SUSPENSION SYSTEM

PROBLEM SYMPTOMS TABLE

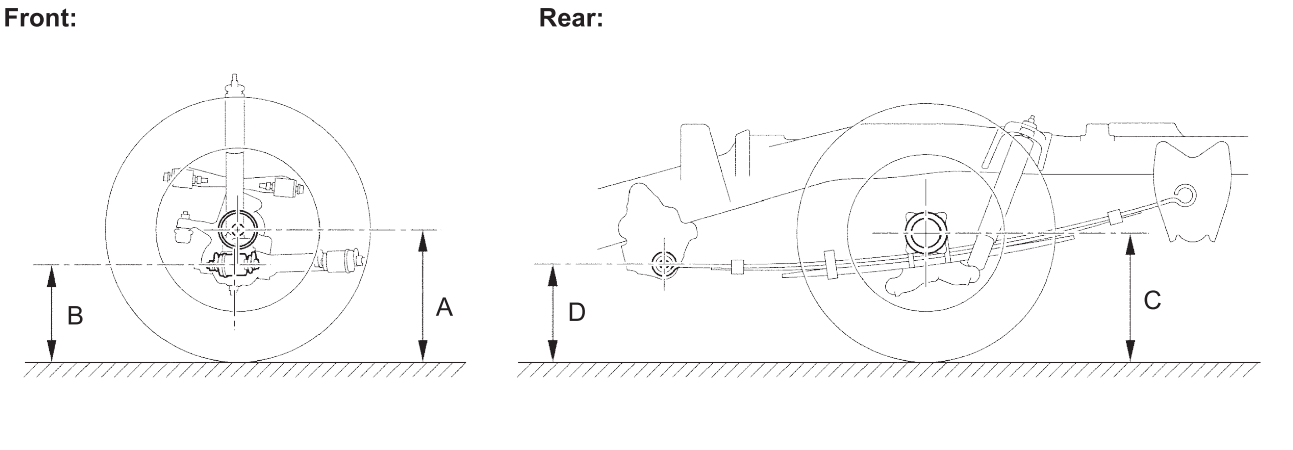
HINT:
Use the table below to help you find the cause of the problem. The numbers indicate the ranked order of probability of each of the possible causes. Check each part in the order suggested. If necessary, replace these applicable parts.

Symptom	Suspected area	See page
Bottoming	1. Vehicle (Overloaded)	-
	2. Front coil spring (Weak) (2WD)	SP-15
	3. Front coil spring (Weak) (4WD and Pre-Runner)	SP-22
	4. Rear leaf spring	SP-54
	5. Front shock absorber (Worn) (2WD)	SP-16
	6. Front shock absorber (Worn) (4WD and Pre-Runner)	SP-22
	7. Rear shock absorber (Worn)	SP-60
Swaying/pitching	1. Tire (Worn or improperly inflated)	TW-1
	2. Front stabilizer bar (Bent or broken) (2WD)	SP-47
	3. Front stabilizer bar (Bent or broken) (4WD and Pre-Runner)	SP-50
	4. Rear stabilizer bar (Bent or broken) (Sport Suspension Package)	SP-63
	5. Front shock absorber (Worn) (2WD)	SP-16
	6. Front shock absorber (Worn) (4WD and Pre-Runner)	SP-22
	7. Rear shock absorber (Worn)	SP-60
Front wheel shimmy	1. Tire (Worn or improperly inflated)	TW-1
	2. Wheel (Out of balance)	TW-1
	3. Front shock absorber (Worn) (2WD)	SP-16
	4. Front shock absorber (Worn) (4WD and Pre-Runner)	SP-22
	5. Wheel alignment (Incorrect) (2WD)	SP-2
	6. Wheel alignment (Incorrect) (4WD and Pre-Runner)	SP-7
	7. Upper ball joint (Worn) (2WD)	SP-27
	8. Upper ball joint (Worn) (4WD and Pre-Runner)	SP-31
	9. Lower ball joint (Worn) (2WD)	SP-36
	10. Lower ball joint (Worn) (4WD and Pre-Runner)	SP-43
	11. Hub bearing (Worn)	AH-1
	12. Steering linkage (Loose or worn)	-
Rear wheel shimmy	1. Tire (Worn or improperly inflated)	TW-1
	2. Wheel (Out of balance)	TW-1
	3. Rear shock absorber (Worn)	SP-60
	4. Wheel alignment (Incorrect) (2WD)	SP-2
	5. Wheel alignment (Incorrect) (4WD and Pre-Runner)	SP-7
	6. Hub bearing (Worn)	AH-2
Abnormal tire wear	1. Tire (Worn or improperly inflated)	TW-1
	2. Wheel alignment (Incorrect) (2WD)	SP-2
	3. Wheel alignment (Incorrect) (4WD and Pre-Runner)	SP-7
	4. Front shock absorber (Worn) (2WD)	SP-16
	5. Front shock absorber (Worn) (4WD and Pre-Runner)	SP-22
	6. Rear shock absorber (Worn)	SP-60
	7. Suspension parts (Worn)	-

FRONT WHEEL ALIGNMENT (for 2WD)

ADJUSTMENT

1. **INSPECT TIRES (See page TW-1)**
2. **MEASURE VEHICLE HEIGHT**



SP

Vehicle height:

Vehicle Model	Tire Size	A - B	C - D
TRN220L-TRMDKA	P215/70R15	87 mm (3.43 in.)	48 mm (1.89 in.)
TRN220L-TRPDKA	P215/70R15	88 mm (3.46 in.)	48 mm (1.89 in.)
TRN225L-CRMDKA	P215/70R15	86 mm (3.39 in.)	50 mm (1.97 in.)
TRN225L-CRPDKA	P215/70R15	87 mm (3.43 in.)	50 mm (1.97 in.)
GRN225L-CRFDKA	P255/45R18	118 mm (4.65 in.)	85 mm (3.35 in.)

