FRONT SUSPENSION SYSTEM

260I2–01

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.

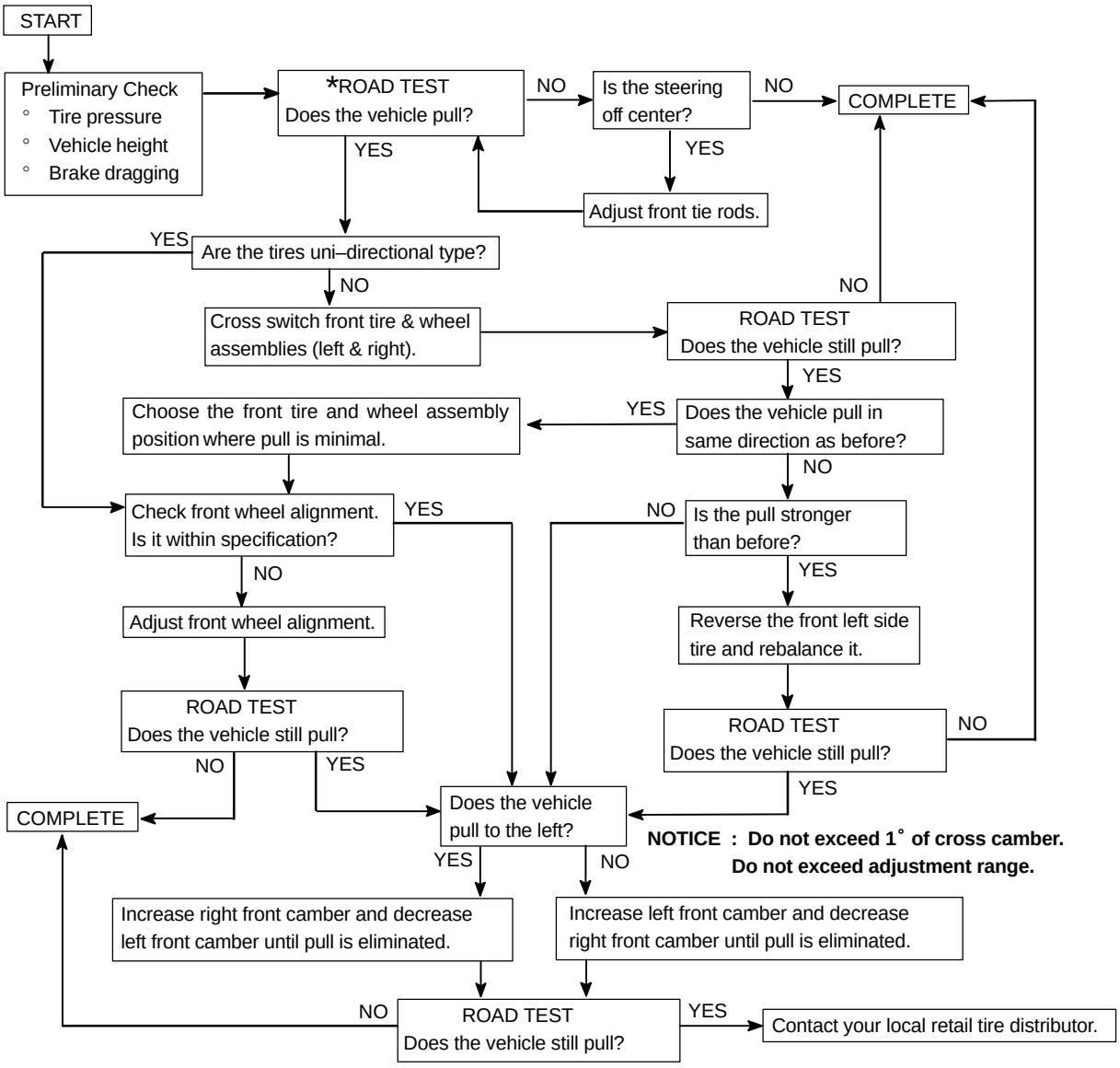
Symptom	Suspected Area	See page
Vehicle is unstable	1. Tires (Worn or improperly inflated) 2. Front wheel alignment 3. Rear wheel alignment 4. Hub bearing 5. Front shock absorber with coil spring 6. Rear shock absorber with coil spring	28–1 26–6 27–3 30–2 26–12 27–4
Bottoming	1. Vehicle (Overloaded) 2. Front shock absorber with coil spring 3. Rear shock absorber with coil spring	– 26–12 27–4
Sways/pitches	1. Tire (Worn or improperly inflated) 2. Stabilizer bar front 3. Front shock absorber with coil spring 4. Rear shock absorber with coil spring	28–1 26–25 26–12 27–4
Front wheels shimmy	1. Tire (Worn or improperly inflated) 2. Wheels (Out of balance) 3. Front wheel alignment 4. Front suspension arm sub–assy lower No.1 5. Lower ball joint assy front 6. Front shock absorber with coil spring 7. Hub bearing	28–1 28–1 26–6 26–19 26–22 26–12 30–2
Abnormal tire wear	1. Tire (Worn or improperly inflated) 2. Wheels (Out of balance) 3. Front wheel alignment 4. Rear wheel alignment	28–1 28–1 26–12 27–4
Vehide pull	1. Tire 2. Tire pressure (incorrect) 3. Wheel alignment (Incorrect) 4. Brake (Dragging) 5. Steering wheel (Off center)	26–2 26–2 26–2 26–2 26–2

260I3–01

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

This is the repair procedure for vehicle pull.



* Select a flat road where the vehicle can be driven in a straight line for 100 meters at a constant speed of 56 km/h (35 mph). Please confirm safety and set the steering wheel to its straight position. Drive the vehicle in a straight line for 100 meters at a constant speed of 56 km/h (35 mph) without holding the steering wheel.

(1) The vehicle can keep straight but the steering wheel has some angle.

→ STEERING OFF CENTER (SEE PAGE 50–4)

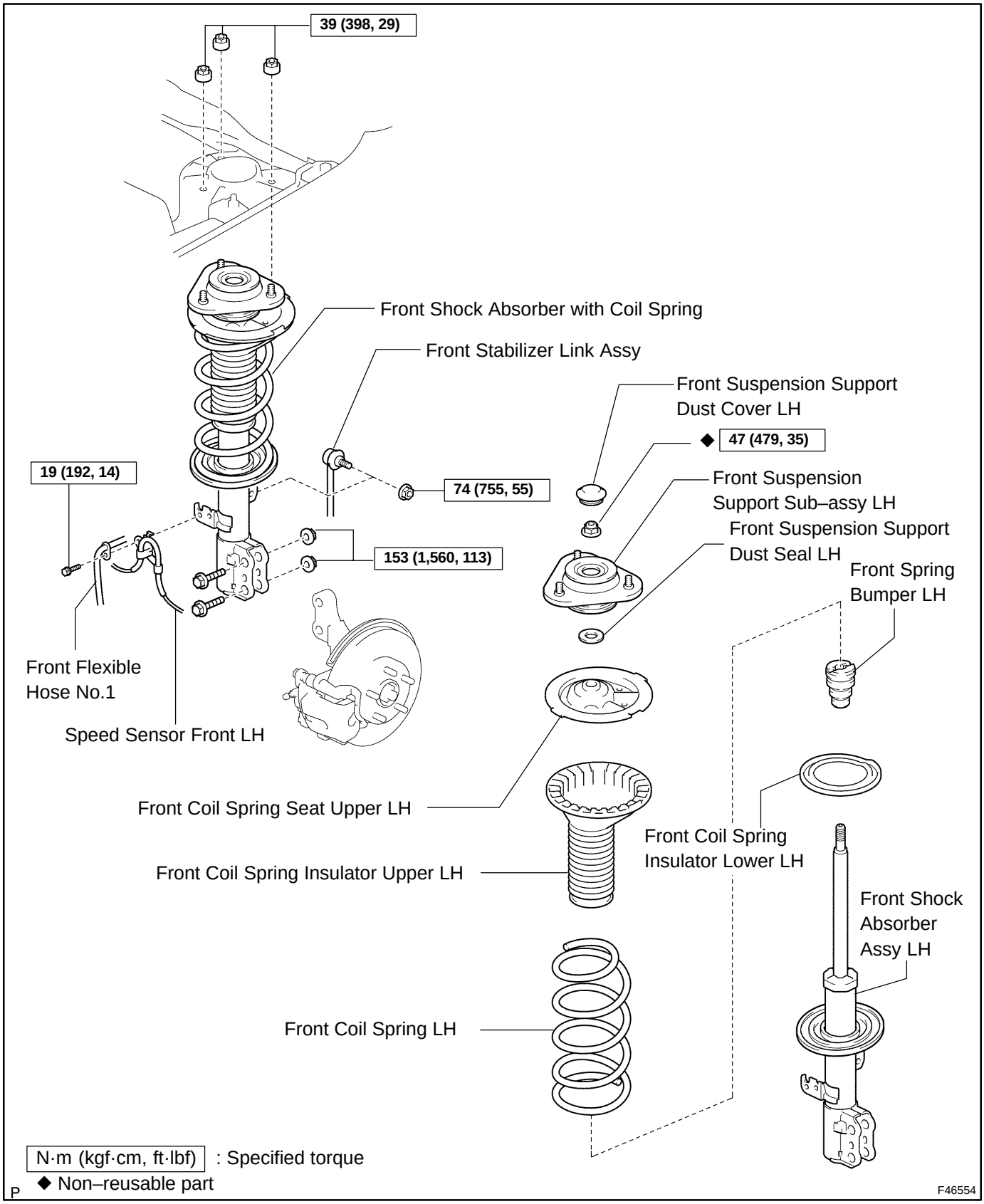
(2) The vehicle cannot keep straight.

