at the rack ends.

4. ADJUST TOE-IN

- (a) Remove the rack boot set clips.
(b) Loosen the tie rod end lock nuts.
(c) Turn the right and left rack ends by an equal amount to adjust toe-in.

HINT:

Try to adjust toe-in to the center of the specified range.

- (d) Make sure that the lengths of the right and left rack ends are the same.
(e) Torque the tie rod end lock nuts.

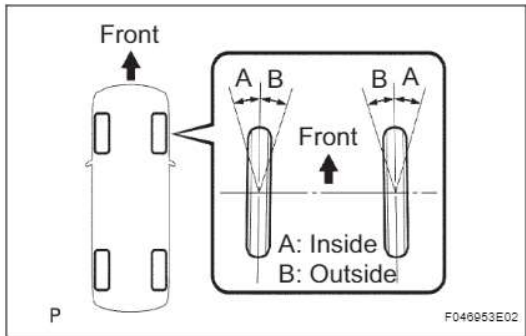
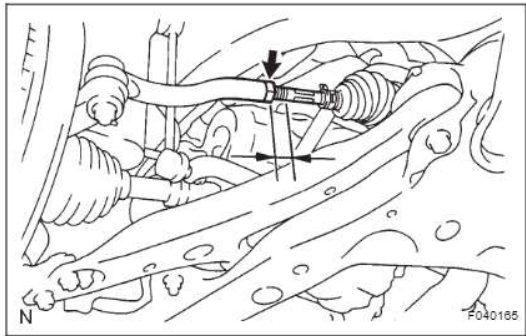
Torque: 74 N*m (755 kgf*cm, 55 ft.*lbf)

- (f) Place the boots on the seats and install the clips.

HINT:

Make sure that the boots are not twisted.

- (g) Perform VSC system calibration (See page [BC-76](#)).



5. INSPECT WHEEL ANGLE

- (a) Turn the steering wheel fully left and right and measure the turning angle.

Wheel turning angle:

2AZ-FE Except SPORT

Inside wheel	Outside wheel: Reference
36°49' +/- 2 ° (36.82° +/- 2°)	32°10' (32.17°)

2AZ-FE SPORT

Inside wheel	Outside wheel: Reference
36°45' +/- 2 ° (36.75° +/- 2°)	32°08' (32.13°)

3MZ-FE Except SPORT

Inside wheel	Outside wheel: Reference
36°43' +/- 2 ° (36.72° +/- 2°)	32°07' (32.12°)

3MZ-FE SPORT

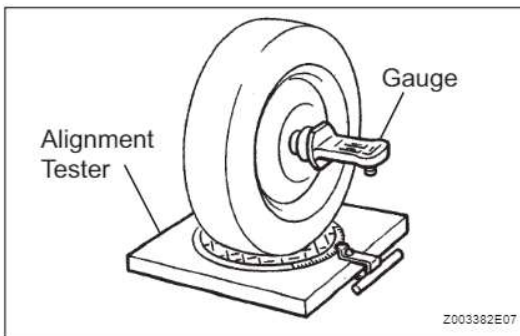
SUSPENSION – FRONT WHEEL ALIGNMENT**SP-11**

Inside wheel	Outside wheel: Reference
36°41' ± 2° (36.68° ± 2°)	32°06' (32.12°)

CONVERTIBLE

Inside wheel	Outside wheel: Reference
36°35' ± 2° 36.58° ± 2°)	32°08' (32.13°)

If the right and left inside wheel angles differ from the specified range, check and adjust the right and left rack end lengths.

**6. INSPECT CAMBER, CASTER AND STEERING AXIS INCLINATION**

- Put the front wheel on the center of the alignment tester.
- Install the camber-caster-kingpin gauge at the center of the axle hub or drive shaft.
- Inspect the camber, caster and steering axis inclination.

**Camber, caster and steering axis inclination:
2AZ-FE Except SPORT**

Camber Right-left error	Caster Right-left error	Steering axis inclination Right-left error
-0°44' ± 45' (-0.73° ± 0.75°) 45' (0.75°) or less	2°54' ± 45' (2.90° ± 0.75°) 45' (0.75°) or less	11°28' ± 45' (11.47° ± 0.75°) 45' (0.75°) or less

2AZ-FE SPORT

Camber Right-left error	Caster Right-left error	Steering axis inclination Right-left error
-0°46' ± 45' (-0.77° ± 0.75°) 45' (0.75°) or less	2°56' ± 45' (2.93° ± 0.75°) 45' (0.75°) or less	11°30' ± 45' (11.50° ± 0.75°) 45' (0.75°) or less

3MZ-FE Except SPORT

Camber Right-left error	Caster Right-left error	Steering axis inclination Right-left error
-0°45' ± 45' (-0.75° ± 0.75°) 45' (0.75°) or less	2°50' ± 45' (2.83° ± 0.75°) 45' (0.75°) or less	11°31' ± 45' (11.52° ± 0.75°) 45' (0.75°) or less

3MZ-FE SPORT

Camber Right-left error	Caster Right-left error	Steering axis inclination Right-left error
-0°46' ± 45' (-0.77° ± 0.75°) 45' (0.75°) or less	2°53' ± 45' (2.88° ± 0.75°) 45' (0.75°) or less	11°33' ± 45' (11.55° ± 0.75°) 45' (0.75°) or less

CONVERTIBLE**SP**

Camber Right-left error	Caster Right-left error	Steering axis inclination Right-left error
-0°44' +- 45' (-0.73° +- 0.75°) 45' (0.75°) or less	2°51' +- 45' (2.85° +- 0.75°) 45' (0.75°) or less	11°31' +- 45' (11.52° +- 0.75°) 45' (0.75°) or less

Check the suspension parts for damaged and/or worn out parts if the caster and steering axis inclination are not within the specified range after the camber has been correctly adjusted.

7. ADJUST CAMBER

NOTICE:

Inspect toe-in after the camber has been adjusted.

- (a) Remove the front wheel.
- (b) Remove the 2 nuts on the lower side of the shock absorber.

NOTICE:

Keep the bolts inserted.

- (c) Clean the installation surfaces of the shock absorber and the steering knuckle.
- (d) Temporarily install the 2 nuts.

- (e) Full push or pull the front axle hub in the direction of the required adjustment.
- (f) Tighten the nuts.

Torque: 210 N*m (2,140 kgf*cm, 155 in.*lbf)

NOTICE:

Keep the bolts from rotating and torque the nuts when installing the nuts.

- (g) Install the front wheel.
Torque: 103 N*m (1,050 kgf*cm, 76 in.*lbf)

- (h) Check the camber.
If the measured value is not within the specification, calculate the required adjustment amount using the formula below.

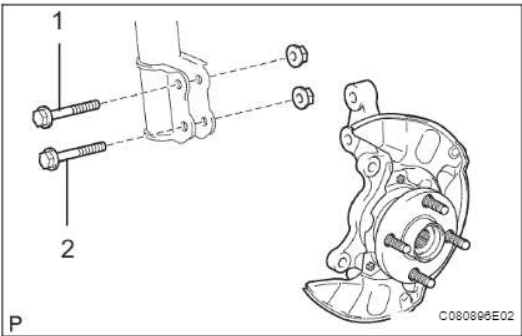
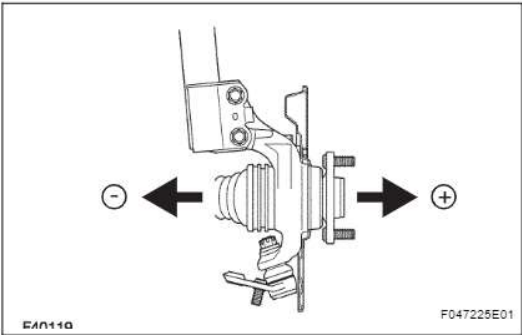
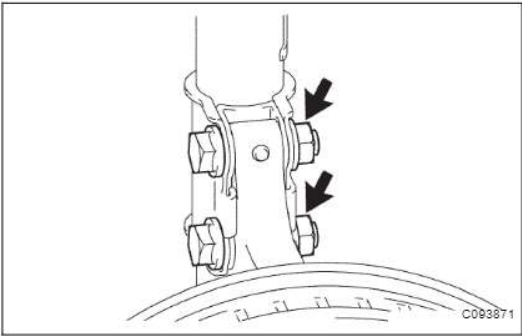
OK:

(Camber adjustment amount) = Specified range medium - measured value

Check installed bolts combination. Select appropriate bolts from the table below to adjust the camber to within the specified range.

Move the axle toward (+) in step (e)	Refer to table (1) (Move the axle toward positive side)
Move the axle toward (-) in step (e)	Refer to table (2) (Move the axle toward negative side)

SP



SUSPENSION – FRONT WHEEL ALIGNMENT**SP-13**

Table (1) (Move the axle toward the positive side)

Installed Bolt Adjusting Value	1							
	2							
-1° 30' to -1° 15'								G
-1° 15' to -1° 00'							G	A
-1° 00' to -0° 45'						G	A	B
-0° 45' to -0° 30'					G	A	B	C
-0° 30' to -0° 15'				G	A	B	C	D
-0° 15' to 0°		G	A	B	C	D	E	
0° to 0° 15'	A	B	C	D	E	F		
0° 15' to 0° 30'	B	C	D	E	F			
0° 30' to 0° 45'	C	D	E	F				
0° 45' to 1° 00'	D	E	F					
1° 00' to 1° 15'	E	F						
1° 15' to 1° 30'	F							

Selected Bolt Combination

	A	B	C	D	E	F	G
1							
2							

P

C111317E01

The body and suspension may be damaged if the camber is not correctly adjusted according to the above table.

NOTICE:

Replace the nut with a new one when replacing the bolt.

- (i) Repeat the steps mentioned above. At step (b), replace 1 or 2 selected bolts.

HINT:

Replace one bolt at a time when replacing 2 bolts.

SP-14

SUSPENSION – FRONT WHEEL ALIGNMENT

The body and suspension may be damaged if the camber is not correctly adjusted according to the above table.

Table (2) (Move the axle toward the negative side)

Installed Bolt Adjusting Value	1							
	2							
-1° 30' to -1° 15'	F							
-1° 15' to -1° 00'	E	F						
-1° 00' to -0° 45'	D	E	F					
-0° 45' to -0° 30'	C	D	E	F				
-0° 30' to -0° 15'	B	C	D	E	F			
-0° 15' to 0°	A	B	C	D	E	F		
0° to 0° 15'		G	A	B	C	D	E	
0° 15' to 0° 30'			G	A	B	C	D	
0° 30' to 0° 45'				G	A	B	C	
0° 45' to 1° 00'					G	A	B	
1° 00' to 1° 15'						G	A	
1° 15' to 1° 30'							G	

Selected Bolt Combination

	A	B	C	D	E	F	G
1							
2							

The body and suspension may be damaged if the camber is not correctly adjusted according to the above table.

NOTICE:
Replace the nut with a new one when replacing the bolt.

SUSPENSION – FRONT WHEEL ALIGNMENT**SP-15**

- (j) Repeat the steps mentioned above. At step (b), replace 1 or 2 selected bolts.
HINT:
Replace one bolt at a time when replacing 2 bolts.

SP

REAR WHEEL ALIGNMENT

ADJUSTMENT

1. INSPECT TIRES

HINT:
See page TW-4

2. MEASURE VEHICLE HEIGHT

HINT:
See page SP-9

NOTICE:
Before inspecting wheel alignment, adjust the vehicle height to the specified value.

3. INSPECT TOE-IN

Coupe:

Toe-in (total)	A + B: 0°24' +/- 12' (0.40° +/- 0.20°) C - D: 4 +/- 2 mm (0.16 +/- 0.08 in.)
-------------------	---

Convertible:

Toe-in (total)	A + B: 0°26' +/- 12' (0.43° +/- 0.20°) C - D: 4 +/- 2 mm (0.16 +/- 0.08 in.)
-------------------	---

HINT:

- Measure "C - D" only when "A + B" cannot be measured.
- If toe-in is not within the specified range, inspect the suspension parts and replace them if necessary.

4. ADJUST TOE-IN

(a) Measure the lengths of the right and left No. 2 lower suspension arms.

**No. 2 lower suspension arm length difference:
1.5 mm (0.06 in.) or less**

If the left-right difference is larger than 1.5 mm (0.06 in.), adjust it by following the procedures below.

(b) Loosen the 2 lock nuts.
(c) Turn the right and left adjusting tubes by an equal amount to adjust toe-in.

HINT:

- Try to adjust toe-in to the center value.
- One turn of each adjusting tube will adjust toe-in by approximately 1.2° (1°12'), 10.8 mm (0.425 in.).