Measuring points:

A:
Ground clearance of front wheel center

B:
Ground clearance of adjustment cam bolt center (front side)

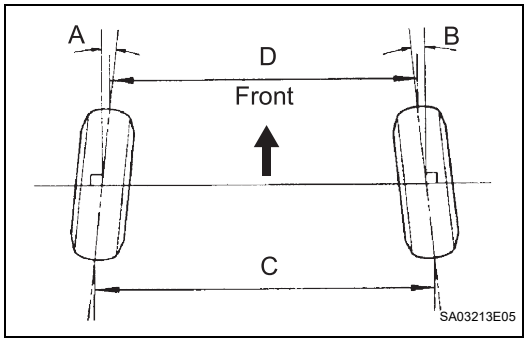
C:
Ground clearance of rear wheel center

D:
Ground clearance of rear leaf spring front side bush center

NOTICE:

Before inspecting the wheel alignment, check the vehicle height.

Bounce the vehicle up and down at the corners to stabilize the suspension before inspecting the vehicle height.



Toe-in

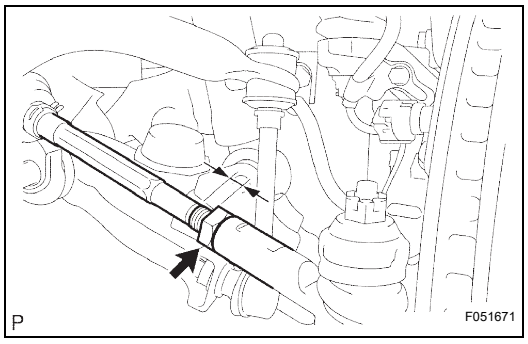
Vehicle Model	Tire Size	A + B	C - D
TRN220L-TRMDKA	P215/70R15	4.8' +- 6.5' (0.081° +- 0.108°)	0.96 +- 2 mm (0.038 +- 0.08 in.)
TRN220L-TRPDKA	P215/70R15	4.3' +- 6.5' (0.072° +- 0.108°)	0.86 +- 2 mm (0.034 +- 0.08 in.)
TRN225L-CRMDKA	P215/70R15	5.3' +- 6.5' (0.089° +- 0.108°)	1.06 +- 2 mm (0.042 +- 0.08 in.)
TRN225L-CRPDKA	P215/70R15	4.8' +- 6.5' (0.081° +- 0.108°)	0.96 +- 2 mm (0.038 +- 0.08 in.)
GRN225L-CRFDKA	P255/45R18	1.8' +- 6.5' (0.030° +- 0.108°)	0.36 +- 2 mm (0.014 +- 0.08 in.)

3. INSPECT TOE-IN

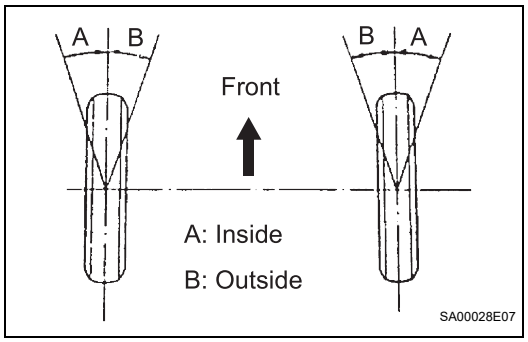
If the toe-in is not within the specified range, adjust it at the rack ends.

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 uniformly to adjust the toe-in.
HINT:
Try to adjust the toe-in to the middle 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: 55.5 N*m (566 kgf*cm, 41 ft.*lbf)
(f) Install the boots onto the seats with the clips.
HINT:
Make sure that the boots are not twisted.



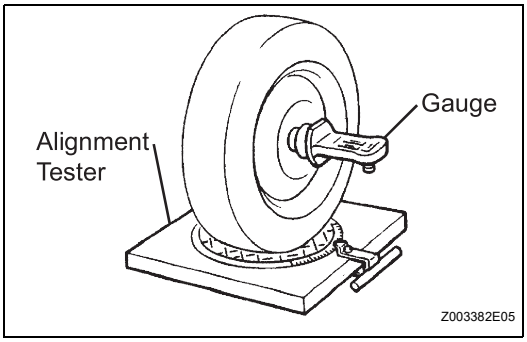
5. INSPECT WHEEL TURNING ANGLE

(a) Turn the steering wheel fully, and measure the turning angle.
Wheel turning angle

Inside wheel	Outside wheel (Reference)
38°48' (36°48' to 39°48') 38.80° (36.80° to 39.80°)	32°30' (30°30' to 33°30') 32.50° (30.50° to 33.50°)

If the right and left turning angles of the inside and outside wheels are not within the specified ranges, check the right and left rack end lengths.

SP



6. INSPECT CAMBER, CASTER AND STEERING AXIS INCLINATION

(a) Install the camber-caster-kingpin gauge and position the front wheel on the wheel alignment tester.

(b) Inspect the camber, caster and steering axis inclination.

Camber, caster and steering axis inclination

Vehicle Model	Tire Size	Camber	Caster	Steering Axis Inclination
TRN220L-TRMDKA	P215/70R15	0°13' +- 45' (0.22° +- 0.75°)	3°52' +- 45' (3.86° +- 0.75°)	10°42' +- 45' (10.70° +- 0.75°)
TRN220L-TRPDKA	P215/70R15	0°12' +- 45' (0.20° +- 0.75°)	3°52' +- 45' (3.86° +- 0.75°)	10°44' +- 45' (10.73° +- 0.75°)
TRN225L-CRMDKA	P215/70R15	0°14' +- 45' (0.24° +- 0.75°)	4°01' +- 45' (4.01° +- 0.75°)	10°41' +- 45' (10.69° +- 0.75°)
TRN225L-CRPDKA	P215/70R15	0°13' +- 45' (0.22° +- 0.75°)	4°01' +- 45' (4.02° +- 0.75°)	10°42' +- 45' (10.70° +- 0.75°)
GRN225L-CRFDKA	P255/45R18	-0°40' +- 45' (-0.66° +- 0.75°)	5°09' +- 45' (5.15° +- 0.75°)	11°34' +- 45' (11.56° +- 0.75°)

NOTICE:

- **Perform the inspection while the vehicle is empty (without spare tires or tools on board).**
- **The tolerance for the difference between the left and right wheels is 30' (0.50°) or less for both the camber and caster.**

If the steering axis inclination is not as specified after the camber and caster have been correctly adjusted, recheck the steering knuckle and front wheel for distortion and slack.