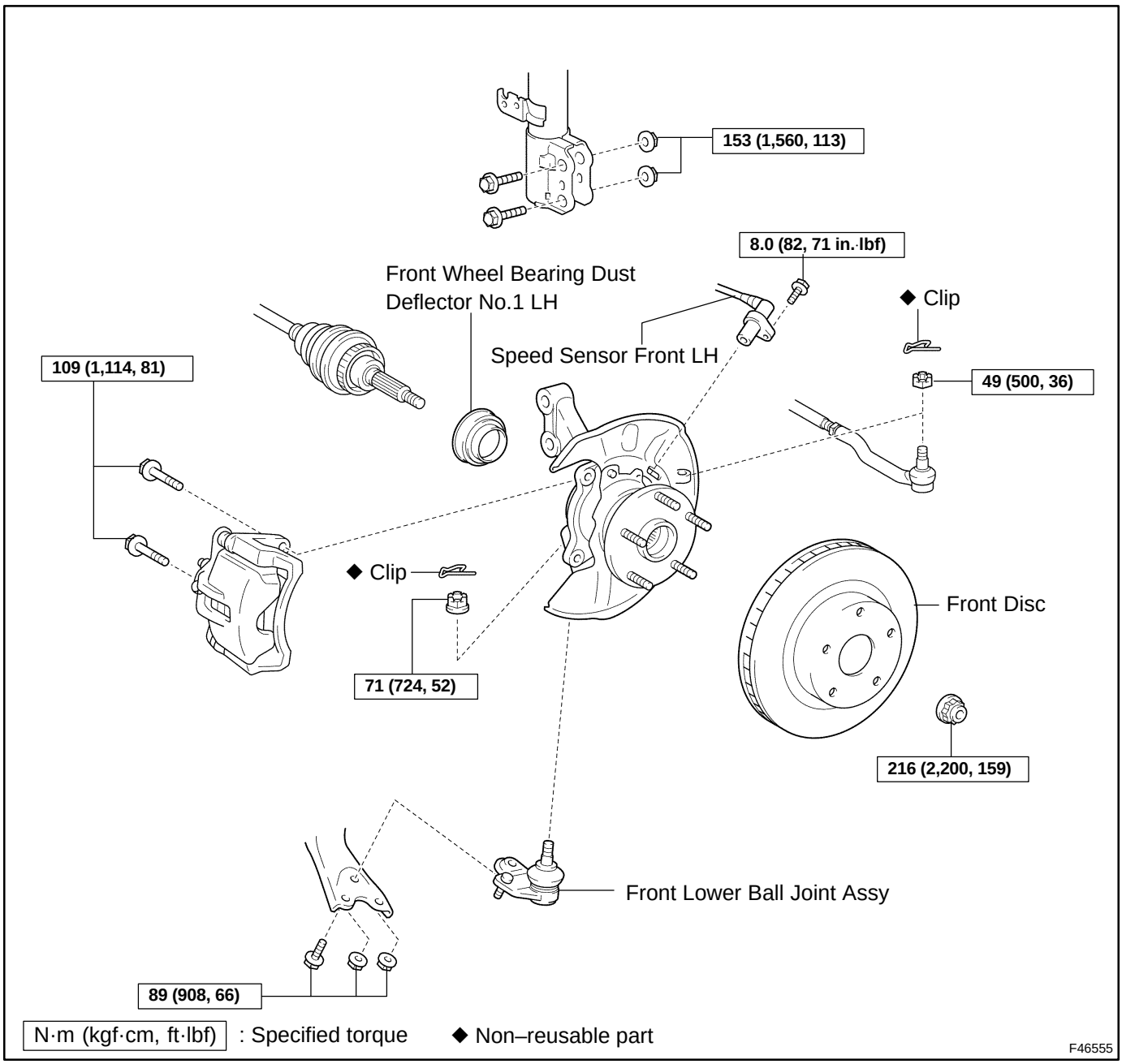
→ STEERING PULL

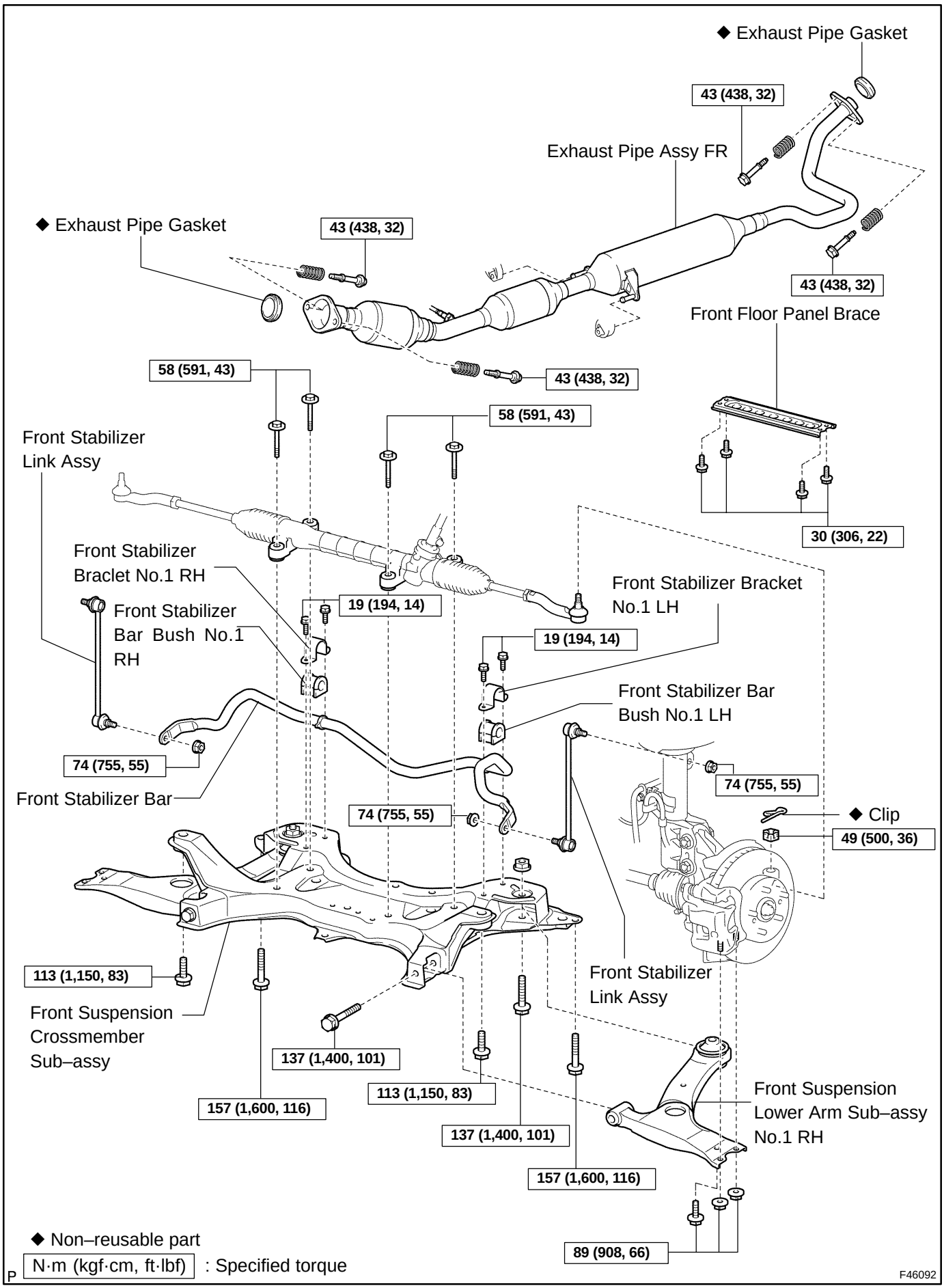
FRONT SUSPENSION

COMPONENTS

260I4–03




153 (1,560, 113)
8.0 (82, 71 in.·lbf)
Front Wheel Bearing Dust Deflector No.1 LH
Speed Sensor Front LH
◆ Clip
109 (1,114, 81)
49 (500, 36)
◆ Clip
71 (724, 52)
Front Disc
216 (2,200, 159)
Front Lower Ball Joint Assy
89 (908, 66)
N·m (kgf·cm, ft·lbf) : Specified torque
◆ Non–reusable part
F46555