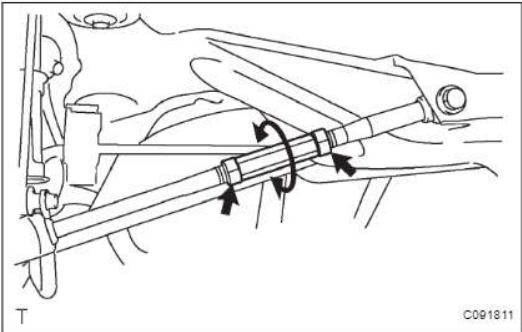
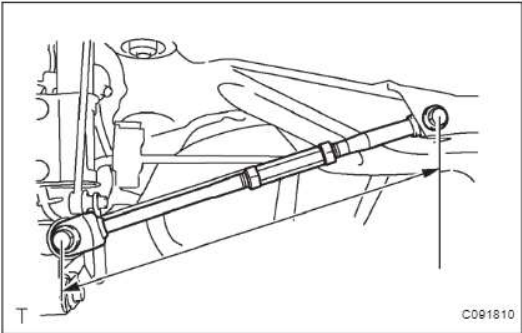
(d) Torque the 2 lock nuts.
Torque: 56 N*m (570 kgf*cm, 41 ft.*lbf)

5. INSPECT CAMBER

Coupe (sport pack):

	2AZ-FE	3MZ-FE
Camber	-1°21' +/- 45' (-1.35° +/- 0.75°)	-1°23' +/- 45' (-1.38° +/- 0.75°)
Right-left error	45' (0.75°) or less	45' (0.75°) or less

SP



SUSPENSION – REAR WHEEL ALIGNMENT**SP-17****Coupe (except sport pack):**

	2AZ-FE	3MZ-FE
Camber	-1°21' +/- 45' (-1.35° +/- 0.75°)	-1°22' +/- 45' (-1.37° +/- 0.75°)
Right-left error	45' (0.75°) or less	45' (0.75°) or less

Convertible:

Camber	-1°20' +/- 45' (-1.33° +/- 0.75°)
Right-left error	45' (0.75°) or less

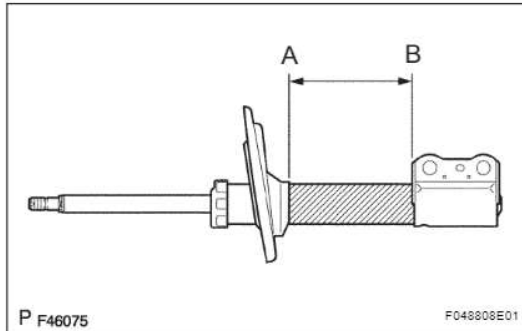
HINT:

Camber is not adjustable. If the measurement is not within the specification, inspect the suspension parts for damage and/or wear, and replace them if necessary.

SP

SUSPENSION – FRONT SHOCK ABSORBER**SP-23****DISPOSAL****HINT:**

Dispose the RH side following the same procedures as with the LH side.

**1. DISPOSE OF SHOCK ABSORBER ASSEMBLY FRONT LH**

- (a) Fully extend the shock absorber rod.
- (b) Using a drill, make a hole in the cylinder between A and B as shown in the illustration to discharge the gas inside.

CAUTION:

- Be careful when drilling because shards of metal may fly about, so always use the proper safety equipment.
- The gas is colorless, odorless and non-poisonous.

SP

SP-18

SUSPENSION – FRONT SHOCK ABSORBER

FRONT SHOCK ABSORBER

REMOVAL

HINT:

- COMPONENTS: See page [SP-1](#)
- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.

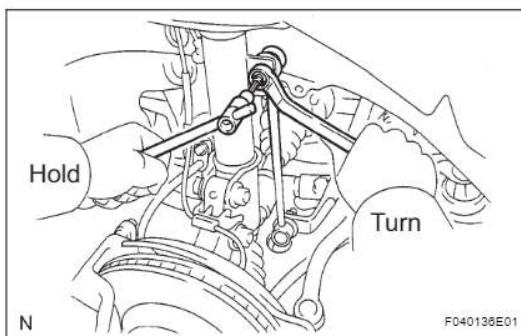
1. REMOVE FRONT WHEEL

2. DISCONNECT FRONT STABILIZER LINK ASSEMBLY LH

- (a) Remove the nut and disconnect the front stabilizer link assembly LH from the shock absorber assembly front LH.

HINT:

Use a hexagon (6 mm) wrench to hold the stud if the ball joint turns together with the nut.

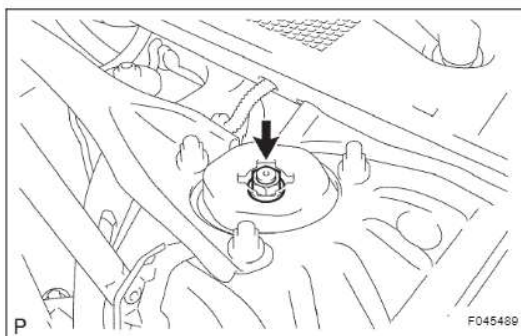


3. REMOVE FRONT SHOCK ABSORBER ASSEMBLY

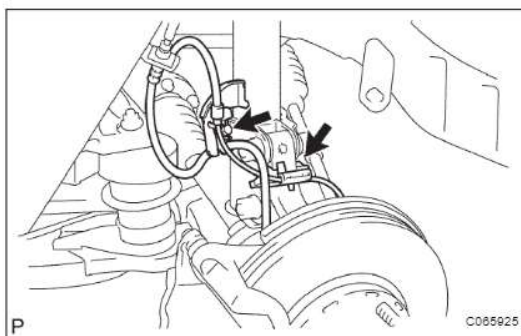
- (a) Loosen the lock nut.

HINT:

If not disassembling the shock absorber it is not necessary to loosen the nut.



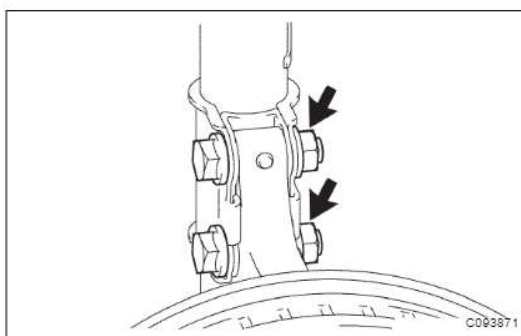
- (b) Remove the bolt and disconnect the front flexible hose No.1 and speed sensor front LH wire harness.



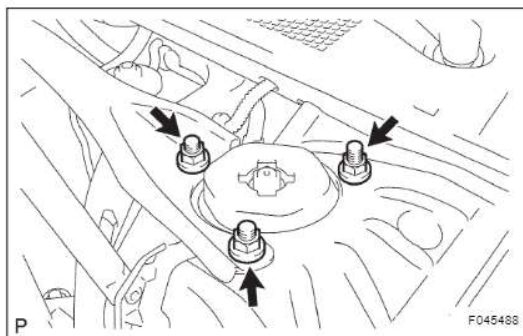
- (c) Remove the 2 nuts and 2 bolts on the lower side of the front shock absorber with coil spring.

NOTICE:

Keep the bolts inserted.



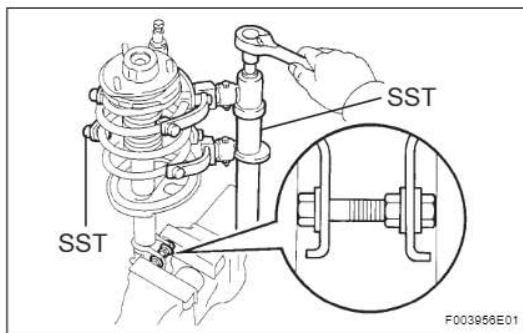
SP

SUSPENSION – FRONT SHOCK ABSORBER**SP-19**

- (d) Remove the 3 nuts on the upper side of the front shock absorber with coil spring.
- (e) Remove the front shock absorber with coil spring.

NOTICE:

Be careful not to drop the 2 washers that are installed under the front suspension upper brace center.

**DISASSEMBLY****1. FIX FRONT SHOCK ABSORBER ASSEMBLY**

- (a) As shown in the illustration to the left, 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.

2. REMOVE SHOCK ABSORBER ASSEMBLY FRONT LH

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

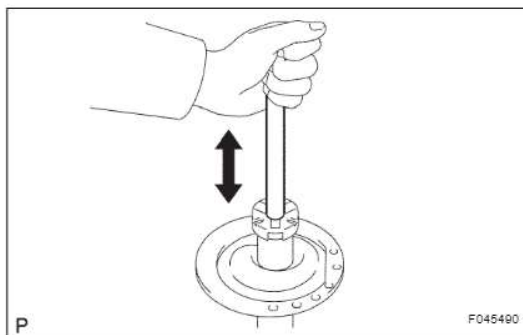
NOTICE:

Do not use an impact wrench. It will damage the SST.

HINT:

Use 2 of the same types of SST.

- (b) Remove the front suspension support sub-assembly LH, front suspension support bearing LH, front coil spring seat upper LH, front coil spring insulator upper LH, front coil spring LH, front spring bumper LH and front coil spring insulator lower LH from the shock absorber assembly front LH.

**INSPECTION****1. INSPECT SHOCK ABSORBER ASSEMBLY FRONT LH**

- (a) Compress and extend the shock absorber rod 4 or more times. Check that there is no abnormal resistance or sound.

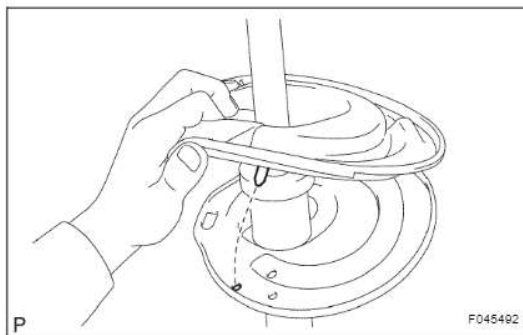
If there is any abnormality, replace the shock absorber assembly front LH with a new one.

NOTICE:

When disposing of the shock absorber assembly front LH (See page [SP-22](#)).

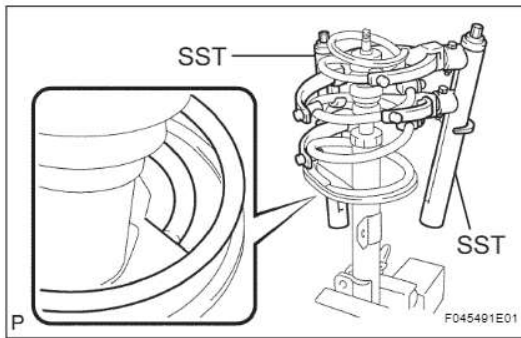
REASSEMBLY**1. INSTALL SHOCK ABSORBER ASSEMBLY FRONT LH**

- (a) Install the front coil spring insulator lower LH onto the shock absorber assembly front LH.
- (b) Install the front spring bumper LH to the piston rod.



SP-20

SUSPENSION – FRONT SHOCK ABSORBER



- (c) Compress the front coil spring LH using SST.

SST 09727-30021 (09727-00010, 09727-00021)

NOTICE:

Do not use an impact wrench. It will damage the SST.

HINT:

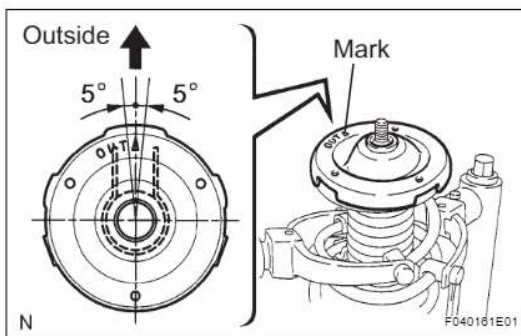
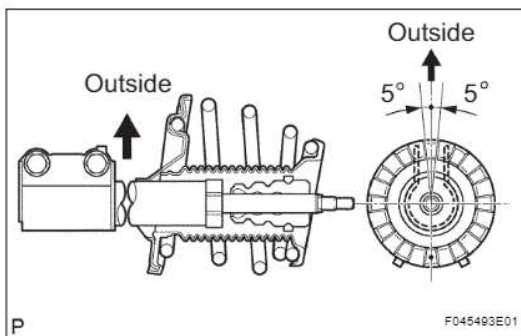
Use 2 of the same type of SST.

- (d) Install the front coil spring LH to the shock absorber assembly front LH.

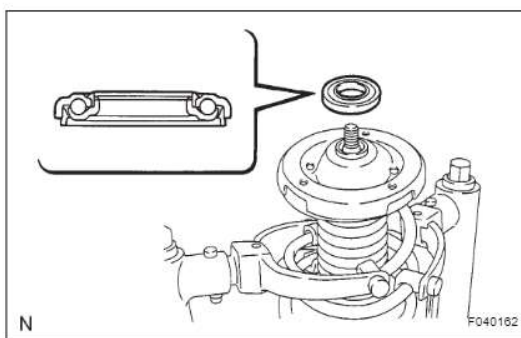
HINT:

Fit the lower end of the front coil spring LH into the gap of the front coil spring lower LH.