7. ADJUST CAMBER AND CASTER

NOTICE:

Inspect the toe-in after the camber has been adjusted.

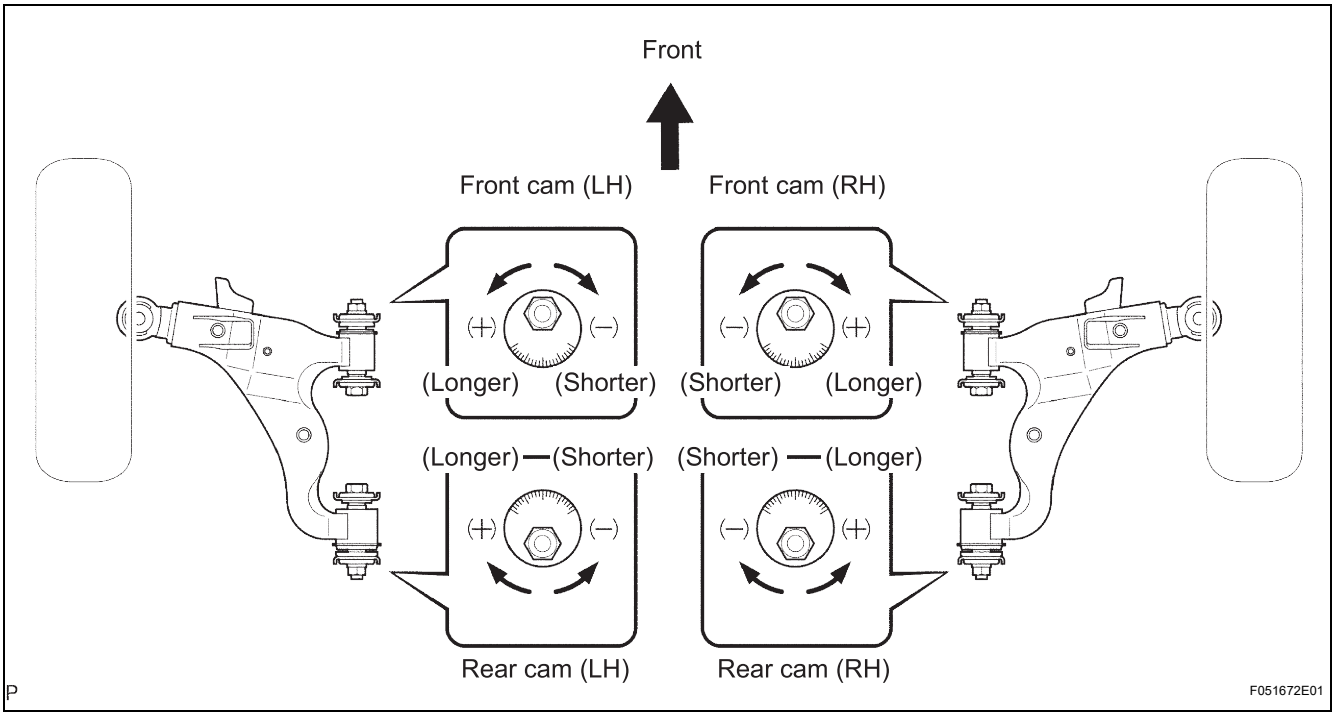
(a) Loosen the 2 nuts.

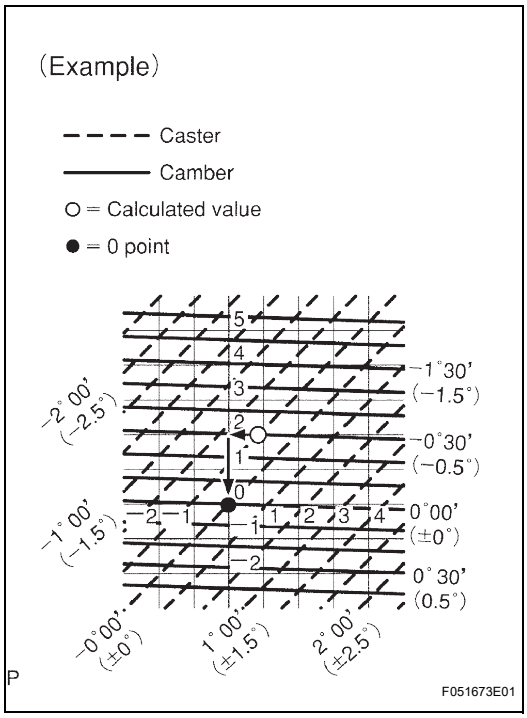
(b) Turn the camber adjust cam and adjust the camber and caster.

HINT:

Try to adjust the camber and caster to the central value.

SP





(c) How to read the adjustment chart (using examples).

(1) Measure the present alignment.

Camber:
-0°17' (0.28°)
Caster:
3°30' (3.50°)