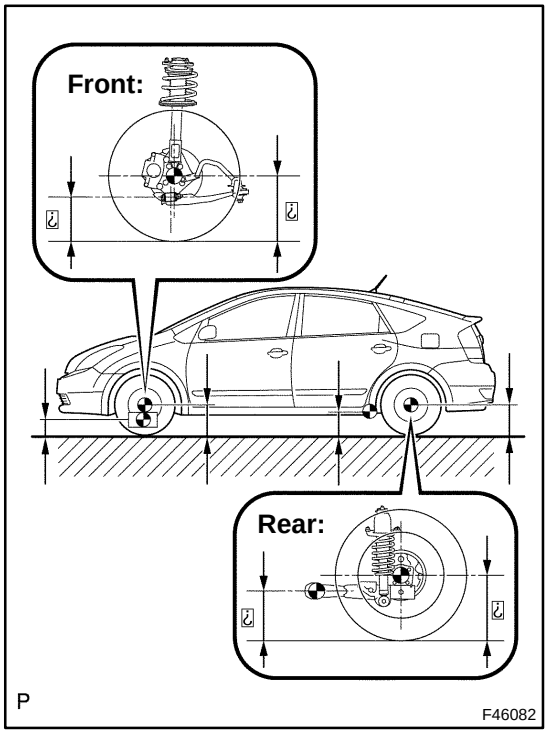

◆ Exhaust Pipe Gasket
43 (438, 32)
Exhaust Pipe Assy FR
◆ Exhaust Pipe Gasket
43 (438, 32)
43 (438, 32)
Front Floor Panel Brace
58 (591, 43)
43 (438, 32)
58 (591, 43)
Front Stabilizer Link Assy
30 (306, 22)
Front Stabilizer Braclet No.1 RH
Front Stabilizer Bracket No.1 LH
19 (194, 14)
Front Stabilizer Bar Bush No.1 RH
19 (194, 14)
Front Stabilizer Bar Bush No.1 LH
74 (755, 55)
Front Stabilizer Bar
74 (755, 55)
74 (755, 55)
◆ Clip
49 (500, 36)
113 (1,150, 83)
Front Stabilizer Link Assy
Front Suspension Crossmember Sub–assy
137 (1,400, 101)
157 (1,600, 116)
113 (1,150, 83)
137 (1,400, 101)
Front Suspension Lower Arm Sub–assy No.1 RH
157 (1,600, 116)
89 (908, 66)
◆ Non–reusable part
N·m (kgf·cm, ft·lbf) : Specified torque
P
F46092

FRONT WHEEL ALIGNMENT

260I5–01

ADJUSTMENT

1. INSPECT TIRE (SEE PAGE 28–1)



2. MEASURE VEHICLE HEIGHT

Vehicle height:

Front (A – B)	95 mm (3.74 in.)
Rear (D – C)	62 mm (2.44 in.)

Measuring points:

A: Ground clearance of front wheel center

B: Ground clearance of lower arm No.1 set bolt center

C: Ground clearance of rear axle carrier bush set bolt center

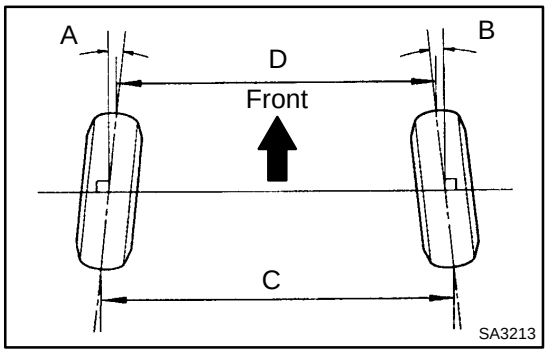
D: Ground clearance of rear wheel center

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.



3. 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" can not be measured.
- If toe–in is not within the specified range, adjust it at the rack ends.

4. ADJUST TOE–IN

(a) Measure the thread lengths of the right and ieft rack ends.
Standard:Difference in thread length of 1.5mm or less

(b) Remove the rack boot set clips.

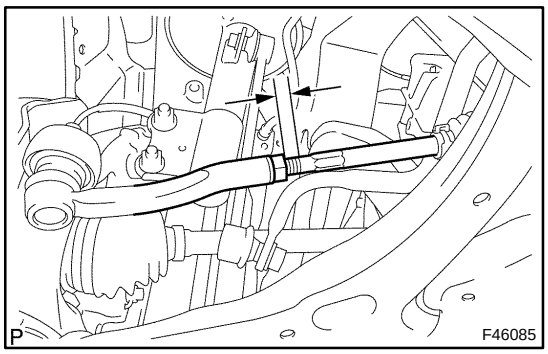
(c) Loosen the tie rod end lock nuts.

(d) Adjust the rack ends if the difference in thread length between the right and left rack ends is not within the specified range.
  (1) Extend the shorter rack end if the measured toe–in deviates toward the outer–side.
  (2) Shorten the longer rack end if the measured toe–in deviates toward the inner–side.

(e) Turn the right and left rack ends by an equal amount to adjust toe–in.

HINT:

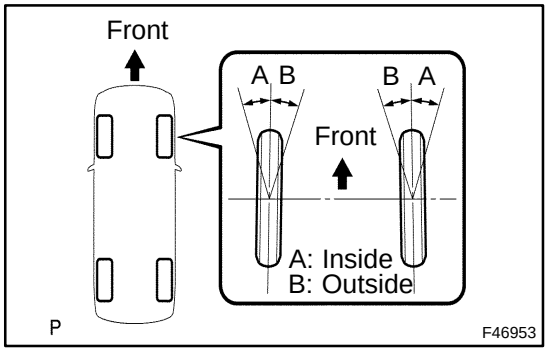
Try to adjust toe–in to the center of the specified range.



(f) Make sure that the lengths of the right and left rack ends are the same.
Standard: 0 ± 1mm
(g) Torque the tie rod end lock nuts.
Torque: 74 N·m (749 kgf·cm, 54 ft·lbf)

NOTICE:
Temporarily tighten the lock nut while holding the hexagonal part of the steering rack end so that the lock nut and the steering rack end do not turn together. Hold the width across flat of the tie rod end and tighten the lock nut.

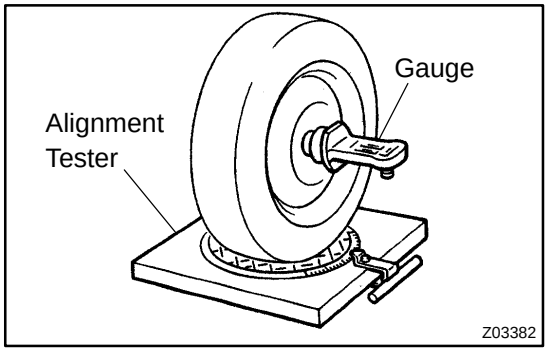
(h) Place the boots on the seats and install the clips.
HINT:
Make sure that the boots are not twisted.
(i) Perform VSC system calibration (see page 05–960).



5. INSPECT WHEEL ANGLE
(a) Turn the steering wheel fully left and right and measure the turning angle.
Wheel turning angle:

Inside wheel	40°35’ ± 2° (40.58° ± 2°)
Outside wheel: Reference	34°15’ (34.25°)

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



6. INSPECT CAMBER, CASTER AND STEERING AXIS INCLINATION
(a) Put the front wheel on the center of the alignment tester.
(b) Remove the center ornament.
(c) Install the camber–caster–steering axis inclination gauge at the center of the axle hub or drive shaft.
(d) Inspect the camber, caster and steering axis inclination.
Camber, caster and steering axis inclination:

Camber	0°35’ ± 45’ (–0.58° ± 0.75°)
Right–left error	45’ (0.75°) or less
Caster	3°10’ ± 45’ (3.17° ± 0.75°)
Right–left error	45’ (0.75°) or less
Steering axis inclination	12°35’ ± 45’ (12.58° ± 0.75°)
Right–left error	45’ (0.75°) or less

NOTICE:
- **nspect while the vehicle is empty (without the spare tire or tools onboard).**
- **The maximum tolerance of right and left difference for the camber and caster is 45’ or iess.**

(e) Remove the camber–caster–steering axis inclination gauge and attachment.
(f) Install the center ornament.

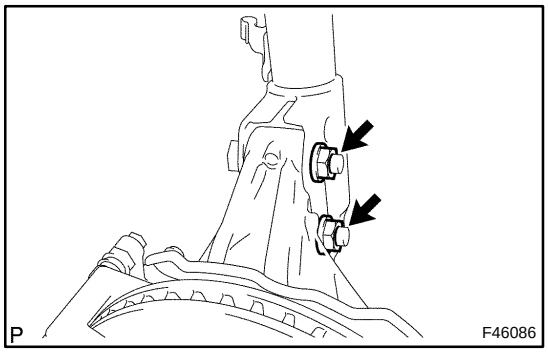
If the caster and steering axis inclination are not within the specified values, after the camber has been correctly adjusted, recheck the suspension parts for damaged and/or worn out parts.

7. ADJUST CAMBER

NOTICE:

Inspect toe–in after the camber has been adjusted.

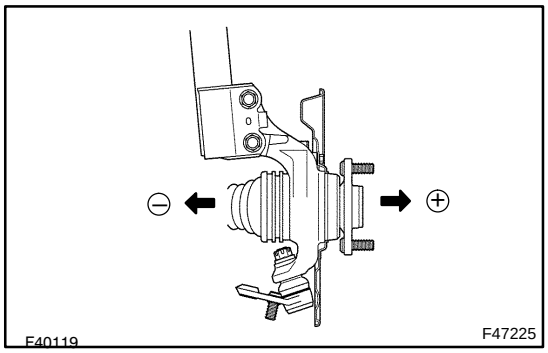
(a) Remove the front wheel.