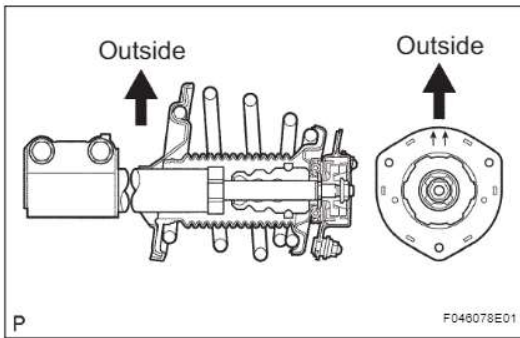
- (e) Install the front coil spring insulator upper LH as shown in the illustration.



- (f) Install the front coil spring seat upper LH to the shock absorber assembly front LH with the mark facing to the outside of the vehicle.



- (g) Install a new front suspension support bearing LH as shown in the illustration.

SUSPENSION – FRONT SHOCK ABSORBER**SP-21**

- (h) Install the front suspension support sub-assembly LH with the mark facing the outside of the vehicle.
- (i) Temporarily tighten a new lock nut.
- (j) Remove the SST slowly in order to release the coil spring.

SST 09727-30021 (09727-00010, 09727-00021)

INSTALLATION**1. INSTALL FRONT SHOCK ABSORBER ASSEMBLY**

- (a) Install the front shock absorber with coil spring.
- (b) Install the 3 nuts to the upper side of the front shock absorber with coil spring.

Torque: 80 N*m (816 kgf*cm, 59 ft.*lbf)

NOTICE:

Be careful not to drop the 2 washers that are installed under the front suspension upper brace center.

- (c) Install the 2 bolts and 2 nuts to the lower side of the front shock absorber with coil spring.

Torque: 210 N*m (2,140 kgf*cm, 155 ft.*lbf)

NOTICE:

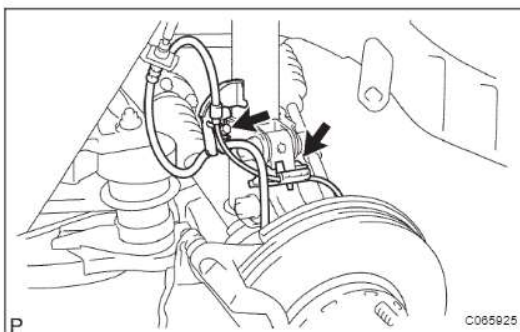
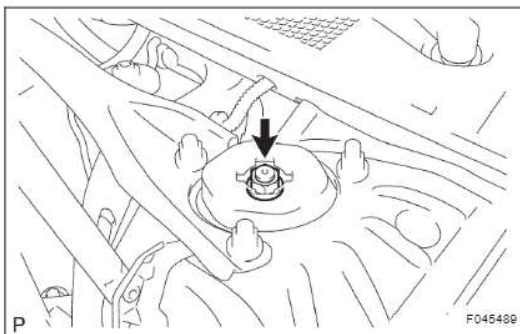
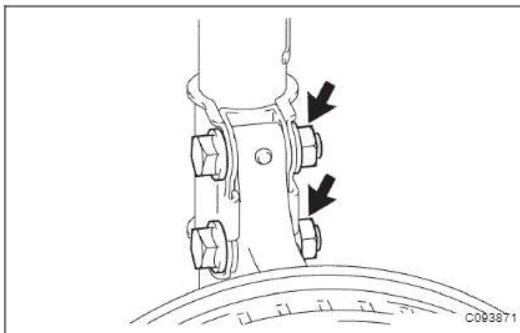
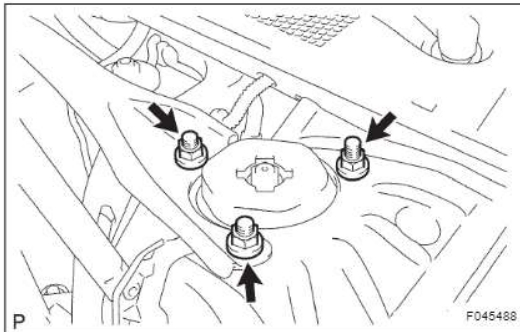
Keep the bolts from rotating and torque the 2 nuts when installing the 2 nuts.

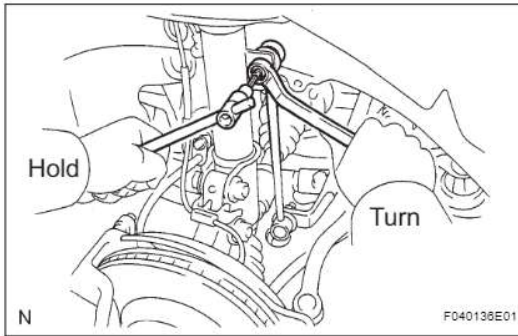
- (d) Fully tighten the lock nut.

Torque: 49 N*m (500 kgf*cm, 36 ft.*lbf)

- (e) Install the front flexible hose No. 1 and speed sensor front LH with the bolt.

Torque: 19 N*m (192 kgf*cm, 14 ft.*lbf)



SP-22**SUSPENSION – FRONT SHOCK ABSORBER**

- 2. INSTALL FRONT STABILIZER LINK ASSEMBLY LH**
 - (a) Install the front stabilizer link assembly LH with the nut.
Torque: 74 N*m (755 kgf*cm, 55 ft.*lbf)
HINT:
Use a hexagon (6 mm) wrench to hold the stud if the ball joint turns together with the nut.
- 3. INSTALL FRONT WHEEL**
Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)
- 4. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT**
HINT:
See page [SP-9](#)

SP

FRONT SUSPENSION NO. 1 LOWER ARM

REMOVAL

HINT:

- COMPONENTS: See page [SP-1](#)
- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.

1. REMOVE ENGINE ASSEMBLY WITH TRANSAXLE (3MZ-FE ENGINE TYPE)

HINT:

See page [EM-64](#)

2. REMOVE ENGINE ASSEMBLY WITH TRANSAXLE (2AZ-FE ENGINE TYPE)

HINT:

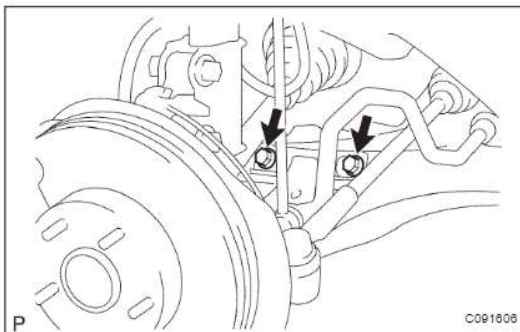
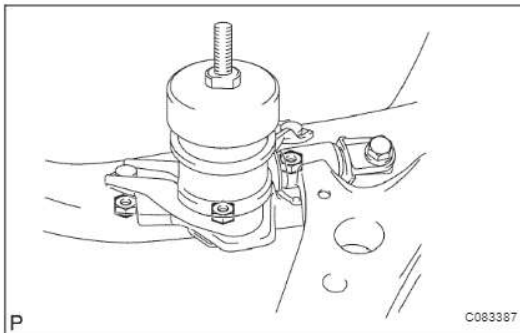
See page [EM-61](#)

3. REMOVE TRANSVERSE ENGINE MOUNTING INSULATOR (AUTOMATIC TRANSAXLE)

- (a) Remove the 3 nuts and transverse engine mounting insulator.

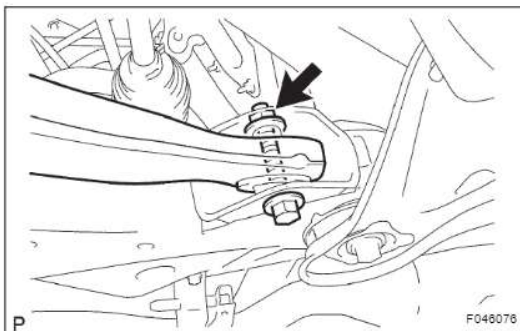
4. REMOVE TRANSVERSE ENGINE MOUNTING INSULATOR (MANUAL TRANSAXLE)

- (a) Remove the 3 nuts and transverse engine mounting insulator.
(b) Remove the 4 bolts and bracket from the manual transmission.



5. REMOVE FRONT SUSPENSION NO.1 LOWER ARM SUB-ASSEMBLY

- (a) Remove the 2 bolts on the front side of the front suspension arm sub-assembly lower No. 1 LH.
(b) Remove the bolt and nut on the rear side of the front suspension arm sub-assembly lower No. 1 LH.
(c) Remove the front suspension arm sub-assembly lower No. 1 LH.
(d) Remove the front lower arm bush stopper from the front suspension arm sub-assembly lower No. 1 LH.



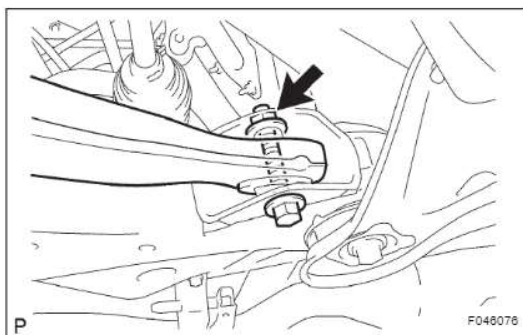
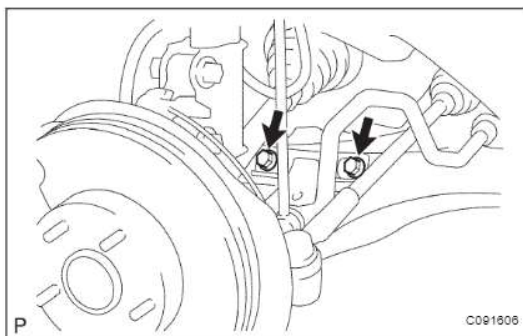
SP-24

SUSPENSION – FRONT SUSPENSION NO. 1 LOWER ARM

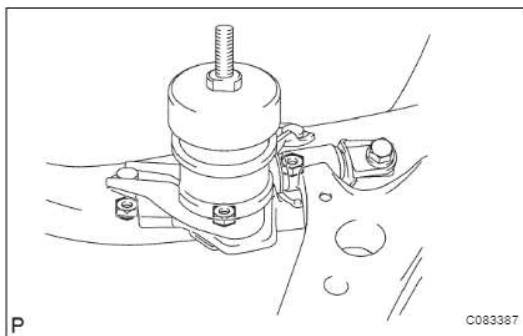
INSTALLATION

1. INSTALL FRONT SUSPENSION NO.1 LOWER ARM SUB-ASSEMBLY

- (a) Install the front lower arm bush stopper to the front suspension arm sub-assembly lower No. 1 LH.
- (b) Install the 2 bolts on the front side of the front suspension arm sub-assembly lower No. 1 LH.
Torque: 200 N*m (2,040 kgf*cm, 148 ft.*lbf)



- (c) Install the bolt and nut on the rear side of the front suspension arm sub-assembly lower No. 1 LH.
Torque: 206 N*m (2,100 kgf*cm, 152 ft.*lbf)



2. INSTALL TRANSVERSE ENGINE MOUNTING INSULATOR (AUTOMATIC TRANSAXLE)

- (a) Install the transverse engine mounting insulator with the 3 nuts.
Torque: 87 N*m (887 kgf*cm, 64 in.*lbf)

3. INSTALL TRANSVERSE ENGINE MOUNTING INSULATOR (MANUAL TRANSAXLE)

- (a) Install the bracket to the manual transmission with the 4 bolts.
Torque: 64 N*m (653 kgf*cm, 47 ft.*lbf)
- (b) Install the transverse engine mounting insulator with the 3 nuts.
Torque: 87 N*m (887 kgf*cm, 64 ft.*lbf)

4. INSTALL ENGINE ASSEMBLY WITH TRANSAXLE (2AZ-FE ENGINE TYPE)

HINT:
See page [EM-69](#)

5. INSTALL ENGINE ASSEMBLY WITH TRANSAXLE (3MZ-FE ENGINE TYPE)

HINT:
See page [EM-75](#)

SP

INSTALLATION

1. INSTALL FRONT LOWER BALL JOINT ASSEMBLY

- (a) Install the lower ball joint assembly front LH to the steering knuckle with the castle nut.

Torque: 123 N*m (1,250 kgf*cm, 91 ft.*lbf)

NOTICE:

Further tighten the nut up to 60° if the holes for the cotter pin are not aligned.

- (b) Install a new cotter pin to the steering knuckle.

NOTICE:

If the holes for the cotter pin are not aligned, tighten the nut further up to 60°.