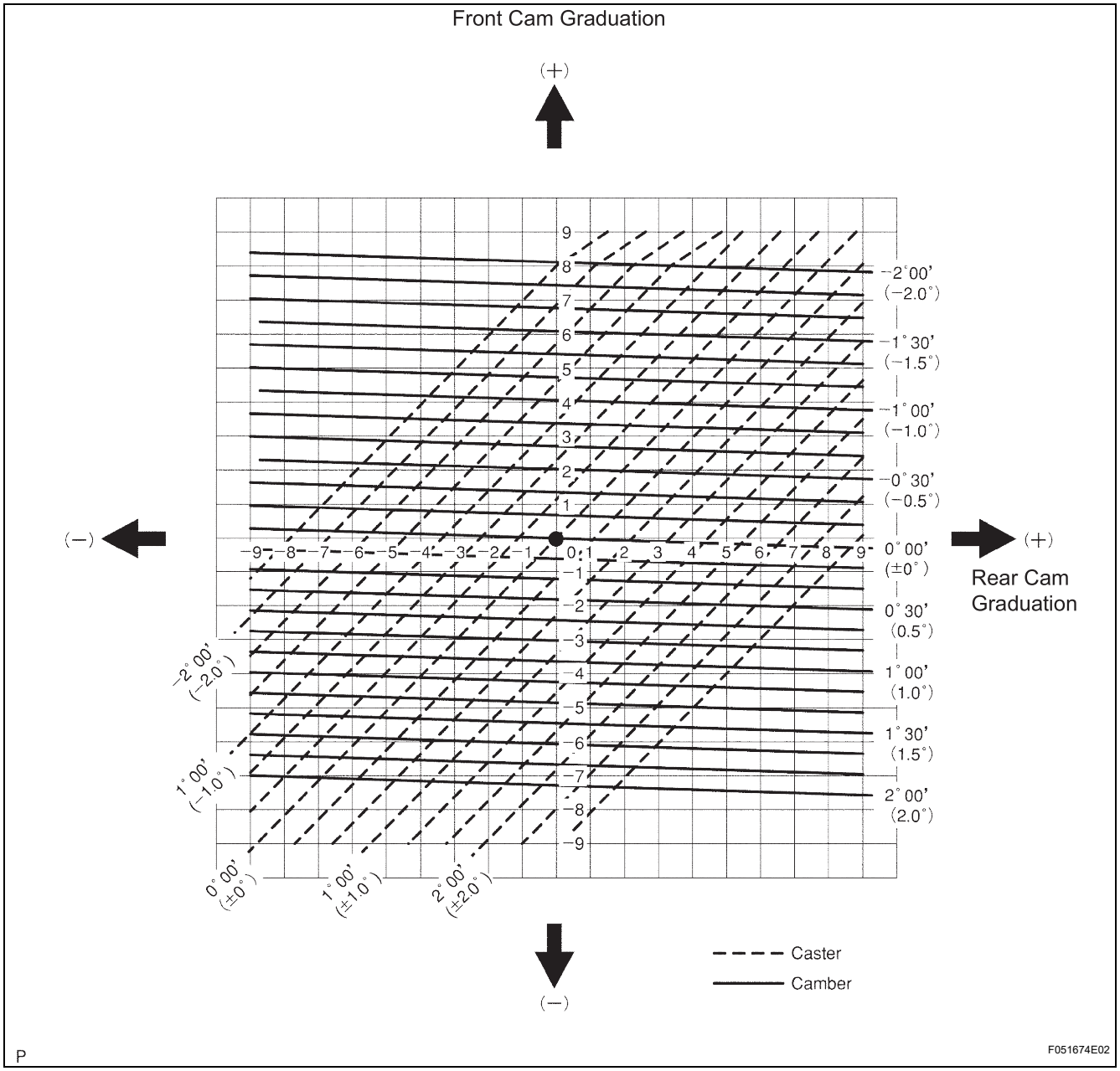
(2) Calculate the difference between the standard value (A) and the measured value (B) on the adjustment chart.

Standard value:
Camber:
0°13' (0.22°)
Caster:
3°50' (3.84°)
Formula:
B - A = C
Camber:
-0°17' - 0°13' = -0°30'
Caster:
3°30' - 3°50' = -0°20'

(3) As shown in the chart, read the distance from the marked point to 0 point, and adjust the front and/or rear adjusting cams accordingly.

Front adjust cam:
- (Shorter) 1.9
Rear adjust cam:
- (Shorter) 0.8

SP


Front Cam Graduation
(+)
(−)
(−)
(+)
Rear Cam Graduation
9
8
7
6
5
4
3
2
1
0
−1
−2
−3
−4
−5
−6
−7
−8
−9
−9 −8 −7 −6 −5 −4 −3 −2 −1
1 2 3 4 5 6 7 8 9
−2°00' (−2.0°)
−1°30' (−1.5°)
−1°00' (−1.0°)
−0°30' (−0.5°)
0°00' (±0°)
0°30' (0.5°)
1°00' (1.0°)
1°30' (1.5°)
2°00' (2.0°)
−2°00' (−2.0°)
−1°00' (−1.0°)
0°00' (±0°)
1°00' (±1.0°)
2°00' (±2.0°)
Caster
Camber
P
F051674E02

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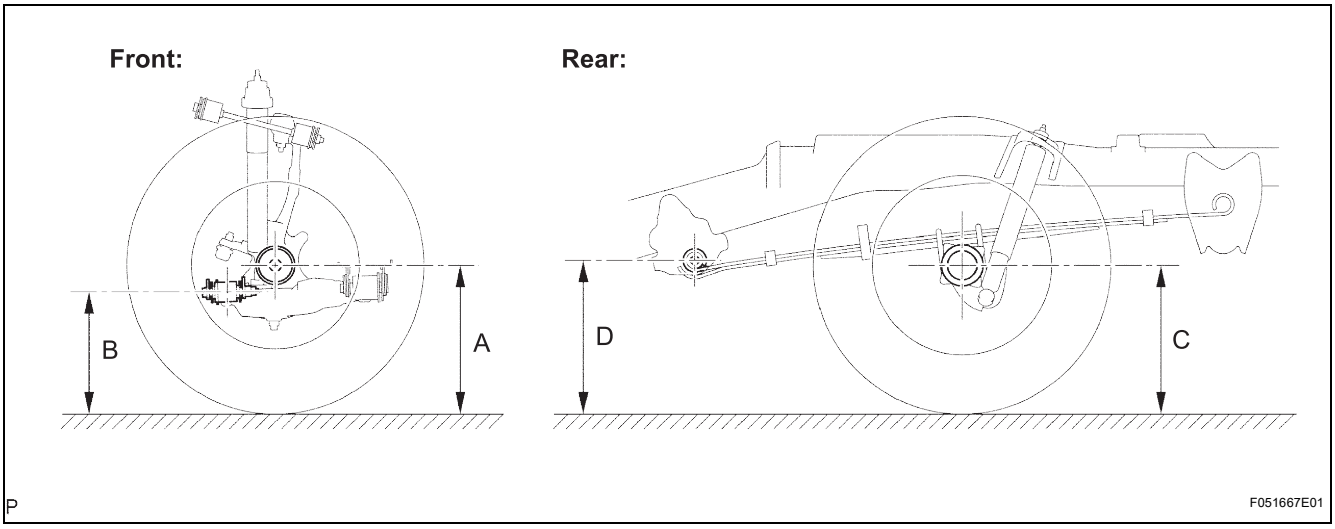
FRONT WHEEL ALIGNMENT (for 4WD and Pre-Runner)