(b) Remove the 2 nuts on the lower side of the shock absorber.

(c) Clean the installation surfaces of the shock absorber and the steering knuckle.

(d) Temporarily install the 2 nuts.



(e) Fully push or pull the front axle hub in the direction of the required adjustment.

(f) Tighten the nuts.

Torque: 153 N·m (1,560 kgf·cm, 113 ft·lbf)

NOTICE:

Keep the bolts from rotating and torque the nuts.

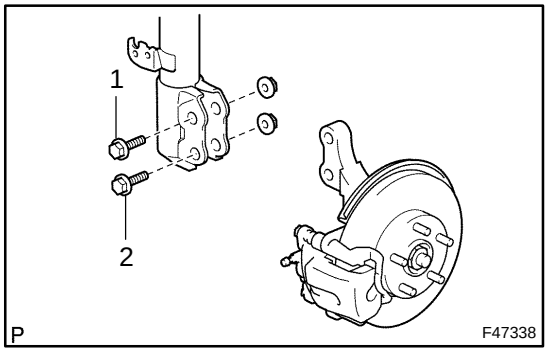
(g) Install the front wheel.

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

(h) Check the camber.

If the measured value is not within the specified range, calculate the required adjustment amount using the formula below.

(Camber adjustment amount) = Center of the specified range – 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)

HINT:

- Measure the camber with the bolts currently installed and check the amount of loosness from the specified range.
  (Ex:The measured value is –1°35')
- Determine whether the direction of the required adjustment is toward the positive or negative side.
  (Ex:Refer to table (1) (Move the axle toward positive side))
- Check the required adjustment amount from the measured value.(Table(1), Table(2))
  (Ex:Select "Adjusting value:0°45' to 1°00' ")
- Check the currently installed bolts combination.
  (Ex:"Installed bolt:1–No Dot 2–2Dots")
- Select the adjusting bolts.
  (Ex:"Selected Bolt Combination" results in F:1–3Dots 2–3Dots)
- Measure the alignment again and check that it is within the specified range.
  (Ex:Measured value is wihin –0°35' ± 45')

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

Installed Bolt / Adjusting Value								
	1	No Dot	No Dot	No Dot	No Dot	1 Dot	2 Dots	3 Dots
	2	No Dot	1 Dot	2 Dots	3 Dots	3 Dots	3 Dots	3 Dots
–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	 90105–15018	 90105–15018	 90105–15018	 90105–15015	 90105–15016	 90105–15017	 90105–15018
2	 90105–15015	 90105–15016	 90105–15017	 90105–15017	 90105–15017	 90105–15017	 90105–15018

Bolt Distinguishing Mark

No Dot	1 Dot	2 Dots	3 Dots
 90105–15018	 90105–15015	 90105–15016	 90105–15017

F47223

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.

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

Installed Bolt / Adjusting Value								
	1	No Dot	No Dot	No Dot	No Dot	1 Dot	2 Dots	3 Dots
	2	No Dot	1 Dot	2 Dots	3 Dots	3 Dots	3 Dots	3 Dots
–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	 90105–15018	 90105–15018	 90105–15018	 90105–15015	 90105–15016	 90105–15017	 90105–15018
2	 90105–15015	 90105–15016	 90105–15017	 90105–15017	 90105–15017	 90105–15017	 90105–15018

Bolt Distinguishing Mark

No Dot	1 Dot	2 Dots	3 Dots
 90105–15018	 90105–15015	 90105–15016	 90105–15017

F47223

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.

(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.

FRONT SHOCK ABSORBER WITH COIL SPRING

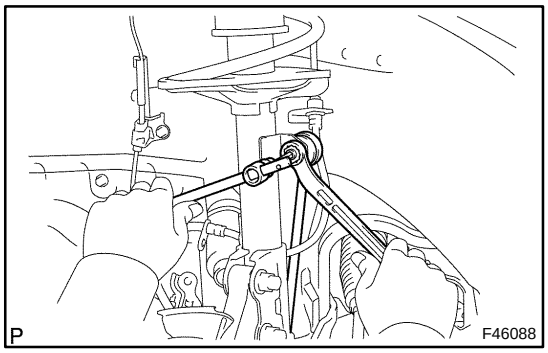
OVERHAUL

260I6–01

HINT:

- COMPONENTS: See page 26–3
- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.

1. **REMOVE FRONT WHEEL**
2. **REMOVE FRONT WIPER ARM HEAD CAP (SEE PAGE 66–14)**
3. **REMOVE FR WIPER ARM RH (SEE PAGE 66–14)**
4. **REMOVE FR WIPER ARM LH (SEE PAGE 66–14)**
5. **REMOVE HOOD TO COWL TOP SEAL (SEE PAGE 66–14)**
6. **REMOVE COWL TOP VENTILATOR LOUVER LH (SEE PAGE 66–14)**
7. **REMOVE COWL TOP VENTILATOR LOUVER RH (SEE PAGE 66–14)**
8. **REMOVE WINDSHIELD WIPER MOTOR & LINK ASSY (SEE PAGE 66–14)**
9. **REMOVE COWL TOP PANEL SUB–ASSY OUTER FRONT (SEE PAGE 32–24)**



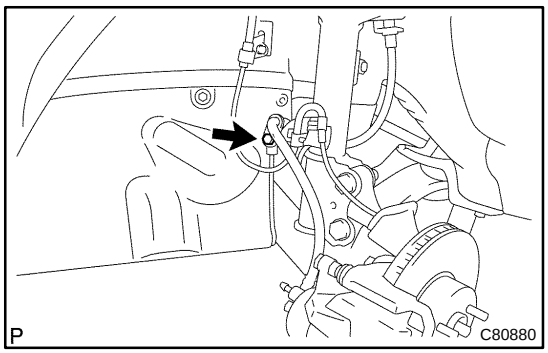
10. SEPARATE FRONT STABILIZER LINK ASSY

(a) Place a wooden block on a jack, and support the front suspension lower arm No.1 LH with the jack.

(b) Remove the nut and separate the front stabilizer link assy from the shock absorber with coil spring.

HINT:

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

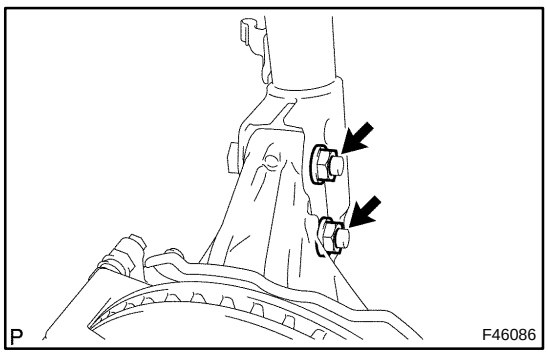


11. REMOVE FRONT SHOCK ABSORBER WITH COIL SPRING

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

NOTICE:

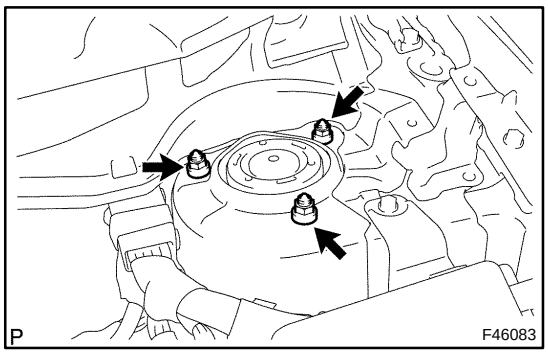
Be sure to completely disconnect the speed sensor front LH from the front shock absorber assy.



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

NOTICE:

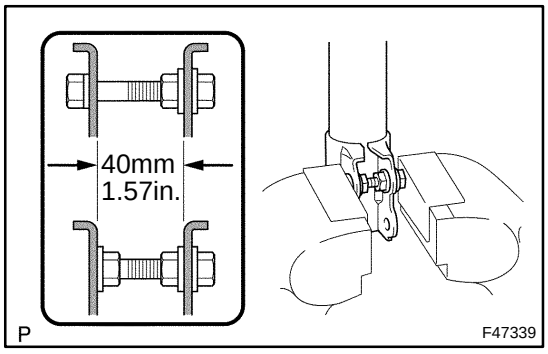
Keep the bolts inserted.



(c) Remove the 3 nuts.
(d) Lower the jack slowly. Remove the 2 bolts on the lower side and the front shock absorber with coil spring.