2. INSTALL FRONT AXLE ASSEMBLY LH (See page [AH-8](#))

SP

3. INSTALL FRONT SUSPENSION NO.1 LOWER ARM SUB-ASSEMBLY (See page [DS-15](#))

4. INSTALL TIE ROD ASSEMBLY LH (See page [DS-15](#))

5. INSTALL FRONT DISC

6. INSTALL FRONT DISC BRAKE CALIPER ASSEMBLY LH (See page [AH-8](#))

7. INSTALL SPEED SENSOR FRONT LH (See page [DS-15](#))

8. INSTALL FRONT AXLE HUB LH NUT (See page [DS-16](#))

9. INSTALL FRONT WHEEL

Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)

10. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT

HINT:

See page [SP-9](#)

11. CHECK ABS SPEED SENSOR SIGNAL (w/ VSC)

HINT:

See page [BC-70](#)

12. CHECK ABS SPEED SENSOR SIGNAL (W/O VSC)

HINT:

See page [BC-6](#)

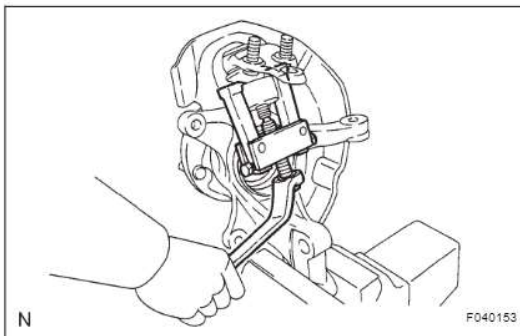
FRONT LOWER BALL JOINT

REMOVAL

HINT:

- COMPONENTS: See page [SP-1](#)
- 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 AXLE HUB LH NUT (See page [DS-4](#))
3. DISCONNECT SPEED SENSOR FRONT LH (See page [DS-4](#))
4. DISCONNECT FRONT DISC BRAKE CALIPER ASSEMBLY LH (See page [AH-5](#))
5. REMOVE FRONT DISC
6. DISCONNECT TIE ROD ASSEMBLY LH (See page [DS-5](#))
7. DISCONNECT FRONT SUSPENSION NO.1 LOWER ARM SUB-ASSEMBLY LH (See page [DS-5](#))
8. REMOVE FRONT AXLE ASSEMBLY LH (See page [AH-5](#))
9. REMOVE FRONT LOWER BALL JOINT ASSEMBLY
 - (a) Remove the cotter pin and castle nut.
 - (b) Remove the lower ball joint assembly front LH using SST.**SST 09628-62011**

**SP**

SP-26

SUSPENSION – FRONT LOWER BALL JOINT

INSPECTION**1. INSPECT FRONT LOWER BALL JOINT ASSEMBLY**

- (a) Secure the lower ball joint assembly front LH in a vise.
- (b) Install the nut to the stud bolt.
- (c) Flip the ball joint back and forth 5 times or more.
- (d) Use a torque wrench to turn the nut continuously at a rate of 3 to 5 seconds per 1 turn. Take the torque reading on the 5th turn.

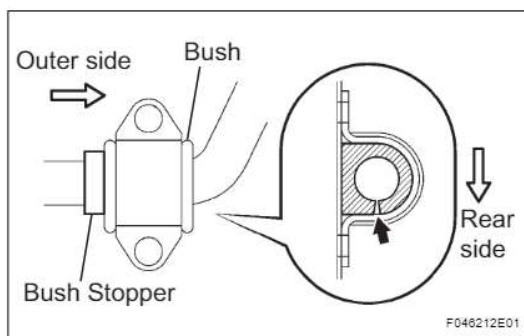
Turning torque:

0.98 to 3.43 N*m (10 to 35 kgf*cm, 8.7 to 30 ft.*lbf)

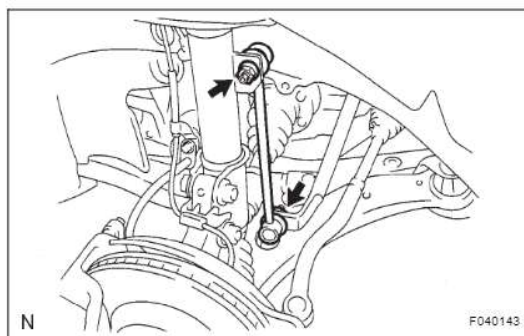
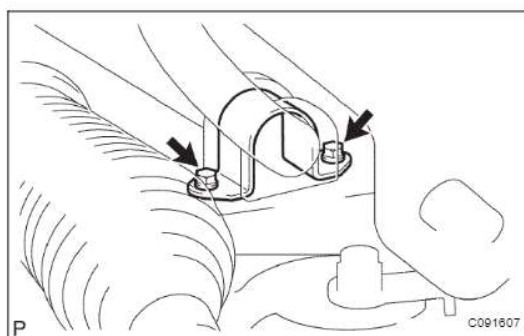
If the value is not within the specification, replace the lower ball joint assembly with a new one.

SP

INSTALLATION



1. **INSTALL STABILIZER BAR FRONT**
(a) Install the stabilizer bar front to the vehicle.
2. **INSTALL FRONT STABILIZER BAR BUSH NO.1**
(a) Install the bush as to the outer side of the each bush stopper on the stabilizer bar.
(b) Place the cutout of the stabilizer bush as facing the rear side as shown in the illustration.
3. **INSTALL RACK & PINION POWER STEERING GEAR ASSEMBLY** (See page [PS-42](#))
4. **INSTALL PRESSURE FEED TUBE ASSEMBLY** (See page [PS-42](#))
5. **INSTALL STEERING GEAR OUTLET RETURN TUBE** (See page [PS-42](#))
6. **INSTALL STEERING INTERMEDIATE SHAFT ASSEMBLY** (See page [PS-43](#))
7. **INSTALL TIE ROD ASSEMBLY LH** (See page [DS-15](#))
8. **INSTALL TIE ROD ASSEMBLY RH**
HINT:
Install the RH side following the same procedures as with the LH side.
9. **INSTALL FRONT STABILIZER BRACKET NO.1 LH**
(a) Install the 2 front stabilizer brackets No. 1 LH with the 2 bolts.
Torque: 19 N*m (194 kgf*cm, 14 ft.*lbf)
10. **INSTALL FRONT STABILIZER BRACKET NO.1 RH**
HINT:
Install the RH side following the same procedures as with the LH side.



11. **INSTALL FRONT STABILIZER LINK ASSEMBLY LH**
(a) Install the front stabilizer link assembly LH with the 2 nuts.
Torque: 74 N*m (755 kgf*cm, 55 ft.*lbf)
HINT:
Use a hexagon (6 mm) wrench to hold the stud if the ball joint turns together with the nut.
12. **INSTALL FRONT STABILIZER LINK ASSEMBLY RH**
HINT:
Install the RH side following the same procedures as with the LH side.
13. **INSTALL FRONT WHEEL**
Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)
14. **BLEED POWER STEERING FLUID**
HINT:
See page [PS-3](#)
15. **POWER STEERING FLUID LEAK**

SP

SP-30**SUSPENSION – FRONT STABILIZER BAR**

16. INSPECT AND ADJUST STEERING WHEEL CENTER POINT**17. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT**

HINT:

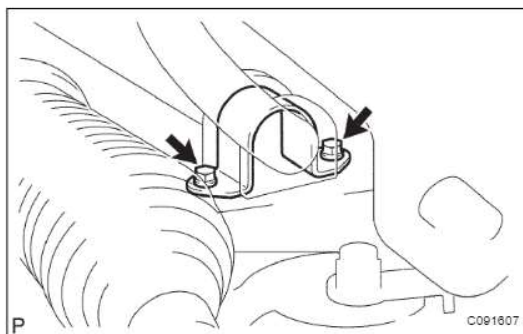
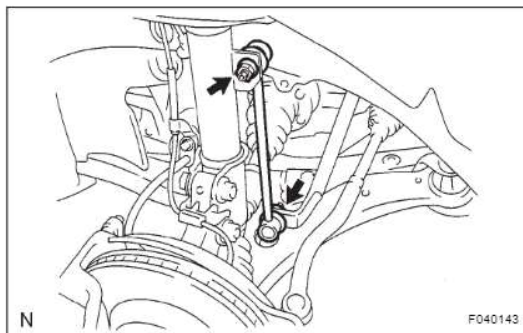
See page [SP-9](#)**SP**

FRONT STABILIZER BAR

REMOVAL

HINT:

COMPONENTS: See page [SP-1](#)



1. **REMOVE FRONT WHEEL**
2. **REMOVE FRONT STABILIZER LINK ASSEMBLY LH**
 - (a) Remove the 2 nuts and front stabilizer link assembly LH.
HINT:
Use a hexagon (6 mm) wrench to hold the stud if the ball joint turns together with the nut.
3. **REMOVE FRONT STABILIZER LINK ASSEMBLY RH**

HINT:
Remove the RH side following the same procedures as with the LH side.
4. **REMOVE FRONT STABILIZER BRACKET NO.1 LH**
 - (a) Remove the 2 bolts and stabilizer brackets No. 1 LH.
5. **REMOVE FRONT STABILIZER BRACKET NO.1 RH**

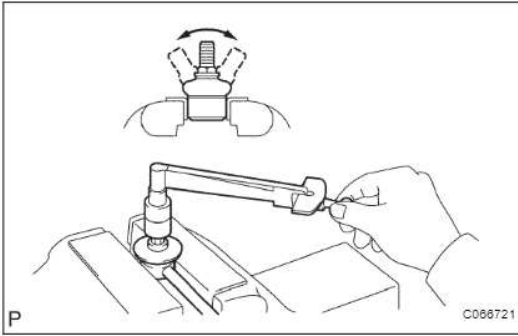
HINT:
Remove the RH side following the same procedures as with the LH side.
6. **DISCONNECT TIE ROD ASSEMBLY LH** (See page [DS-5](#))
7. **DISCONNECT TIE ROD ASSEMBLY RH**

HINT:
Disconnect the RH side following the same procedures as with the LH side.
SST 09628-62011
8. **SEPARATE STEERING INTERMEDIATE SHAFT ASSEMBLY** (See page [PS-27](#))
9. **DISCONNECT STEERING GEAR OUTLET RETURN TUBE** (See page [PS-28](#))
10. **DISCONNECT PRESSURE FEED TUBE ASSEMBLY** (See page [PS-28](#))
11. **REMOVE RACK & PINION POWER STEERING GEAR ASSEMBLY** (See page [PS-29](#))
12. **REMOVE FRONT STABILIZER BAR BUSH NO.1**
 - (a) Remove the 2 bushes from the stabilizer.
13. **REMOVE STABILIZER BAR FRONT**
 - (a) Remove the stabilizer bar front from the vehicle.

SP

SP-28

SUSPENSION – FRONT STABILIZER BAR

**INSPECTION****1. INSPECT FRONT STABILIZER LINK ASSEMBLY**

- (a) Secure the front stabilizer link assembly LH in a vise.
- (b) Install the nut to the stud bolt.
- (c) Flip the ball joint back and forth 5 times or more.
- (d) Use a torque wrench to turn the nut continuously at a rate of 2 to 4 seconds per 1 turn. Take the torque reading on the 5th turn.

Turning torque:

0.05 to 1.96 N*m (0.5 to 20 kgf*cm, 0.4 to 17.4 ft.*lbf)

If the value is not within the specification, replace the front stabilizer link assembly with a new one.