ADJUSTMENT

1. **INSPECT TIRES (See page TW-1)**
2. **MEASURE VEHICLE HEIGHT**



Vehicle height:
for Pre-Runner (North America)

Vehicle Model	Tire Size	A-B	C-D
TRN260L-TRMDKA	P245/75R16	62 mm (2.44 in.)	-47 mm (-1.85 in.)
TRN265L-CRMDKA	P245/75R16	60 mm (2.36 in.)	-47 mm (-1.85 in.)
GRN265L-CRFDKA	P245/75R16	66 mm (2.60 in.)	-44 mm (-1.73 in.)
GRN265L-CRFDKA	P265/70R16	69 mm (2.72 in.)	-46 mm (-1.81 in.)
GRN265L-CRFDKA	P265/65R17	66 mm (2.60 in.)	-44 mm (-1.73 in.)
GRN265L-CRADKA	P245/75R16	63 mm (2.48 in.)	-44 mm (-1.73 in.)
GRN265L-CRADKA	P265/70R16	70 mm (2.76 in.)	-45 mm (-1.77 in.)
GRN265L-CRADKA	P265/65R17	63 mm (2.48 in.)	-44 mm (-1.73 in.)
GRN265L-PRADKA	P245/75R16	64 mm (2.52 in.)	-39 mm (-1.54 in.)
GRN265L-PRADKA	P265/70R16	62 mm (2.44 in.)	-43 mm (-1.69 in.)
GRN265L-PRADKA	P265/65R17	64 mm (2.52 in.)	-39 mm (-1.54 in.)
GRN270L-PRADKA	P245/75R16	65 mm (2.56 in.)	-38 mm (-1.50 in.)
GRN270L-PRADKA	P265/65R17	65 mm (2.56 in.)	-38 mm (-1.50 in.)

for Pre-Runner (Mexico)

Vehicle Model	Tire Size	A-B	C-D
GRN265L-PRADKA	P245/75R16	53 mm (2.09 in.)	-51 mm (-2.01 in.)
GRN265L-PRADKA	P265/65R17	53 mm (2.09 in.)	-51 mm (-2.01 in.)

for 4WD

Vehicle Model	Tire Size	A-B	C-D
TRN240L-TRMDKA	P245/75R16	63 mm (2.48 in.)	-45 mm (-1.77 in.)
TRN245L-CRMDKA	P245/75R16	63 mm (2.48 in.)	-44 mm (-1.73 in.)
GRN245L-CRFDKA	P245/75R16	69 mm (2.72 in.)	-40 mm (-1.57 in.)
GRN245L-CRFDKA	P265/70R16	71 mm (2.80 in.)	-43 mm (-1.69 in.)

SP

Vehicle Model	Tire Size	A-B	C-D
GRN245L-CRFDKA	P265/65R17	69 mm (2.72 in.)	-41 mm (-1.61 in.)
GRN245L-CRADKA	P245/75R16	65 mm (2.56 in.)	-41 mm (-1.61 in.)
GRN245L-CRADKA	P265/70R16	71 mm (2.80 in.)	-43 mm (-1.69 in.)
GRN245L-CRADKA	P265/65R17	65 mm (2.56 in.)	-41 mm (-1.61 in.)
GRN245L-PRFDKA	P245/75R16	64 mm (2.52 in.)	-38 mm (-1.50 in.)
GRN245L-PRFDKA	P265/70R16	69 mm (2.72 in.)	-39 mm (-1.54 in.)
GRN245L-PRFDKA	P265/65R17	64 mm (2.52 in.)	-38 mm (-1.50 in.)
GRN245L-PRADKA	P245/75R16	65 mm (2.56 in.)	-37 mm (-1.46 in.)
GRN245L-PRADKA	P265/70R16	70 mm (2.76 in.)	-38 mm (-1.50 in.)
GRN245L-PRADKA	P265/65R17	65 mm (2.56 in.)	-37 mm (-1.46 in.)
GRN250L-PRADKA	P245/75R16	66 mm (2.60 in.)	-35 mm (-1.38 in.)
GRN250L-PRADKA	P265/65R17	66 mm (2.60 in.)	-35 mm (-1.38 in.)

Measuring points:

A:
Ground clearance of front wheel center

B:
Ground clearance of adjustment cam bolt center (front side)

C:
Ground clearance of rear wheel center

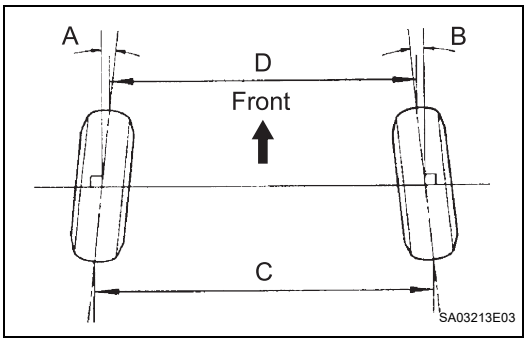
D:
Ground clearance of rear leaf spring front side bush center

SP

NOTICE:

Before inspecting the wheel alignment, check the vehicle height.

Bounce the vehicle up and down at the corners to stabilize the suspension before inspecting the vehicle height.



3. INSPECT TOE-IN

Toe-in:

for Pre-Runner (North America)

Vehicle Model	Tire Size	A+B	C-D
TRN260L-TRMDKA	P245/75R16	7.3' +- 6.5' (0.121° +- 0.108°)	1.64 +- 2 mm (0.065 +- 0.08 in.)
TRN265L-CRMDKA	P245/75R16	8.6' +- 6.5' (0.144° +- 0.108°)	1.94 +- 2 mm (0.076 +- 0.08 in.)
GRN265L-CRFDKA	P245/75R16	4.6' +- 6.5' (0.077° +- 0.108°)	1.04 +- 2 mm (0.041 +- 0.08 in.)
GRN265L-CRFDKA	P265/70R16	2.7' +- 6.5' (0.044° +- 0.108°)	0.60 +- 2 mm (0.024 +- 0.08 in.)
GRN265L-CRFDKA	P265/65R17	4.6' +- 6.5' (0.077° +- 0.108°)	1.05 +- 2 mm (0.041 +- 0.08 in.)
GRN265L-CRADKA	P245/75R16	6.6' +- 6.5' (0.110° +- 0.108°)	1.48 +- 2 mm (0.058 +- 0.08 in.)
GRN265L-CRADKA	P265/70R16	2.0' +- 6.5' (0.033° +- 0.108°)	0.45 +- 2 mm (0.018 +- 0.08 in.)
GRN265L-CRADKA	P265/65R17	6.6' +- 6.5' (0.111° +- 0.108°)	1.50 +- 2 mm (0.059 +- 0.08 in.)
GRN265L-PRADKA	P245/75R16	5.2' +- 6.5' (0.087° +- 0.108°)	1.18 +- 2 mm (0.046 +- 0.08 in.)
GRN265L-PRADKA	P265/70R16	6.6' +- 6.5' (0.110° +- 0.108°)	1.49 +- 2 mm (0.059 +- 0.08 in.)