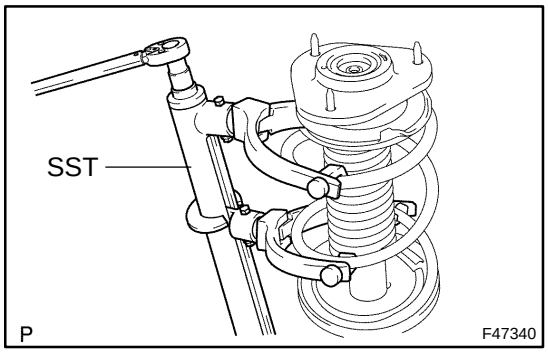
NOTICE:

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



12. FIX FRONT SHOCK ABSORBER WITH COIL SPRING

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



13. REMOVE FRONT SUPPORT TO FRONT SHOCK ABSORBER LH NUT

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

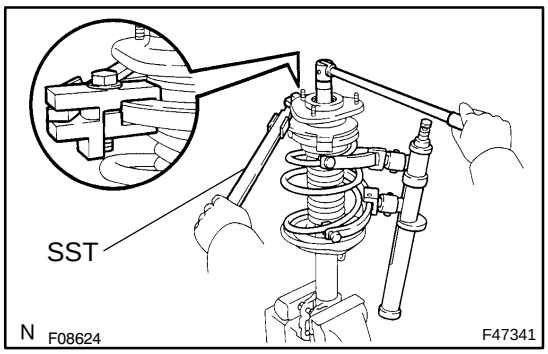
NOTICE:

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

HINT:

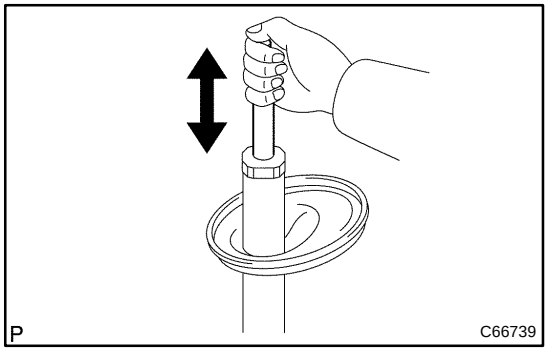
The coil spring can also be installed/removed using the hydraulic spring compressor.

(c) Remove the front suspension support dust cover.
(d) Secure the front coil spring seat upper with SST and remove the front suspension support to front shock absorber LH nut.
SST 09729–22031



14. REMOVE FRONT SUSPENSION SUPPORT SUB–ASSY LH
15. REMOVE FRONT SUSPENSION SUPPORT LH DUST SEAL
16. REMOVE FRONT COIL SPRING SEAT UPPER LH
17. REMOVE FRONT COIL SPRING INSULATOR UPPER LH
18. REMOVE FRONT COIL SPRING LH
19. REMOVE FRONT SPRING BUMPER LH
20. REMOVE FRONT COIL SPRING INSULATOR LOWER LH

21. REMOVE SHOCK ABSORBER ASSY FRONT LH



22. INSPECT SHOCK ABSORBER ASSY FRONT LH

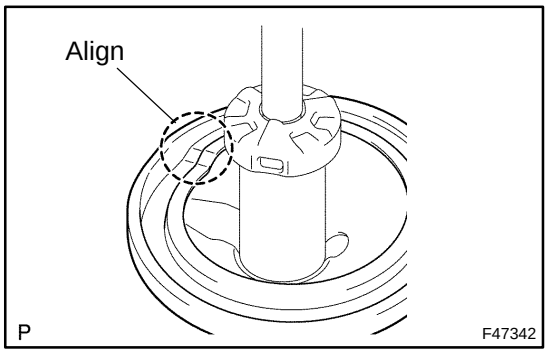
(a) Compress and extend the shock absorber rod 4 or more times. Check that there is no abnormal resistance or sound.

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

NOTICE:

When disposing of the shock absorber assy front LH, see DISPOSAL on page 26–18.

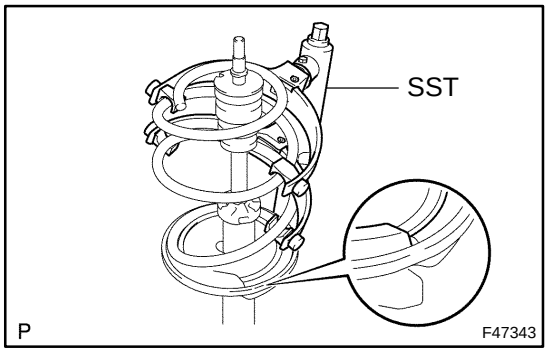
23. INSTALL SHOCK ABSORBER ASSY FRONT LH



24. INSTALL FRONT COIL SPRING INSULATOR LOWER LH

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

25. INSTALL FRONT SPRING BUMPER LH



26. INSTALL FRONT COIL SPRING LH

(a) Using SST, compress the coil spring.

SST 09727–30021 (09727–00010, 09727–00021, 09727–00031)

NOTICE:

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

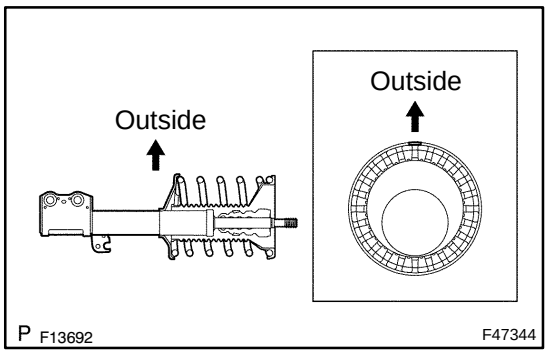
HINT:

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

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

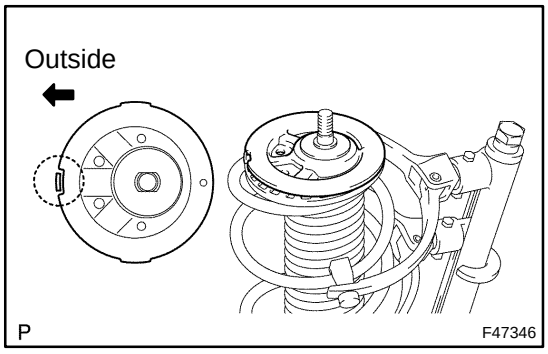
HINT:

Install the spring with the smaller diameter on top.



27. INSTALL FRONT COIL SPRING INSULATOR UPPER LH

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



28. INSTALL FRONT COIL SPRING SEAT UPPER LH

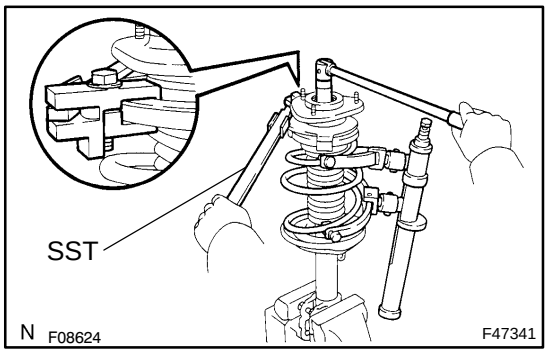
(a) Install the front coil spring seat upper with the recess facing to the outside of the vehicle.

NOTICE:

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

29. INSTALL FRONT SUSPENSION SUPPORT LH DUST SEAL

30. INSTALL FRONT SUSPENSION SUPPORT SUB–ASSY LH



31. INSTALL FRONT SUPPORT TO FRONT SHOCK ABSORBER LH NUT

(a) Secure the front coil spring seat upper with SST and tighten it with a new nut.

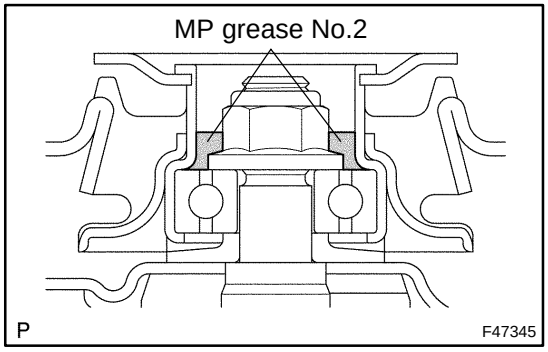
Torque: 47 N·m (479 kgf·cm, 35 ft·lbf)

(b) Release the SST while aligning the protruding part of the front coil spring insulator upper, the recess of the spring front coil spring seat upper and the shock absorber lower bracket and then remove the SST from the coil spring.

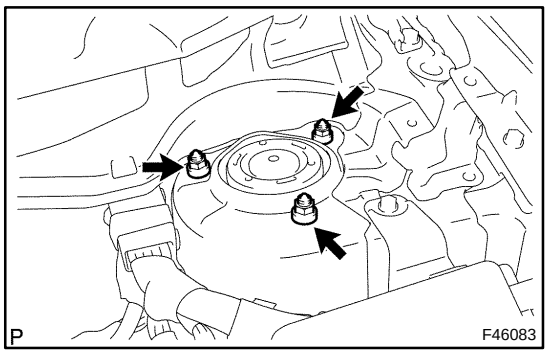
SST 09729–22031

NOTICE:

Do not use an impact wrench when removing the SST.