SP

REASSEMBLY

1. INSTALL REAR SHOCK ABSORBER ASSEMBLY LH

SP

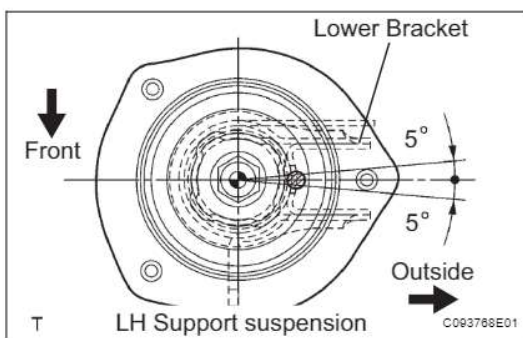
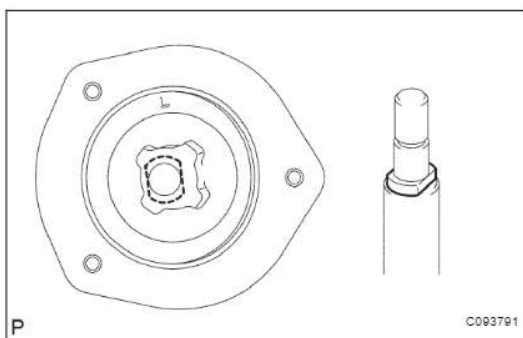
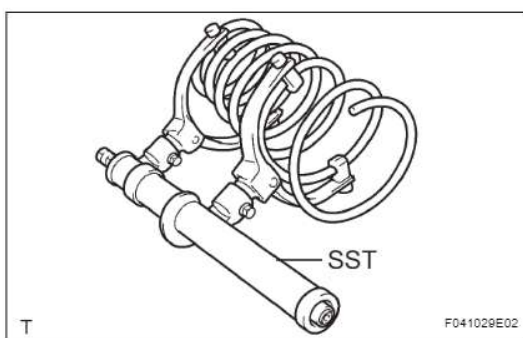
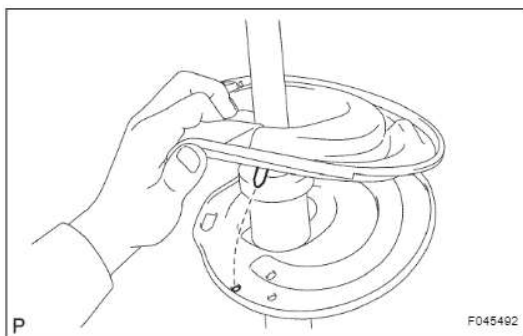
SP-34

SUSPENSION – REAR SHOCK ABSORBER

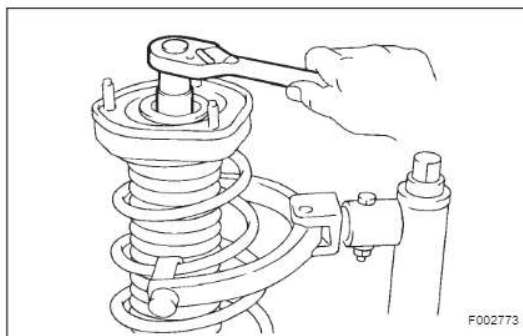
INSTALLATION

1. INSTALL REAR SHOCK ABSORBER ASSEMBLY LH

- (a) Install the spring bumper.
- (b) Install the insulator lower, as shown in the illustration.



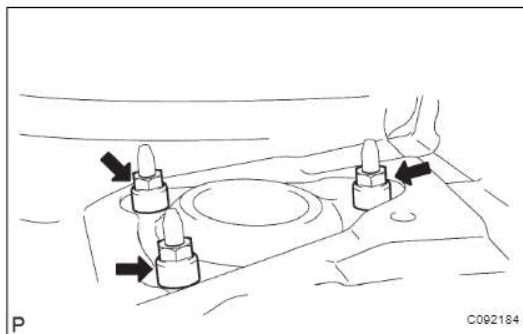
- (c) Using SST, compress the coil spring.
SST 09727-30021
NOTICE:
Do not use an impact wrench. It will damage the SST.
- (d) Install the coil spring to the shock absorber.
 - (1) Fit the lower end of the coil spring into the gap of the lower seat.
 - (2) Check that the 2 flat faces of the piston rod are positioned in parallel with the 2 flat faces of the LH support suspension.
- (e) Align the LH support suspension with the shock absorber lower bracket, as shown in the illustration.
HINT:
Set the LH support suspension so that the protruding part of the LH support suspension faces outside.

SUSPENSION – REAR SHOCK ABSORBER**SP-35**

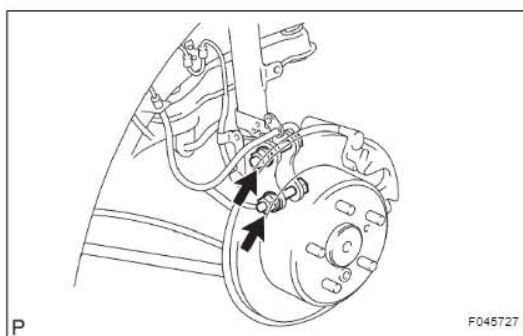
- (f) Install the collar to the piston rod.
- (g) Temporarily install a new nut.
- (h) Remove the SST.

SST 09727-30021**HINT:**

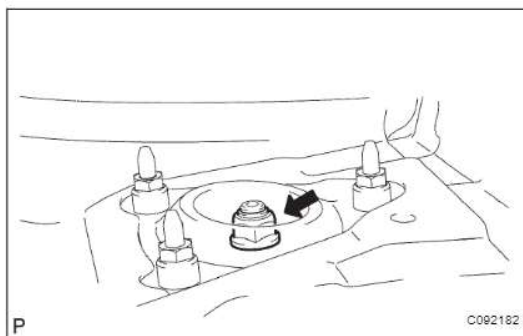
After removing SST, recheck the direction of the LH support suspension.

**2. INSTALL REAR SHOCK ABSORBER ASSEMBLY**

- (a) Install the shock absorber with coil spring and tighten the 3 nuts.

Torque: 39 N*m (400 kgf*cm, 29 ft.*lbf)

- (b) Install the 2 bolts and nuts to the shock absorber with coil spring.

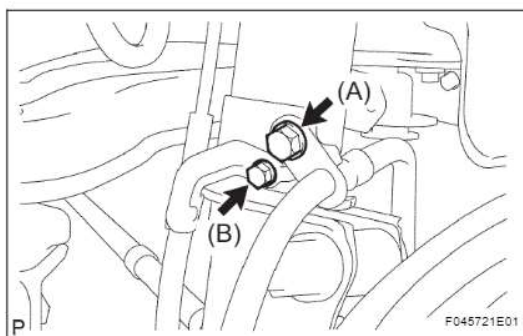
Torque: 255 N*m (2,600 kgf*cm, 188 ft.*lbf)

- (c) Fully tighten the nut installed on the top of the shock absorber with coil spring.

Torque: 49 N*m (500 kgf*cm, 36 ft.*lbf)**HINT:**

If the shock absorber has not been disassembled, it is not necessary to torque the nut.

- (d) Install the rear suspension support No. 1 cover LH.

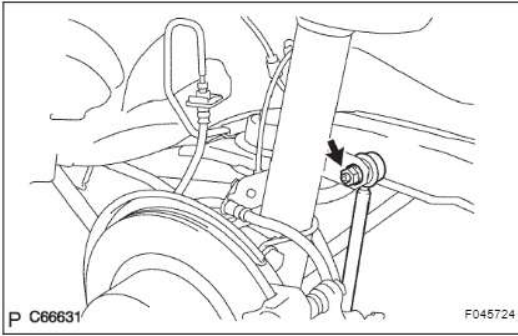
**3. INSTALL REAR LH FLEXIBLE HOSE**

- (a) Install the flexible hose and skid control sensor wire with the 2 bolts.

Torque: Bolt A**19 N*m (195 kgf*cm, 14 ft.*lbf)****Bolt B****5.5 N*m (56 kgf*cm, 49 ft.*lbf)**

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SUSPENSION – REAR SHOCK ABSORBER

**4. INSTALL REAR STABILIZER LINK ASSEMBLY LH**

- (a) Install the stabilizer link to the shock absorber with the nut.

Torque: 39 N*m (400 kgf*cm, 29 ft.*lbf)

HINT:

If the ball joint turns together with the nut, use a hexagon wrench (5 mm) to hold the stud.

5. INSTALL REAR WHEEL

Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)

6. INSPECT REAR WHEEL ALIGNMENT

HINT:

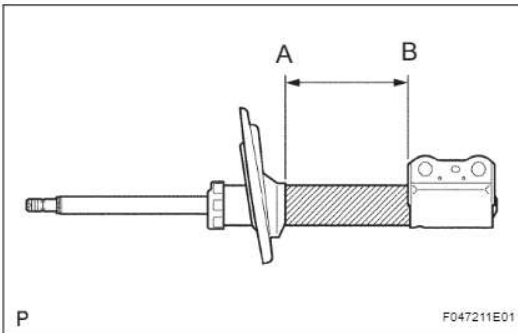
See page [SP-16](#)

DISPOSAL**1. DISPOSE OF REAR SHOCK ABSORBER ASSEMBLY LH**

- (a) Fully extend the shock absorber rod.
 (b) Using a drill, make a hole in the cylinder somewhere between A and B as shown in the illustration to discharge the gas inside.

CAUTION:

- Be careful when drilling because shards of metal may fly about, so always use the proper safety equipment.
- The gas is colorless, odorless and non-poisonous.



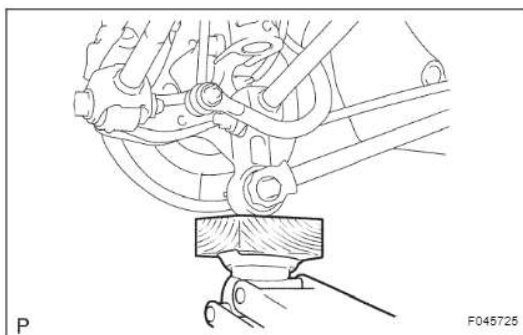
SP

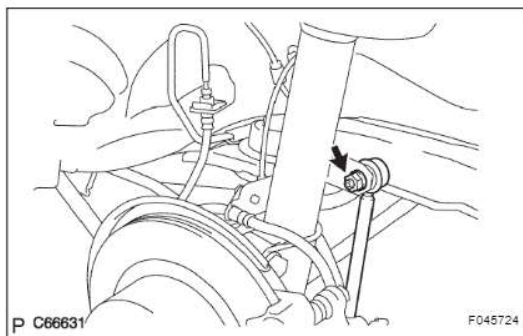
REAR SHOCK ABSORBER

REMOVAL

HINT:

- COMPONENTS: See page [SP-1](#)
 - Use the same procedures for the RH side and LH side.
 - The procedures listed below are for the LH side.
 - Installation is in the reverse order of removal.
1. **REMOVE ROOF SIDE GARNISH ASSEMBLY INNER RH (COUPE BODY TYPE)** (See page [IR-5](#))
 2. **REMOVE ROOF SIDE GARNISH ASSEMBLY INNER LH (COUPE BODY TYPE)**
 3. **REMOVE PACKAGE TRAY TRIM PANEL ASSEMBLY (COUPE BODY TYPE)** (See page [SB-38](#))
 4. **DISCONNECT REAR SEAT 3 POINT TYPE BELT ASSEMBLY LH (COUPE BODY TYPE)** (See page [SB-38](#))
 5. **REMOVE REAR SEAT CUSHION ASSEMBLY (CONVERTIBLE BODY TYPE)** (See page [SE-46](#))
 6. **REMOVE REAR SEAT HEADREST PLATE COVER (CONVERTIBLE BODY TYPE)** (See page [SE-46](#))
 7. **REMOVE REAR SEAT HEADREST ASSEMBLY (CONVERTIBLE BODY TYPE)**
 8. **REMOVE REAR SEAT SHOULDER BELT COVER LH (CONVERTIBLE BODY TYPE)**
 9. **REMOVE REAR SEATBACK ASSEMBLY (CONVERTIBLE BODY TYPE)** (See page [SE-47](#))
 10. **REMOVE QUARTER TRIM PANEL SUB-ASSEMBLY UPPER LH (CONVERTIBLE BODY TYPE)** (See page [IR-10](#))
 11. **REMOVE REAR WHEEL**
 12. **SEPARATE REAR STABILIZER LINK ASSEMBLY LH**
 - (a) Support the rear axle carrier with a jack.

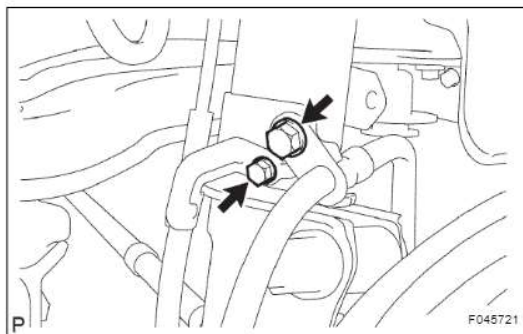


SUSPENSION – REAR SHOCK ABSORBER**SP-31**

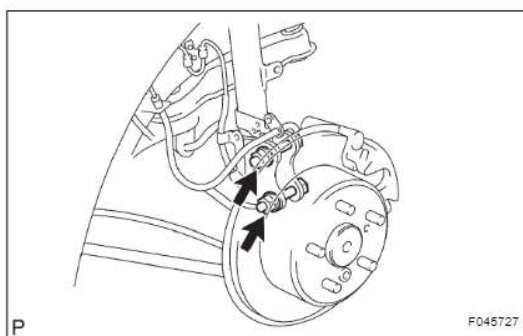
- (b) Remove the nut, and disconnect the stabilizer link from the shock absorber.

HINT:

If the ball joint turns together with the nut, use a hexagon wrench (5 mm) to hold the stud.

**13. DISCONNECT REAR LH FLEXIBLE HOSE**

- (a) Remove the 2 bolts, and disconnect the flexible hose and skid control sensor wire from the shock absorber.