Vehicle Model	Tire Size	A+B	C-D
GRN265L-PRADKA	P265/65R17	5.3' +- 6.5' (0.089° +- 0.108°)	1.20 +- 2 mm (0.047 +- 0.08 in.)
GRN270L-PRADKA	P245/75R16	4.6' +- 6.5' (0.077° +- 0.108°)	1.04 +- 2 mm (0.041 +- 0.08 in.)
GRN270L-PRADKA	P265/65R17	4.6' +- 6.5' (0.077° +- 0.108°)	1.05 +- 2 mm (0.041 +- 0.08 in.)

for Pre-Runner (Mexico)

Vehicle Model	Tire Size	A+B	C-D
GRN265L-PRADKA	P245/75R16	12.7' +- 6.5' (0.212° +- 0.108°)	2.87 +- 2 mm (0.113 +- 0.08 in.)
GRN265L-PRADKA	P265/65R17	12.9' +- 6.5' (0.215° +- 0.108°)	2.91 +- 2 mm (0.115 +- 0.08 in.)

for 4WD

Vehicle Model	Tire Size	A+B	C-D
TRN240L-TRMDKA	P245/75R16	6.6' +- 6.5' (0.110° +- 0.108°)	1.48 +- 2 mm (0.058 +- 0.08 in.)
TRN245L-CRMDKA	P245/75R16	6.6' +- 6.5' (0.110° +- 0.108°)	1.48 +- 2 mm (0.058 +- 0.08 in.)
GRN245L-CRFDKA	P245/75R16	2.6' +- 6.5' (0.044° +- 0.108°)	0.59 +- 2 mm (0.023 +- 0.08 in.)
GRN245L-CRFDKA	P265/70R16	1.3' +- 6.5' (0.022° +- 0.108°)	0.30 +- 2 mm (0.012 +- 0.08 in.)
GRN245L-CRFDKA	P265/65R17	2.7' +- 6.5' (0.044° +- 0.108°)	0.60 +- 2 mm (0.024 +- 0.08 in.)
GRN245L-CRADKA	P245/75R16	5.2' +- 6.5' (0.087° +- 0.108°)	1.18 +- 2 mm (0.046 +- 0.08 in.)
GRN245L-CRADKA	P265/70R16	1.3' +- 6.5' (0.022° +- 0.108°)	0.30 +- 2 mm (0.012 +- 0.08 in.)
GRN245L-CRADKA	P265/65R17	5.3' +- 6.5' (0.089° +- 0.108°)	1.20 +- 2 mm (0.047 +- 0.08 in.)
GRN245L-PRFDKA	P245/75R16	5.2' +- 6.5' (0.087° +- 0.108°)	1.18 +- 2 mm (0.046 +- 0.08 in.)
GRN245L-PRFDKA	P265/70R16	2.7' +- 6.5' (0.044° +- 0.108°)	0.60 +- 2 mm (0.024 +- 0.08 in.)
GRN245L-PRFDKA	P265/65R17	5.3' +- 6.5' (0.089° +- 0.108°)	1.20 +- 2 mm (0.047 +- 0.08 in.)
GRN245L-PRADKA	P245/75R16	4.6' +- 6.5' (0.077° +- 0.108°)	1.04 +- 2 mm (0.041 +- 0.08 in.)
GRN245L-PRADKA	P265/70R16	2.0' +- 6.5' (0.033° +- 0.108°)	0.45 +- 2 mm (0.018 +- 0.08 in.)
GRN245L-PRADKA	P265/65R17	4.6' +- 6.5' (0.077° +- 0.108°)	1.05 +- 2 mm (0.041 +- 0.08 in.)
GRN250L-PRADKA	P245/75R16	4.0' +- 6.5' (0.066° +- 0.108°)	0.89 +- 2 mm (0.035 +- 0.08 in.)
GRN250L-PRADKA	P265/65R17	4.0' +- 6.5' (0.066° +- 0.108°)	0.90 +- 2 mm (0.035 +- 0.08 in.)

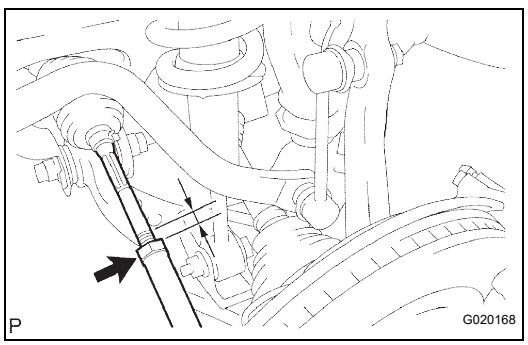
If the toe-in is not within the specified range, adjust it at the rack ends.

4. ADJUST TOE-IN

(a) Remove the rack boot set clips.

(b) Loosen the tie rod end lock nuts.

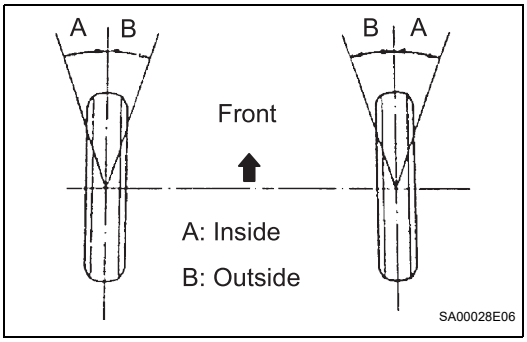
(c) Turn the right and left rack ends uniformly to adjust the toe-in.
HINT:
Try to adjust the toe-in to the middle of the specified range.