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

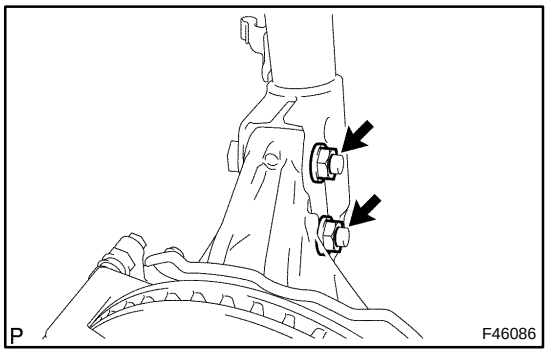


32. INSTALL FRONT SHOCK ABSORBER WITH COIL SPRING

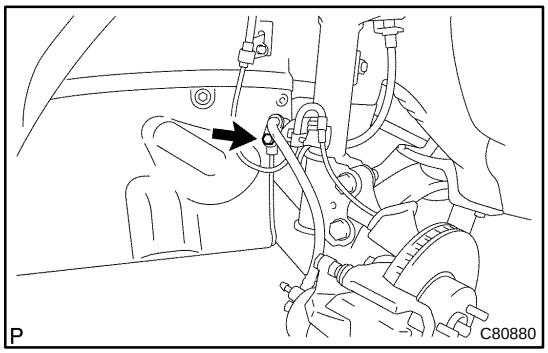
(a) Insert the 2 bolts from the front side of the vehicle and install the front shock absorber with coil spring to the steering knuckle assy.

(b) Place a wooden block between the front shock absorber with coil spring and a jack. Slowly raise the jack and install the front shock absorber with coil spring (upper side) to the vehicle.

(c) Install the front shock absorber with coil spring (upper side) with the 3 nuts.
Torque: 39 N·m (398 kgf·cm, 29 ft·lbf)

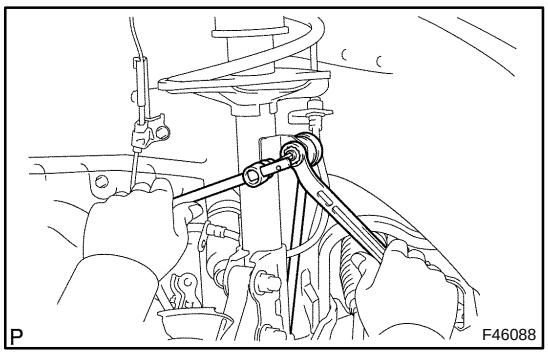


(d) Install the front shock absorber with coil spring to the steering knuckle with the 2 nuts.
Torque: 153 N·m (1560 kgf·cm, 113 ft·lbf)



(e) Connect the front flexible hose No.1 and the speed sensor front LH to the shock absorber assy with the bolt.
Torque: 19 N·m (192 kgf·cm, 14 ft·lbf)

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



33. CONNECT FRONT STABILIZER LINK ASSY

(a) Connect the front stabilizer link assy to the front shock absorber with coil spring with the nut.
Torque: 74 N·m (755 kgf·cm, 55 ft·lbf)

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

34. INSTALL COWL TOP PANEL SUB–ASSY OUTER FRONT (SEE PAGE 32–24)
35. INSTALL WINDSHIELD WIPER MOTOR & LINK ASSY (SEE PAGE 66–14)
36. INSTALL COWL TOP VENTILATOR LOUVER RH
37. INSTALL COWL TOP VENTILATOR LOUVER LH
38. INSTALL HOOD TO COWL TOP SEAL

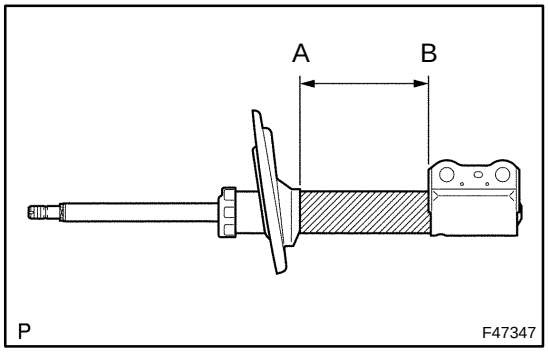
39. INSTALL FR WIPER ARM RH (SEE PAGE 66–14)
40. INSTALL FR WIPER ARM LH (SEE PAGE 66–14)
41. INSTALL FRONT WIPER ARM HEAD CAP
42. INSTALL FRONT WHEEL
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)
43. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT (SEE PAGE 26–6)

260I7–01

DISPOSAL

HINT:

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



1. DISPOSE OF SHOCK ABSORBER ASSY 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.**

FRONT SUSPENSION ARM SUB–ASSY LOWER NO.1 LH

260I8–01

REPLACEMENT

HINT:

- COMPONENTS: See page 26–3
- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.

1. PLACE FRONT WHEELS FACING STRAIGHT AHEAD

2. REMOVE COLUMN HOLE COVER SILENCER SHEET (SEE PAGE 51–6)

3. SEPARATE STEERING SLIDING YOKE SUB–ASSY (SEE PAGE 51–6)

4. REMOVE FRONT WHEEL

5. REMOVE EXHAUST PIPE ASSY FRONT (SEE PAGE 15–2)

6. REMOVE FRONT AXLE HUB LH NUT (SEE PAGE 30–7)

SST 09930–00010

7. REMOVE FRONT AXLE HUB RH NUT

SST 09930–00010

HINT:

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

8. SEPARATE TIE ROD END SUB–ASSY LH (SEE PAGE 30–7)

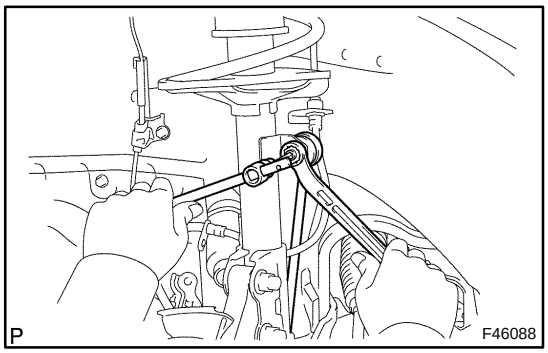
SST 09628–00011

9. SEPARATE TIE ROD END SUB–ASSY RH

SST 09628–00011

HINT:

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

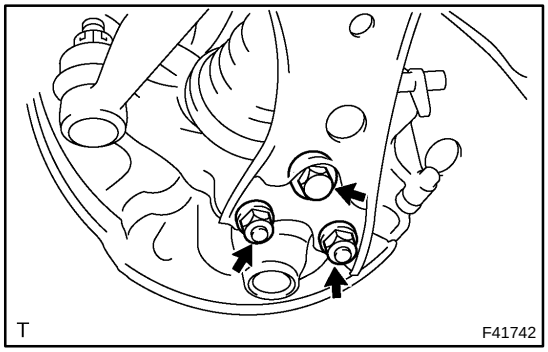


10. REMOVE FRONT STABILIZER LINK ASSY

(a) Remove the nuts and disconnect the stabilizer link assy LH and RH from the front shock absorber with coil spring.

HINT:

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



11. SEPARATE FRONT SUSPENSION ARM SUB–ASSY LOWER NO.1 LH

(a) Remove the bolt and the 2 nuts.

(b) Lower the front suspension arm sub–assy lower No.1 LH and separate it from the front lower ball joint assy.

12. SEPARATE FRONT SUSPENSION ARM SUB–ASSY LOWER NO.1 RH

HINT:

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

13. REMOVE FRONT AXLE ASSY LH (SEE PAGE 30–21)

14. REMOVE FRONT AXLE ASSY RH

HINT:

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

15. REMOVE FRONT DRIVE SHAFT ASSY LH (SEE PAGE 30–7)

SST 09520–01010, 09520–24010 (09520–32040)

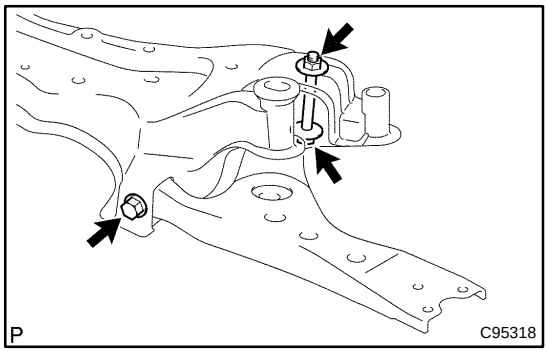
16. REMOVE FRONT DRIVE SHAFT ASSY RH

SST 09520–01010, 09520–24010 (09520–32040)

HINT:

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

17. SEPARATE FRONT SUSPENSION CROSSMEMBER SUB–ASSY (SEE PAGE 14–32)

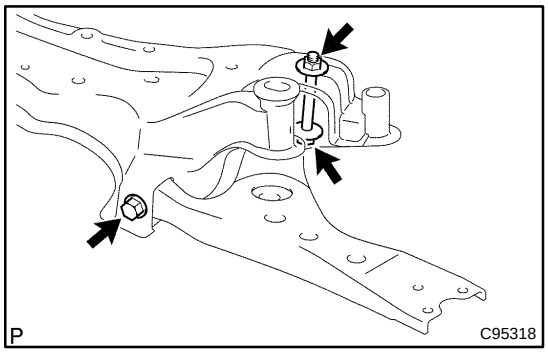


18. REMOVE FRONT SUSPENSION ARM SUB–ASSY LOWER NO.1 LH

(a) Remove the 2 bolts, the nut and the front suspension arm sub–assy lower No.1 LH.

NOTICE:

Keep the nut from rotating and loosen the bolt.



19. TEMPORARILY TIGHTEN FRONT SUSPENSION ARM SUB–ASSY LOWER NO.1 LH

(a) Install the front suspension arm sub–assy lower No.1 LH to the suspension crossmember sub–assy and temporarily tighten the front suspension arm sub–assy lower No.1 LH with the 2 bolts and the nut.