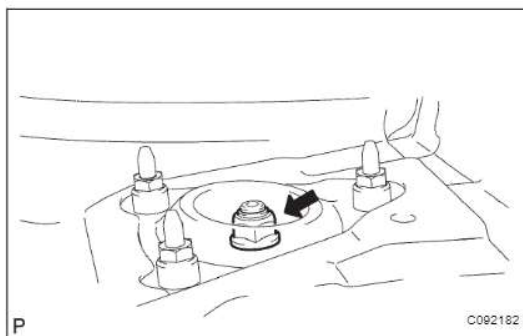
SP**14. REMOVE REAR SHOCK ABSORBER ASSEMBLY**

- (a) Loosen the 2 nuts on the lower side of the shock absorber.

HINT:

Do not remove the 2 bolts and 2 nuts.

- (b) Remove the rear suspension support No. 1 cover LH.



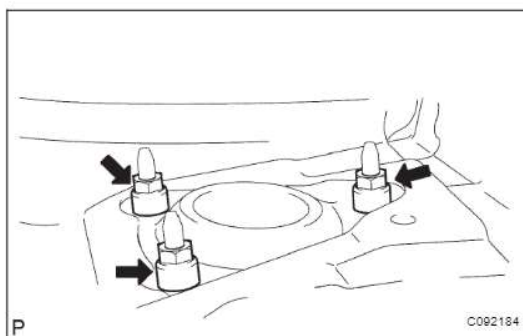
- (c) Loosen the LH support suspension center nut.

NOTICE:

Do not remove the nut.

HINT:

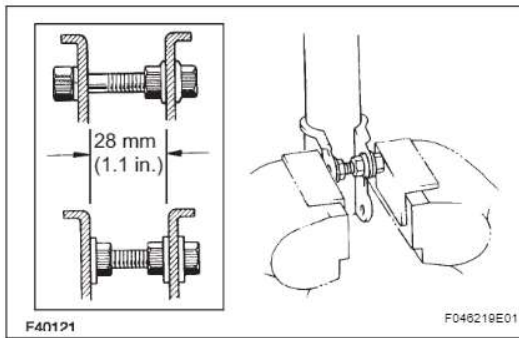
It is not necessary to loosen the nut if the shock absorber is not being disassembled.



- (d) Remove the 3 nuts.
 (e) Lower the rear axle carrier, and remove the 2 nuts and 2 bolts on the lower side of the shock absorber.
 (f) Remove the shock absorber with coil spring.

SP-32

SUSPENSION – REAR SHOCK ABSORBER



DISASSEMBLY

1. FIX REAR SHOCK ABSORBER ASSEMBLY

- (a) Install the 2 nuts and bolt to the bracket at the lower part of the shock absorber, and secure it in a vise as shown in the illustration to the left.

2. REMOVE REAR SHOCK ABSORBER ASSEMBLY LH

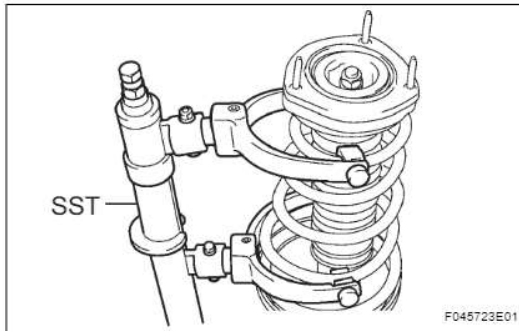
- (a) Using SST, compress the coil spring.

SST 09727-30021

NOTICE:

Do not use an impact wrench. It will damage the SST.

- (b) Remove the nut, collar and LH support suspension.
- (c) Remove the coil spring, spring bumper and insulator lower.



INSPECTION

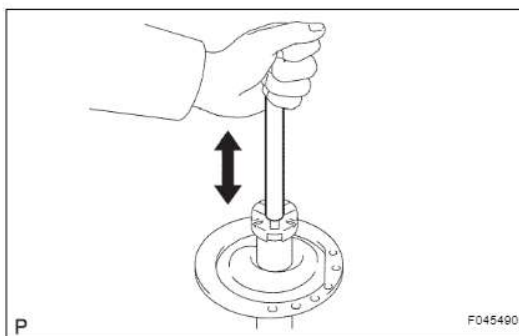
1. INSPECT REAR SHOCK ABSORBER ASSEMBLY LH

- (a) Compress and extend the shock absorber rod, and check that there is no abnormal resistance or unusual sound.

If there is any abnormality, replace the shock absorber with a new one.

NOTICE:

When disposing of the shock absorber. (See page [SP-35](#))



SP

SP-36

SUSPENSION – REAR NO. 1 LOWER SUSPENSION ARM

REAR NO. 1 LOWER SUSPENSION ARM

REMOVAL

HINT:

- COMPONENTS: See page [SP-1](#)
- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.

1. REMOVE REAR WHEEL

2. REMOVE CENTER EXHAUST PIPE ASSEMBLY

- (a) 2AZ-FE engine: See page [EX-3](#)
- (b) 3MZ-FE engine: See page [EX-3](#)

3. REMOVE STABILIZER BAR REAR

HINT:

See page [SP-45](#)

4. SEPARATE REAR STRUT ROD ASSEMBLY

HINT:

See page [SP-43](#)

5. SEPARATE NO.2 REAR SUSPENSION ARM ASSEMBLY LH

- (a) Remove the bolt, nut and the rear suspension arm No.2 (outer side) from the rear axle carrier.

NOTICE:

When removing the bolt, keep the nut from rotating.

6. SEPARATE NO.2 REAR SUSPENSION ARM ASSEMBLY RH

HINT:

Separate the RH side using the same procedures as for the LH side.

7. SEPARATE NO.1 REAR SUSPENSION ARM ASSEMBLY

- (a) Remove the bolt, nut and the rear suspension arm No.1 (outer side) from the rear axle carrier.

NOTICE:

When removing the bolt, keep the nut from rotating.

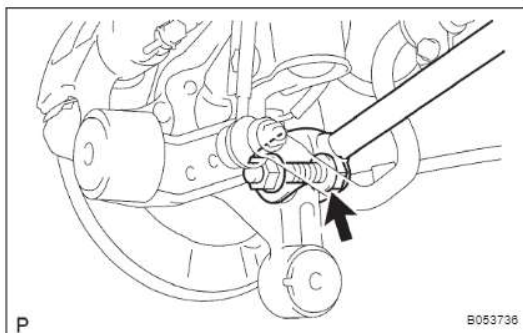
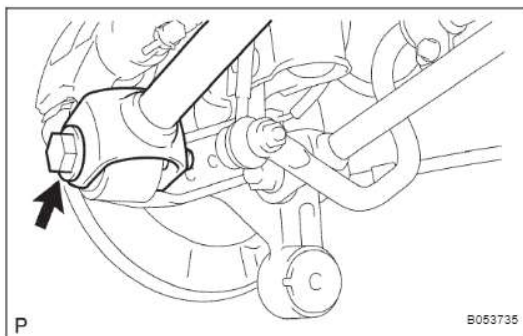
8. REMOVE NO.1 REAR SUSPENSION ARM ASSEMBLY RH

HINT:

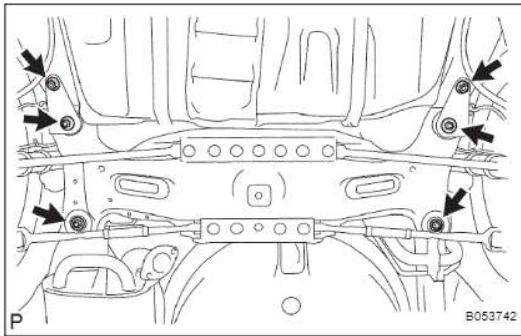
Separate the RH side using the same procedures as for the LH side.

9. REMOVE REAR SUSPENSION MEMBER SUB-ASSEMBLY

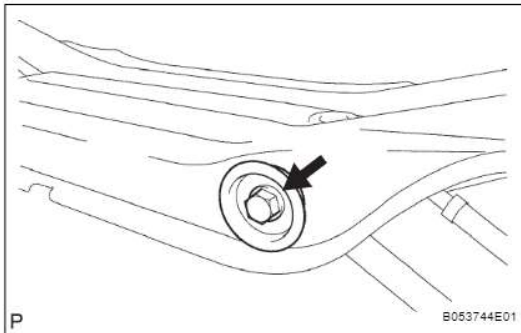
- (a) Support the rear suspension member with a jack.



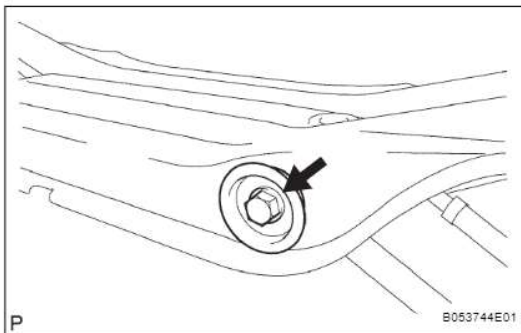
SP

SUSPENSION – REAR NO. 1 LOWER SUSPENSION ARM**SP-37**

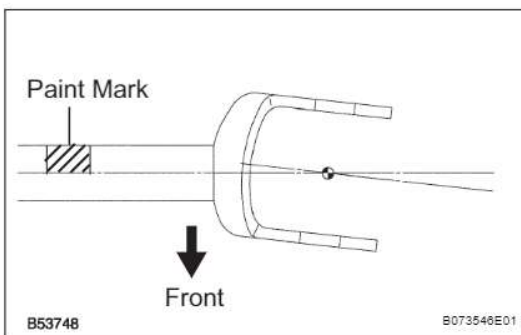
- (b) Remove the 4 nuts, 2 bolts and 4 retainers from the rear suspension member.
- (c) Lower the rear suspension member.

**10. REMOVE NO.1 REAR SUSPENSION ARM ASSEMBLY LH**

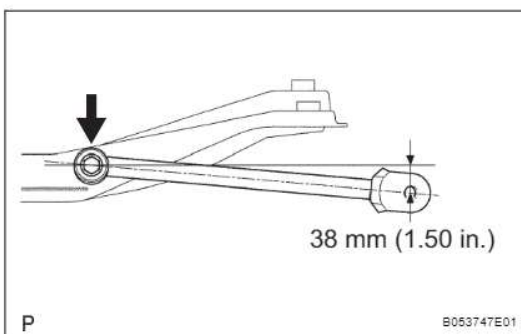
- (a) Remove the bolt and rear suspension arm No.1.

**INSTALLATION****1. INSTALL NO.1 REAR SUSPENSION ARM ASSEMBLY LH**

- (a) Install the rear suspension arm No.1 with the bolt, and temporarily tighten the bolt.



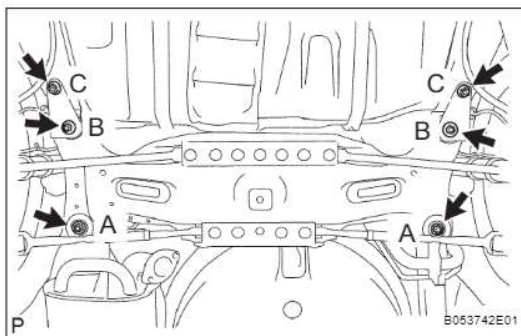
- (1) Install the rear suspension arm No.1 so that the bracket leans toward the front side of the vehicle, as shown in the illustration.
- (2) Ensure that the paint mark faces the rear side of the vehicle.



- (b) Set the rear suspension arm No.1 in the position shown in the illustration, and fully tighten the bolt.
Torque: 100 N*m (1,020 kgf*cm, 74 ft.*lbf)

SP-38

SUSPENSION – REAR NO. 1 LOWER SUSPENSION ARM



2. INSTALL REAR SUSPENSION MEMBER SUB-ASSEMBLY

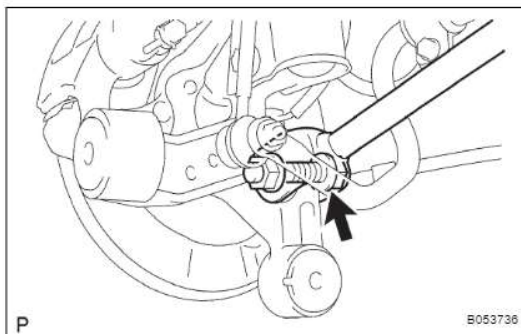
- (a) Raise the rear suspension member with a jack.
- (b) Install the rear suspension member with the 4 nuts, 2 bolts and 4 retainers.

Torque: A, B

55 N*m (561 kgf*cm, 41 ft.*lbf)

C

38 N*m (387 kgf*cm, 28 ft.*lbf)



3. TEMPORARILY TIGHTEN NO.1 REAR SUSPENSION ARM ASSEMBLY LH

- (a) Connect the rear suspension arm No.1 (outer side) to the rear axle carrier with the bolt and nut and temporarily tighten the bolt and nut.