(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: 55.5 N*m (566 kgf*cm, 41 ft.*lbf)

(f) Place the boots on the seats and install the clips.
HINT:
Make sure that the boots are not twisted.



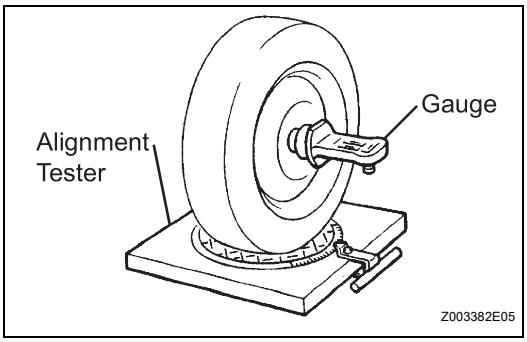
5. INSPECT WHEEL TURNING ANGLE

(a) Turn the steering wheel fully, and measure the turning angle.

Wheel turning angle

Inside wheel	Outside wheel (Reference)
40°18' (38°18' to 41°18') 40.30° (38.30° to 41.30°)	35°54' (33°54' to 36°54') 35.90° (33.90° to 36.90°)

If the right and left turning angles of the inside and outside wheels are not within the specified ranges, check the right and left rack end lengths.



6. INSPECT CAMBER, CASTER AND STEERING AXIS INCLINATION

(a) Install the camber-caster-kingpin gauge and position the front wheel on the wheel alignment tester.

(b) Inspect the camber, caster and steering axis inclination.

Camber, caster and steering axis inclination: for Pre-Runner (North America)

Vehicle Model	Tire Size	Camber	Caster	Steering Axis Inclination
TRN260L-TRMDKA	P245/75R16	0°35' +- 45' (0.59° +- 0.75°)	1°41' +- 45' (1.68° +- 0.75°)	11°52' +- 45' (11.86° +- 0.75°)
TRN265L-CRMDKA	P245/75R16	0°37' +- 45' (0.62° +- 0.75°)	1°46' +- 45' (1.77° +- 0.75°)	11°50' +- 45' (11.83° +- 0.75°)
GRN265L-CRFDKA	P245/75R16	0°31' +- 45' (0.52° +- 0.75°)	1°55' +- 45' (1.92° +- 0.75°)	11°56' +- 45' (11.93° +- 0.75°)
GRN265L-CRFDKA	P265/70R16	0°28' +- 45' (0.47° +- 0.75°)	1°56' +- 45' (1.93° +- 0.75°)	11°59' +- 45' (11.99° +- 0.75°)
GRN265L-CRFDKA	P265/65R17	0°31' +- 45' (0.52° +- 0.75°)	1°56' +- 45' (1.94° +- 0.75°)	11°56' +- 45' (11.93° +- 0.75°)
GRN265L-CRADKA	P245/75R16	0°35' +- 45' (0.58° +- 0.75°)	1°53' +- 45' (1.89° +- 0.75°)	11°53' +- 45' (11.88° +- 0.75°)
GRN265L-CRADKA	P265/70R16	0°27' +- 45' (0.45° +- 0.75°)	1°59' +- 45' (1.98° +- 0.75°)	12°00' +- 45' (12.00° +- 0.75°)
GRN265L-CRADKA	P265/65R17	0°35' +- 45' (0.58° +- 0.75°)	1°53' +- 45' (1.89° +- 0.75°)	11°53' +- 45' (11.88° +- 0.75°)
GRN265L-PRADKA	P245/75R16	0°32' +- 45' (0.54° +- 0.75°)	2°01' +- 45' (2.01° +- 0.75°)	11°55' +- 45' (11.91° +- 0.75°)
GRN265L-PRADKA	P265/70R16	0°35' +- 45' (0.58° +- 0.75°)	1°58' +- 45' (1.96° +- 0.75°)	11°53' +- 45' (11.88° +- 0.75°)
GRN265L-PRADKA	P265/65R17	0°32' +- 45' (0.54° +- 0.75°)	2°01' +- 45' (2.01° +- 0.75°)	11°55' +- 45' (11.91° +- 0.75°)
GRN270L-PRADKA	P245/75R16	0°31' +- 45' (0.52° +- 0.75°)	2°07' +- 45' (2.11° +- 0.75°)	11°56' +- 45' (11.93° +- 0.75°)
GRN270L-PRADKA	P265/65R17	0°31' +- 45' (0.52° +- 0.75°)	2°08' +- 45' (2.13° +- 0.75°)	11°56' +- 45' (11.93° +- 0.75°)

for Pre-Runner (Mexico)

Vehicle Model	Tire Size	Camber	Caster	Steering Axis Inclination
GRN265L-PRADKA	P245/75R16	0°43' +- 45' (0.71° +- 0.75°)	1°38' +- 45' (1.64° +- 0.75°)	11°44' +- 45' (11.74° +- 0.75°)
GRN265L-PRADKA	P265/65R17	0°43' +- 45' (0.71° +- 0.75°)	1°38' +- 45' (1.64° +- 0.75°)	11°44' +- 45' (11.74° +- 0.75°)