20. INSTALL FRONT SUSPENSION CROSSMEMBER SUB–ASSY (SEE PAGE 14–32)

SST 09670–00010

21. INSTALL FRONT DRIVE SHAFT ASSY LH (SEE PAGE 30–7)

22. INSTALL FRONT DRIVE SHAFT ASSY RH

HINT:

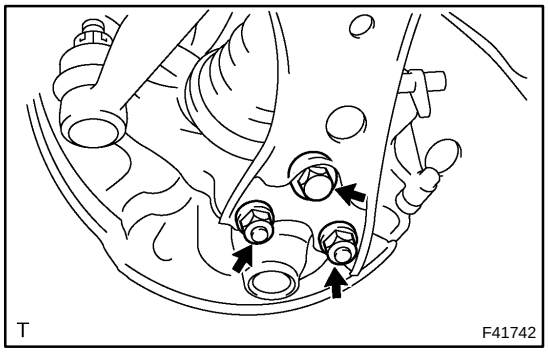
Install the RH side following the same procedures as with the LH side.

23. INSTALL FRONT AXLE ASSY LH (SEE PAGE 30–21)

24. INSTALL FRONT AXLE ASSY RH

HINT:

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



25. INSTALL FRONT SUSPENSION ARM SUB–ASSY LOWER NO.1 LH

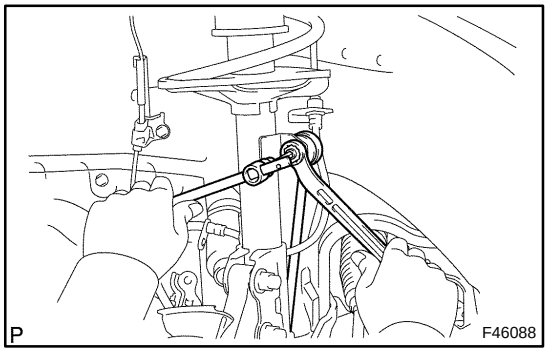
(a) Install the front suspension arm sub–assy lower No.1 LH to the front lower ball joint assy with the bolt and the 2 nuts.

Torque: 89 N·m (908 kgf·cm, 66 ft·lbf)

26. INSTALL FRONT SUSPENSION ARM SUB–ASSY LOWER NO.1 RH

HINT:

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



27. INSTALL FRONT STABILIZER LINK ASSY

(a) Connect the front stabilizer link assy LH and RH to the front shock absorber with coil spring with the 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.

28. INSTALL TIE ROD END SUB–ASSY LH (SEE PAGE 30–7)

29. INSTALL TIE ROD END SUB–ASSY RH

HINT:

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

30. INSTALL FRONT AXLE HUB LH NUT (SEE PAGE 30–7)

31. INSTALL FRONT AXLE HUB RH NUT

HINT:

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

32. INSTALL EXHAUST PIPE ASSY FRONT (SEE PAGE 15–2)

33. STABILIZE SUSPENSION

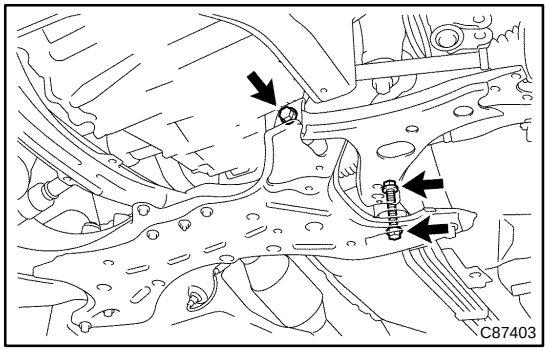
(a) Install the front tire.

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

(b) Jack down the vehicle and bounce it up and down several times to stabilize the front suspension.

34. INSTALL STEERING SLIDING YOKE SUB–ASSY (SEE PAGE 51–6)

35. INSTALL COLUMN HOLE COVER SILENCER SHEET (SEE PAGE 51–6)



36. FULLY TIGHTEN FRONT SUSPENSION ARM SUB–ASSY LOWER NO.1 LH

(a) Fully tighten the 2 bolts.

Torque: 137 N·m (1,400 kgf·cm, 101 ft·lbf)

NOTICE:

- **Keep the nut from rotating while tightening the rear–side bolt.**
- **Lower the tires to the ground using a 4–pillar lifter.**

37. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT (SEE PAGE 26–6)

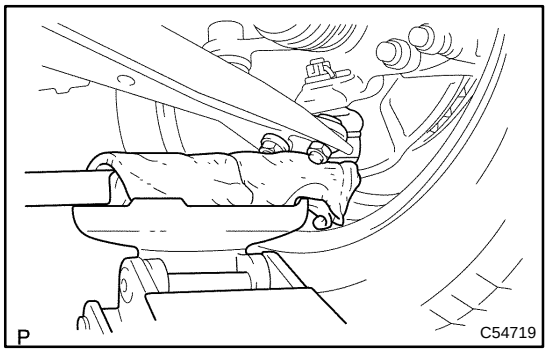
LOWER BALL JOINT ASSY FRONT LH

260I9–01

REPLACEMENT

HINT:

- COMPONENTS: See page 26–3
- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.



1. INSPECT LOWER BALL JOINT ASSY FRONT LH

(a) Jack up the front part of the vehicle.

(b) Move the front suspension arm sub–assy lower No.1 up and down to check vertical looseness of the lower ball joint assy front.

HINT:

Wrap a cloth around the wooden block to prevent damage to the bolt and nuts.

2. REMOVE FRONT WHEEL

3. REMOVE FRONT AXLE HUB LH NUT (SEE PAGE 30–7)

SST 09930–00010

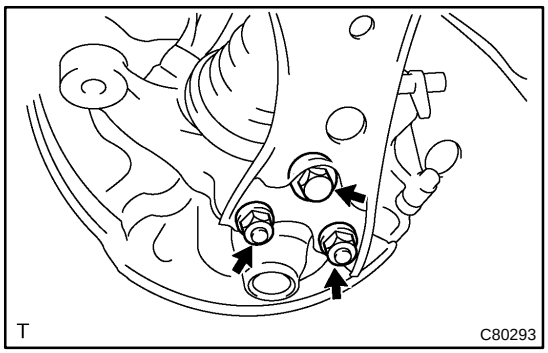
4. SEPARATE SPEED SENSOR FRONT LH (SEE PAGE 30–7)

5. SEPARATE FRONT DISC BRAKE CALIPER ASSY LH (SEE PAGE 30–21)

6. REMOVE FRONT DISC(SEE PAGE 30–21)

7. SEPARATE TIE ROD END SUB–ASSY LH (SEE PAGE 30–7)

SST 09628–62011



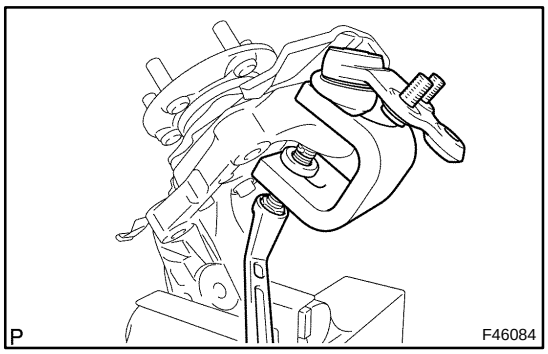
8. SEPARATE FRONT SUSPENSION ARM SUB–ASSY LOWER NO.1 LH

(a) Remove the bolt and the 2 nuts.

(b) Lower the front suspension arm sub–assy lower No.1 LH and separate if from the front lower ball joint assy.

9. REMOVE FRONT AXLE ASSY LH (SEE PAGE 30–21)

10. REMOVE FRONT WHEEL BEARING DUST DEFLECTOR NO.1 LH (SEE PAGE 30–21)



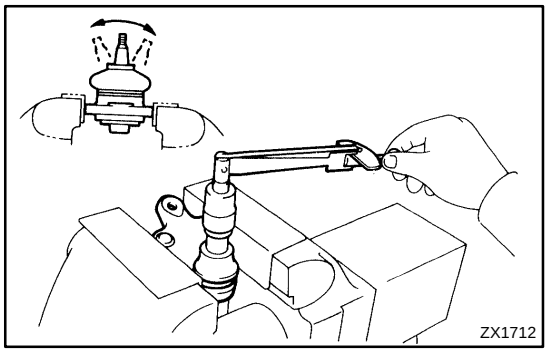
11. REMOVE LOWER BALL JOINT ASSY FRONT LH

(a) Remove the clip and the castle nuts.

(b) Using SST, remove the lower ball joint assy front.
SST 09611–36020

NOTICE:

- **Do not damage the steering knuckle.**
- **Securely hang the SST to the spacer of the steering knuckle.**
- **Replace the steering knuckle with a new one if the spacer comes off the steering knuckle.**



12. INSPECT LOWER BALL JOINT ASSY FRONT LH

(a) Flip the ball joint stud back and forth 5 times as shown in the illustration before installing the nut.

(b) Use a torque wrench to turn the nut continuously at a rate of 3 to 5 seconds per turn. Take the torque reading on the 5th turn.
Turning torque:
0.98 to 4.90 N·m (10 to 50 kgf·cm, 8.7 to 43 in.·lbf)

(c) Check the dust boots for cracks or grease leakage.