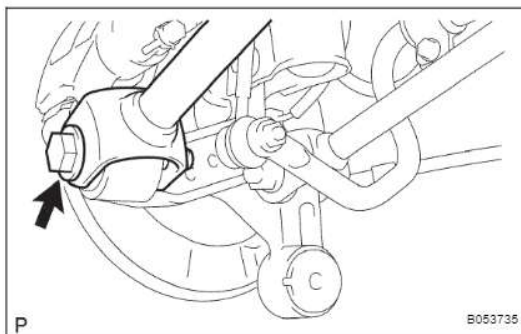
HINT:

Insert the bolt from the front side of the vehicle and temporarily install the bolt.

4. TEMPORARILY TIGHTEN NO.1 REAR SUSPENSION ARM ASSEMBLY RH

HINT:

Temporarily tighten the RH side using the same procedures as for the LH side.



5. TEMPORARILY TIGHTEN NO.2 REAR SUSPENSION ARM ASSEMBLY LH

- (a) Connect the rear suspension arm No.2 (outer side) to the rear axle carrier with the bolt and nut and temporarily tighten the bolt.

HINT:

Insert the bolt from the rear side of the vehicle and temporarily install the bolt.

6. TEMPORARILY TIGHTEN NO.2 REAR SUSPENSION ARM ASSEMBLY RH

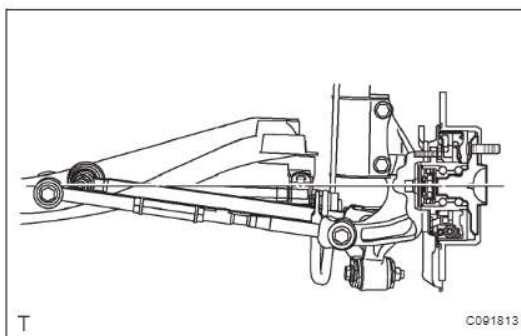
HINT:

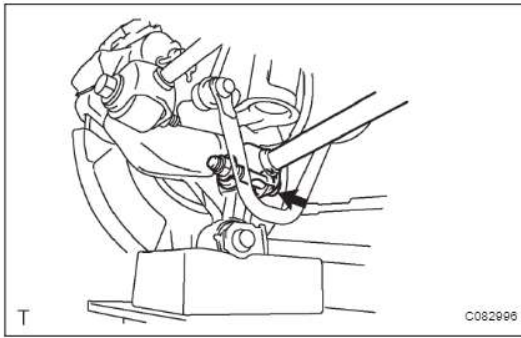
Temporarily tighten the RH side using the same procedures as for the LH side.

7. TEMPORARILY TIGHTEN REAR STRUT ROD ASSEMBLY

8. STABILIZE SUSPENSION

- (a) Jack up the rear axle carrier, placing a wood block to avoid damage. Apply load to the suspension so that the installed bolt of the suspension arm assembly No.1 (inner side of the vehicle) is horizontally aligned with the center of the rear axle hub.

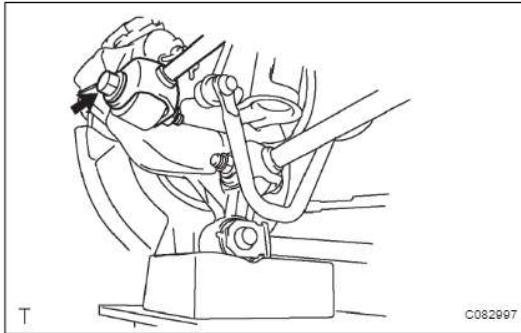


SUSPENSION – REAR NO. 1 LOWER SUSPENSION ARM**SP-39****9. FULLY TIGHTEN NO.1 REAR SUSPENSION ARM ASSEMBLY LH**

(a) Fully tighten the bolt.

Torque: 100 N*m (1,020 kgf*cm, 74 ft.*lbf)**10. FULLY TIGHTEN NO.1 REAR SUSPENSION ARM ASSEMBLY RH****HINT:**

Fully tighten the RH side using the same procedures as for the LH side.

**11. FULLY TIGHTEN NO.2 REAR SUSPENSION ARM ASSEMBLY LH**

(a) Fully tighten the bolt.

Torque: 100 N*m (1,020 kgf*cm, 74 ft.*lbf)**12. FULLY TIGHTEN NO.2 REAR SUSPENSION ARM ASSEMBLY RH****HINT:**

Fully tighten the RH side using the same procedures as for the LH side.

13. FULLY TIGHTEN REAR STRUT ROD ASSEMBLY**HINT:**See page [SP-43](#)**14. INSTALL STABILIZER BAR REAR****HINT:**See page [SP-46](#)**15. INSTALL CENTER EXHAUST PIPE ASSEMBLY**(a) 2AZ-FE engine: See page [EX-4](#)(b) 3MZ-FE engine: See page [EX-4](#)**16. INSTALL REAR WHEEL****Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)****17. INSPECT REAR WHEEL ALIGNMENT****HINT:**See page [SP-16](#)**SP**

SP-40

SUSPENSION – REAR NO. 2 LOWER SUSPENSION ARM

REAR NO. 2 LOWER SUSPENSION ARM

REMOVAL

HINT:

- COMPONENTS: See page [SP-1](#)
- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.

1. REMOVE REAR WHEEL
2. REMOVE CENTER EXHAUST PIPE ASSEMBLY
 - (a) 2AZ-FE engine: See page [EX-3](#)
 - (b) 3MZ-FE engine: See page [EX-3](#)
3. REMOVE STABILIZER BAR REAR (See page [SP-36](#))
4. SEPARATE REAR STRUT ROD ASSEMBLY (See page [SP-36](#))
5. SEPARATE NO.1 REAR SUSPENSION ARM ASSEMBLY LH (See page [SP-36](#))
6. SEPARATE NO.1 REAR SUSPENSION ARM ASSEMBLY RH

HINT:

Separate the RH side using the same procedures as for the LH side.

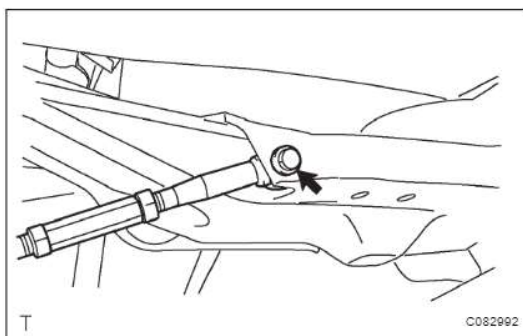
7. SEPARATE NO.2 REAR SUSPENSION ARM ASSEMBLY LH (See page [SP-36](#))
8. SEPARATE NO.2 REAR SUSPENSION ARM ASSEMBLY RH

HINT:

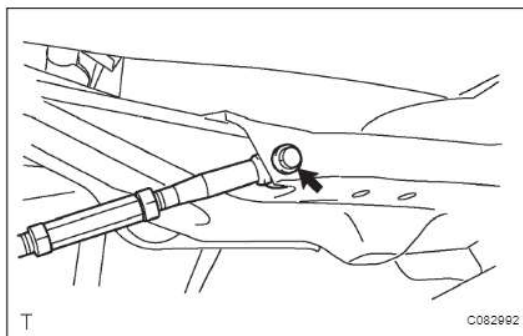
Separate the RH side using the same procedures as for the LH side.

9. REMOVE REAR SUSPENSION MEMBER SUB-ASSEMBLY (See page [SP-36](#))
10. REMOVE NO.2 REAR SUSPENSION ARM ASSEMBLY LH

- (a) Remove the bolt, and disconnect the rear suspension arm No.2 (inner side).

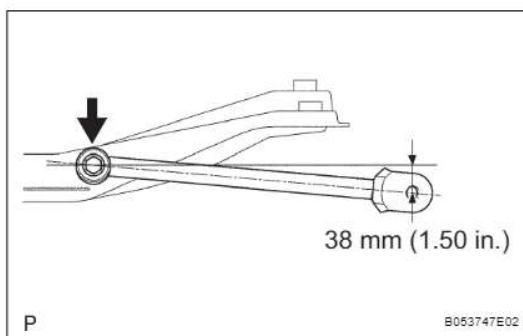
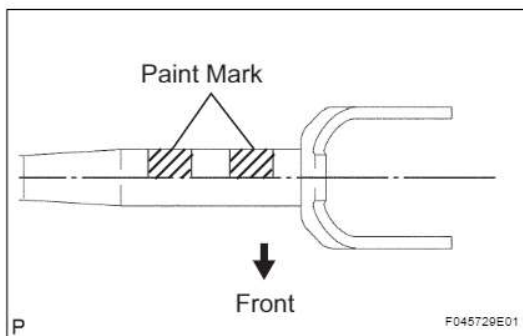


SP

SUSPENSION – REAR NO. 2 LOWER SUSPENSION ARM**SP-41****INSTALLATION****1. INSTALL NO.2 REAR SUSPENSION ARM ASSEMBLY LH**

- (a) Install the rear suspension arm No.2 (inner side) with the bolt and temporarily tighten the bolt.

- (1) Ensure that the paint mark faces the rear side of the vehicle.



- (b) Set the rear suspension arm in the position shown in the illustration, and fully tighten the bolt.

Torque: 100 N*m (1,020 kgf*cm, 74 ft.*lbf)

2. INSTALL REAR SUSPENSION MEMBER SUB-ASSEMBLY (See page [SP-38](#))**3. TEMPORARILY TIGHTEN NO.1 REAR SUSPENSION ARM ASSEMBLY LH (See page [SP-38](#))****4. TEMPORARILY TIGHTEN NO.1 REAR SUSPENSION ARM ASSEMBLY RH**

HINT:

Temporarily tighten the RH side using the same procedures as for the LH side.

5. TEMPORARILY TIGHTEN NO.2 REAR SUSPENSION ARM ASSEMBLY LH (See page [SP-38](#))**6. TEMPORARILY TIGHTEN NO.2 REAR SUSPENSION ARM ASSEMBLY RH**

HINT:

Temporarily tighten the RH side using the same procedures as for the LH side.

7. TEMPORARILY TIGHTEN REAR STRUT ROD ASSEMBLY**8. STABILIZE SUSPENSION (See page [SP-38](#))****9. FULLY TIGHTEN NO.1 REAR SUSPENSION ARM ASSEMBLY LH (See page [SP-39](#))****SP**

SP-42**SUSPENSION – REAR NO. 2 LOWER SUSPENSION ARM**

10. FULLY TIGHTEN NO.1 REAR SUSPENSION ARM ASSEMBLY RH

HINT:

Fully tighten the RH side using the same procedures as for the LH side.

11. FULLY TIGHTEN NO.2 REAR SUSPENSION ARM ASSEMBLY LH (See page [SP-39](#))**12. FULLY TIGHTEN NO.2 REAR SUSPENSION ARM ASSEMBLY RH**

HINT:

Fully tighten the RH side using the same procedures as for the LH side.

13. FULLY TIGHTEN REAR STRUT ROD ASSEMBLY (See page [SP-39](#))**14. INSTALL STABILIZER BAR REAR (See page [SP-39](#))****15. INSTALL CENTER EXHAUST PIPE ASSEMBLY**(a) 2AZ-FE engine: See page [EX-4](#)(b) 3MZ-FE engine: See page [EX-4](#)**16. INSTALL REAR WHEEL**

Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)

17. INSPECT REAR WHEEL ALIGNMENT

HINT:

See page [SP-16](#)**SP**

REAR STRUT ROD

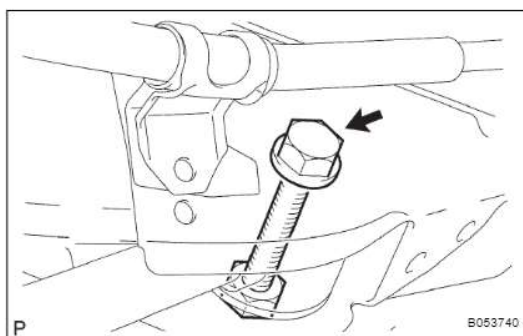
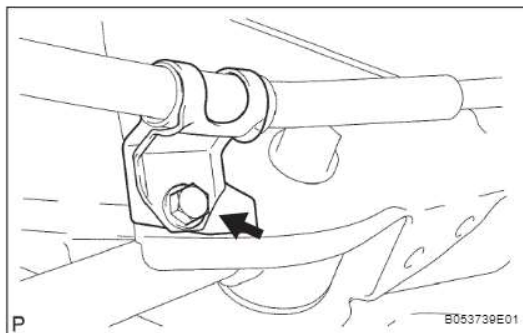
REMOVAL

HINT:

COMPONENTS: See page [SP-1](#)

1. REMOVE REAR WHEEL
2. REMOVE REAR STRUT ROD ASSEMBLY

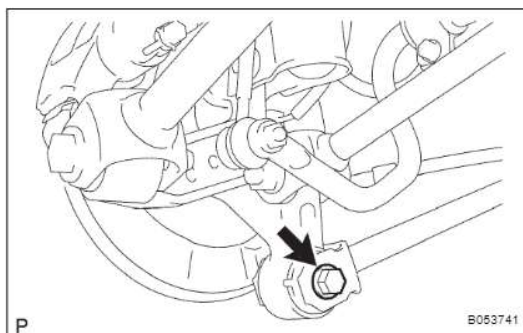
- (a) Remove the bolt and separate the parking brake cable.