If the value is not within the specified range, replace the lower ball joint assy with a new one.

13. INSTALL LOWER BALL JOINT ASSY FRONT LH

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

NOTICE:

Ensure that the thread and taper are free of oil etc.

Torque: 71 N·m (724 kgf·cm, 52 ft·lbf)

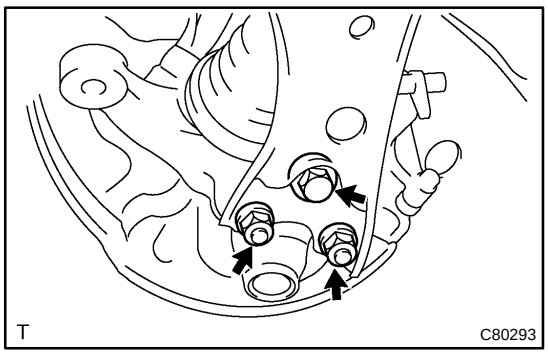
NOTICE:

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

(b) Install a new clip to the steering knuckle.

14. INSTALL FRONT WHEEL BEARING DUST DEFLECTOR NO.1 LH (SEE PAGE 30–21)
SST 09950–70010 (09951–07150), 09608–32010

15. INSTALL FRONT AXLE ASSY LH (SEE PAGE 30–21)



16. INSTALL FRONT SUSPENSION ARM SUB–ASSY LOWER NO.1 LH

(a) Lower the front suspension arm sub–assy lower No.1 LH and install the lower ball joint assy front to the front suspension arm sub–assy lower No.1 LH with the bolt and the 2 nuts.
Torque: 89 N·m (908 kgf·cm, 66 ft·lbf)

17. INSTALL TIE ROD END SUB–ASSY LH (SEE PAGE 30–7)

18. INSTALL FRONT DISC

19. INSTALL FRONT DISC BRAKE CALIPER ASSY LH (SEE PAGE 30–21)

20. INSTALL SPEED SENSOR FRONT LH (SEE PAGE 30–7)

21. INSTALL FRONT AXLE HUB LH NUT (SEE PAGE 30–7)

22. INSTALL FRONT WHEEL
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)
23. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT (SEE PAGE 26–6)
24. CHECK ABS SPEED SENSOR SIGNAL (SEE PAGE 05–961)

STABILIZER BAR FRONT

260IA–01

REPLACEMENT

HINT:

- COMPONENTS: See page 26–3
- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.

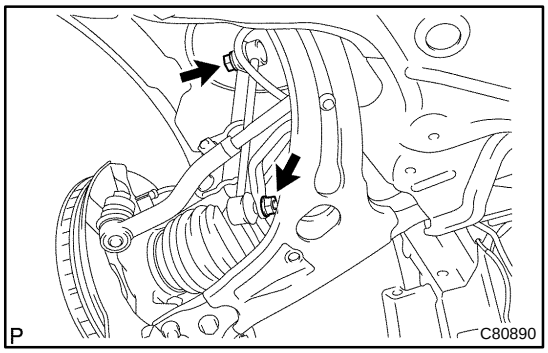
1. PLACE FRONT WHEELS FACING STRAIGHT AHEAD

2. REMOVE COLUMN HOLE COVER SILENCER SHEET (SEE PAGE 51–6)

3. SEPARATE STEERING SLIDING YOKE SUB–ASSY (SEE PAGE 51–6)

4. SEPARATE STEERING COLUMN HOLE COVER SUB–ASSY NO.1 (SEE PAGE 51–6)

5. REMOVE FRONT WHEEL

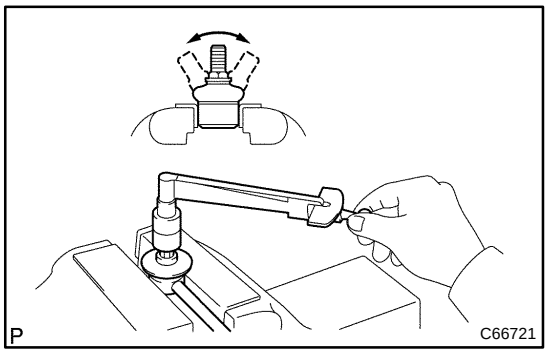


6. REMOVE FRONT STABILIZER LINK ASSY

(a) Remove the 2 nuts and front stabilizer link assy LH.

HINT:

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



7. INSPECT FRONT STABILIZER LINK ASSY

(a) Flip the ball joint stud back and forth 5 times as shown in the illustration before installing the nut.

(b) Use a torque wrench to turn the nut continuously at a rate of 2 to 4 seconds per 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 in.·lbf)

(c) Check the dust cover for cracks or grease leakage.

If the value is not within the specified range, replace the front stabilizer link assy with a new one.

8. SEPARATE TIE ROD END SUB–ASSY LH (SEE PAGE 30–7)

SST 09628–00011

9. SEPARATE TIE ROD END SUB–ASSY RH

SST 09628–00011

HINT:

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

10. REMOVE FLOOR PANEL BRACE FRONT (SEE PAGE 15–2)

11. REMOVE EXHAUST PIPE ASSY FRONT (SEE PAGE 15–2)

12. SEPARATE FRONT STABILIZER BRACKET NO.1 LH

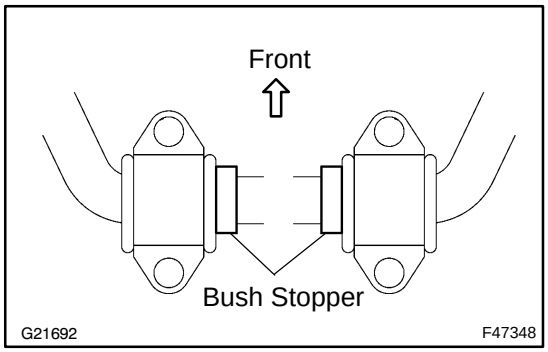
(a) Remove the 2 bolts and the stabilizer bracket No.1 LH from the front suspension crossmember sub–assy.

13. SEPARATE FRONT STABILIZER BRACKET NO.1 RH

HINT:

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

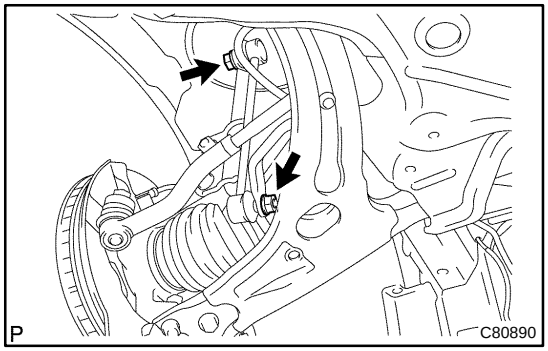
14. REMOVE STEERING INTERMEDIATE SHAFT (SEE PAGE 51–6)
15. REMOVE STEERING COLUMN HOLE COVER SUB–ASSY NO.1 (SEE PAGE 51–6)
16. REMOVE STEERING GEAR ASSY (SEE PAGE 51–6)
17. REMOVE FRONT STABILIZER BAR BUSH NO.1
(a) Remove the 2 front stabilizer bar bushes No.1 from the stabilizer bar.
18. REMOVE STABILIZER BAR FRONT
(a) Remove the front stabilizer bar from the right side of the vehicle.
19. INSTALL STABILIZER BAR FRONT
(a) Insert the front stabilizer bar from the right side of the vehicle.



20. INSTALL FRONT STABILIZER BAR BUSH NO.1
(a) Install the bush to the outer side of the bush stopper on the stabilizer bar.

NOTICE:
- **Place the cutout of the stabilizer bush facing the rear side.**
- **Ensure the right of left deviation of the stabilizer bar is 5mm or less.**

21. INSTALL STEERING GEAR ASSY (SEE PAGE 51–6)
22. INSTALL STEERING COLUMN HOLE COVER SUB–ASSY NO.1 (SEE PAGE 51–6)
23. INSTALL STEERING INTERMEDIATE SHAFT (SEE PAGE 51–6)
24. INSTALL FRONT STABILIZER BRACKET NO.1 LH
(a) Install the stabilizer bracket No.1 LH to the front suspension crossmember sub–assy with the 2 bolts.
Torque: 19 N·m (194 kgf·cm, 14 ft·lbf)
25. INSTALL FRONT STABILIZER BRACKET NO.1 RH
HINT:
Install the RH side following the same procedures as with the LH side.
26. INSTALL EXHAUST PIPE ASSY FRONT (SEE PAGE 15–2)
27. INSTALL FLOOR PANEL BRACE FRONT (SEE PAGE 15–2)



28. INSTALL FRONT STABILIZER LINK ASSY
(a) Install the front stabilizer link assy LH with the 2 nuts.
Torque: 74 N·m (755 kgf·cm, 55 ft·lbf)
HINT:
Use a hexagon wrench (6 mm) to hold the stud if the ball joint turns together with the nut.

29. INSTALL TIE ROD END SUB–ASSY LH (SEE PAGE 30–7)
30. INSTALL TIE ROD END SUB–ASSY RH
HINT:
Install the RH side following the same procedures as with the LH side.

31. INSTALL FRONT WHEEL
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)
32. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT (SEE PAGE 26–6)