- (b) Remove the bolt and nut and disconnect the strut rod (front side).

NOTICE:

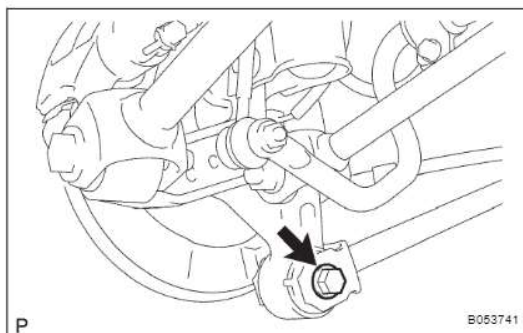
When removing the bolt, keep the nut from rotating.



- (c) Remove the bolt, nut and strut rod from the rear axle carrier.

NOTICE:

When removing the bolt, keep the nut from rotating.



INSTALLATION

1. TEMPORARILY TIGHTEN REAR STRUT ROD ASSEMBLY

- (a) Install the strut rod (rear side), bolt and nut, and temporarily tighten the bolt.

NOTICE:

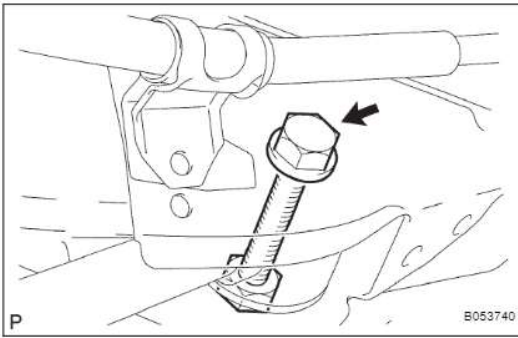
When installing the bolt, fix the nut and temporarily tighten the bolt.

HINT:

Insert the bolt from the inner side of the vehicle and temporarily install the bolt.

SP-44

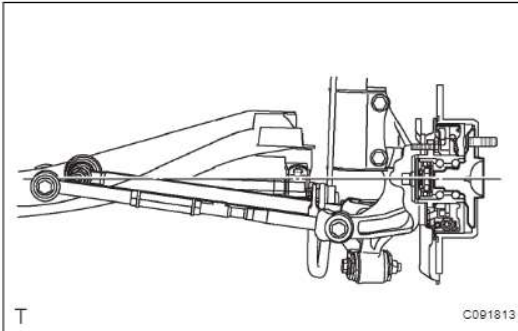
SUSPENSION – REAR STRUT ROD



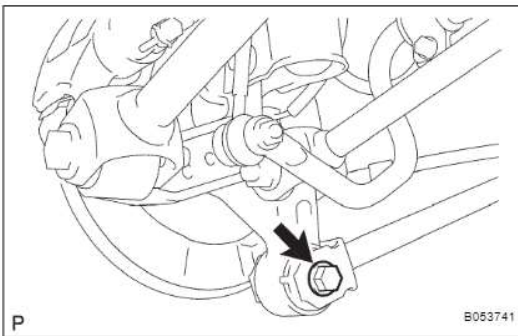
- (b) Connect the strut rod (front side) with the bolt and nut.

NOTICE:

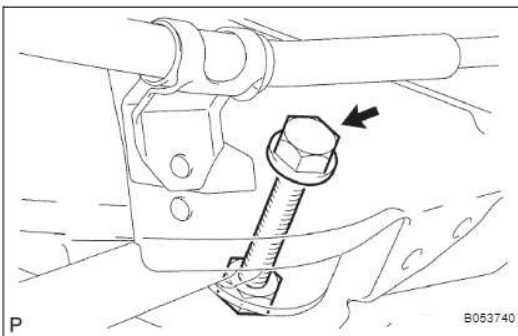
When installing the bolt, fix the nut and temporarily tighten the bolt.

**2. STABILIZE SUSPENSION**

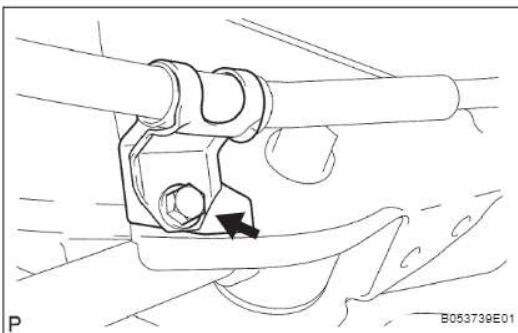
- (a) Jack up the rear axle carrier, placing a wood block to avoid damage. Apply load to the suspension so that the installed bolt of the suspension arm assembly No. 1 (inner side of the vehicle) is horizontally aligned with the center of the rear axle hub.

**3. FULLY TIGHTEN REAR STRUT ROD ASSEMBLY**

- (a) Fully tighten the bolt.
Torque: 113 N*m (1,150 kgf*cm, 83 ft.*lbf)



- (b) Fully tighten the bolt.
Torque: 113 N*m (1,150 kgf*cm, 83 ft.*lbf)



- (c) Install the parking brake cable with the bolt.
Torque: 5.4 N*m (55 kgf*cm, 48 ft.*lbf)

4. INSTALL REAR WHEEL

Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)

5. INSPECT REAR WHEEL ALIGNMENT

HINT:

See page [SP-16](#)

REAR STABILIZER BAR

REMOVAL

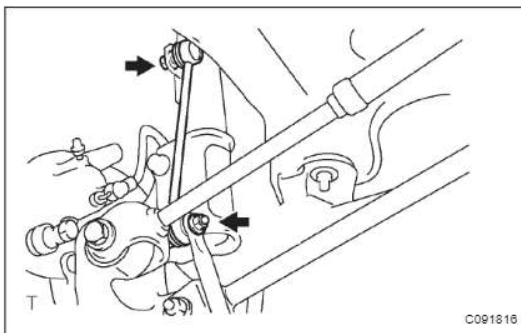
HINT:

COMPONENTS: See page [SP-1](#)

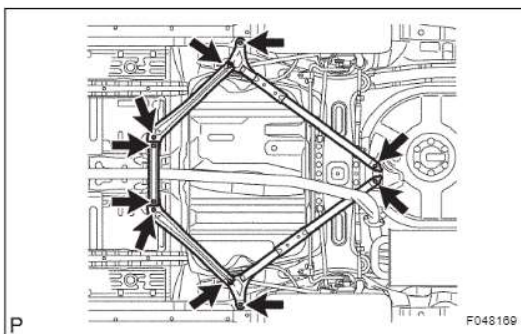
1. **REMOVE REAR WHEEL**
2. **REMOVE REAR STABILIZER LINK ASSEMBLY LH**
 - (a) Remove the 2 nuts and stabilizer link.

HINT:
If the ball joint turns together with the nut, use a hexagon wrench (5 mm) to hold the stud.
3. **REMOVE REAR STABILIZER LINK ASSEMBLY RH**

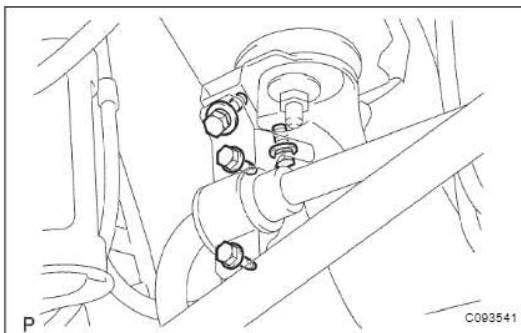
HINT:
Remove the RH side using the same procedures as for the LH side.



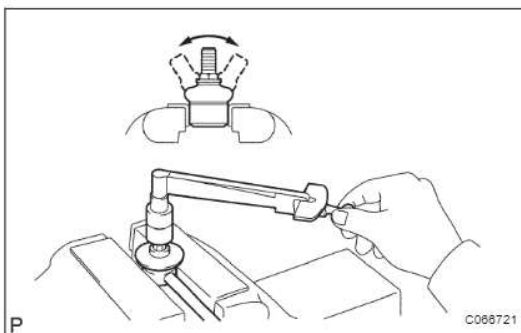
C091816



F048109



C093541



C088721

4. **REMOVE STABILIZER BAR REAR**
 - (a) Convertible:
 - (1) Remove the 2 bolts and the floor panel brace rear.
 - (2) Remove the 4 bolts and the member brace rear lower LH and RH.
 - (3) Remove the 4 bolts and the center floor panel reinforcement sub-assembly LH and RH.
 - (b) Remove the 8 bolts, 4 stabilizer brackets, 2 stabilizer bushes and stabilizer bar.

INSPECTION

1. **INSPECT REAR STABILIZER LINK ASSEMBLY LH**
 - (a) Before installing the nut, flip the ball joint stud back and forth 5 times as shown in the illustration.
 - (b) Using a torque wrench, continuously turn the nut 3 to 5 seconds per turn, and take the torque reading on the 5th turn.

Turning torque:

1.0 N*m (10 kgf*cm, 9 ft.*lbf) or less

If the value is not within the specification, replace the rear stabilizer link assembly with a new one.

NOTICE:

- Check that neither unusual drag nor rattle occurs during the rotation.

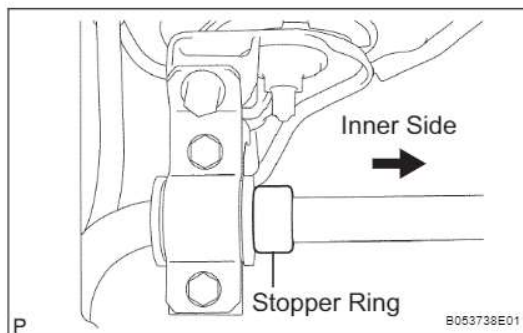
SP-46

SUSPENSION – REAR STABILIZER BAR

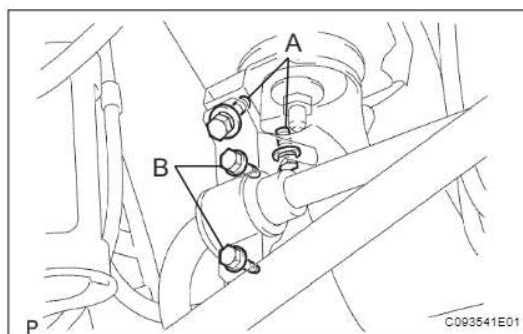
- Check that neither cracks nor grease leakage exists on the dust cover.

INSTALLATION**1. INSTALL STABILIZER BAR REAR**

- (a) Install the stabilizer bush to the outer side of the stopper ring on the stabilizer bar.



SP

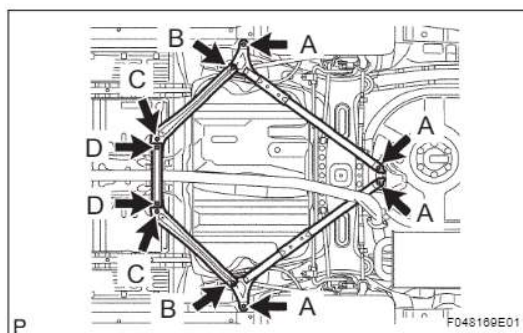


- (b) Install the 2 stabilizer bushes and 4 stabilizer brackets with the 8 bolts.

Torque: 19 N*m (195 kgf*cm, 14 ft.*lbf)

HINT:

2 types of bolts (A, B) are used, so make sure the correct bolts are installed.



- (c) Convertible:

- (1) Install the center floor panel reinforcement sub-assembly LH and RH with the 4 bolts.

Torque: Bolt A

56 N*m (571 kgf*cm, 41 ft.*lbf)

- (2) Install the member brace rear lower LH and RH with the 4 bolts.

Torque: Bolt B

56 N*m (571 kgf*cm, 41 ft.*lbf)

Bolt C

51 N*m (520 kgf*cm, 38 ft.*lbf)

- (3) Install the floor panel brace rear with the 2 bolts.

Torque: Bolt D

51 N*m (520 kgf*cm, 38 ft.*lbf)

2. INSTALL REAR STABILIZER LINK ASSEMBLY LH

- (a) Install the stabilizer link with the 2 nuts.

Torque: 39 N*m (400 kgf*cm, 29 ft.*lbf)

HINT:

If the ball joint turns together with the nut, use a hexagon wrench (5 mm) to hold the stud.

3. INSTALL REAR STABILIZER LINK ASSEMBLY RH

HINT:

Install the RH side using the same procedures as for the LH side.

4. INSTALL REAR WHEEL

Torque: 103 N*m (1,050 kgf*cm, 76 ft.*lbf)