SP

for 4WD

Vehicle Model	Tire Size	Camber	Caster	Steering Axis Inclination
TRN240L-TRMDKA	P245/75R16	0°35' +- 45' (0.58° +- 0.75°)	1°44' +- 45' (1.73 +- 0.75°)	11°52' +- 45' (11.86° +- 0.75°)
TRN245L-CRMDKA	P245/75R16	0°35' +- 45' (0.58° +- 0.75°)	1°51' +- 45' (1.85° +- 0.75°)	11°53' +- 45' (11.88° +- 0.75°)
GRN245L-CRFDKA	P245/75R16	0°28' +- 45' (0.47° +- 0.75°)	1°59' +- 45' (1.99° +- 0.75°)	11°59' +- 45' (11.99° +- 0.75°)
GRN245L-CRFDKA	P265/70R16	0°26' +- 45' (0.43° +- 0.75°)	2°00' +- 45' (2.00° +- 0.75°)	12°01' +- 45' (12.02° +- 0.75°)
GRN245L-CRFDKA	P265/65R17	0°28' +- 45' (0.47° +- 0.75°)	2°00' +- 45' (2.00° +- 0.75°)	11°59' +- 45' (11.99° +- 0.75°)
GRN245L-CRADKA	P245/75R16	0°32' +- 45' (0.54° +- 0.75°)	1°55' +- 45' (1.92° +- 0.75°)	11°55' +- 45' (11.91° +- 0.75°)
GRN245L-CRADKA	P265/70R16	0°26' +- 45' (0.43° +- 0.75°)	2°00' +- 45' (2.00° +- 0.75°)	12°01' +- 45' (12.02° +- 0.75°)
GRN245L-CRADKA	P265/65R17	0°32' +- 45' (0.54° +- 0.75°)	1°55' +- 45' (1.92° +- 0.75°)	11°55' +- 45' (11.91° +- 0.75°)
GRN245L-PRFDKA	P245/75R16	0°32' +- 45' (0.54° +- 0.75°)	2°02' +- 45' (2.03° +- 0.75°)	11°55' +- 45' (11.91° +- 0.75°)
GRN245L-PRFDKA	P265/70R16	0°28' +- 45' (0.47° +- 0.75°)	2°04' +- 45' (2.06° +- 0.75°)	11°59' +- 45' (11.99° +- 0.75°)
GRN245L-PRFDKA	P265/65R17	0°32' +- 45' (0.54° +- 0.75°)	2°02' +- 45' (2.03° +- 0.75°)	11°55' +- 45' (11.91° +- 0.75°)
GRN245L-PRADKA	P245/75R16	0°31' +- 45' (0.52° +- 0.75°)	2°04' +- 45' (2.06° +- 0.75°)	11°56' +- 45' (11.93° +- 0.75°)
GRN245L-PRADKA	P265/70R16	0°27' +- 45' (0.45° +- 0.75°)	2°05' +- 45' (2.09° +- 0.75°)	12°00' +- 45' (12.00° +- 0.75°)
GRN245L-PRADKA	P265/65R17	0°31' +- 45' (0.52° +- 0.75°)	2°04' +- 45' (2.06° +- 0.75°)	11°56' +- 45' (11.93° +- 0.75°)
GRN250L-PRADKA	P245/75R16	0°30' +- 45' (0.50° +- 0.75°)	2°08' +- 45' (2.14° +- 0.75°)	11°57' +- 45' (11.95° +- 0.75°)
GRN250L-PRADKA	P265/65R17	0°30' +- 45' (0.50° +- 0.75°)	2°10' +- 45' (2.16° +- 0.75°)	11°57' +- 45' (11.95° +- 0.75°)

NOTICE:

- **Perform the inspection while the vehicle is empty (without spare tires or tools on board).**
- **The tolerance for the difference between the left and right wheels is 30' (0.50°) or less for both the camber and caster.**

If the steering axis inclination is not as specified after the camber and caster have been correctly adjusted, recheck the steering knuckle and front wheel for distortion and slack.

7. ADJUST CAMBER AND CASTER

NOTICE:

Inspect the toe-in after the camber has been adjusted.

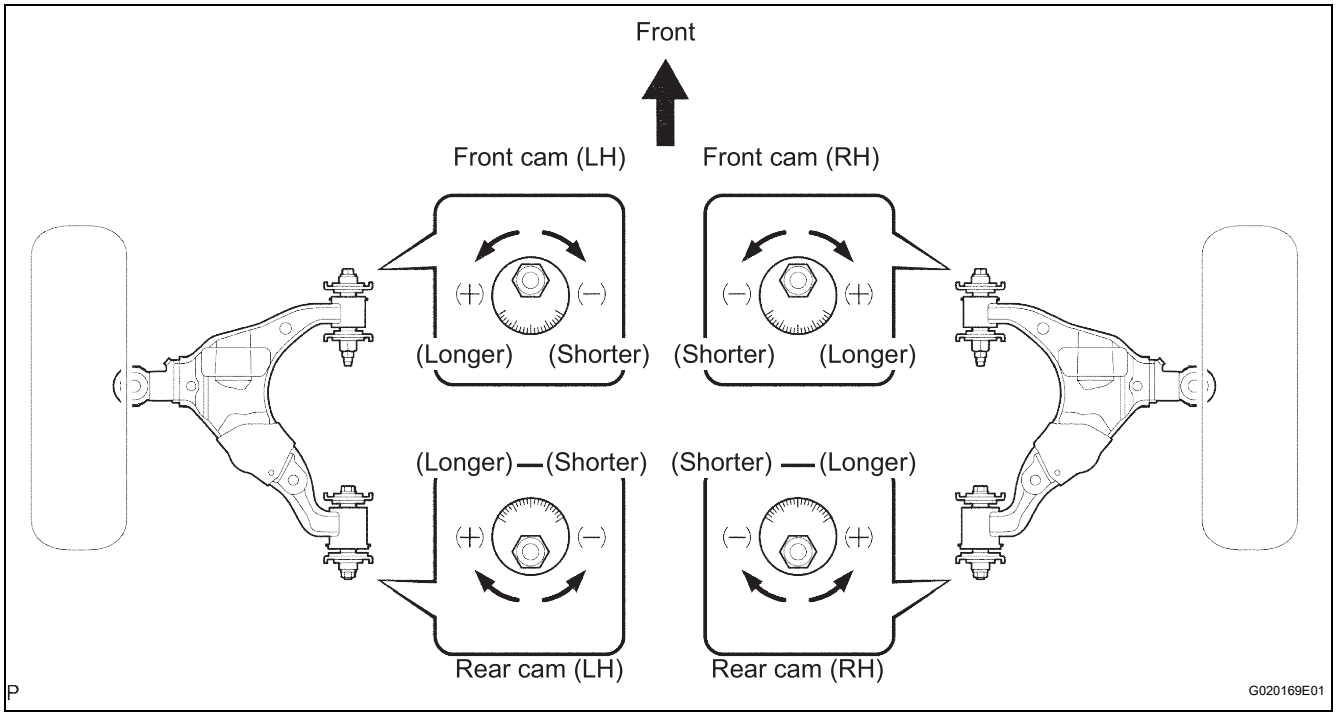
(a) Loosen the nut and bolt.

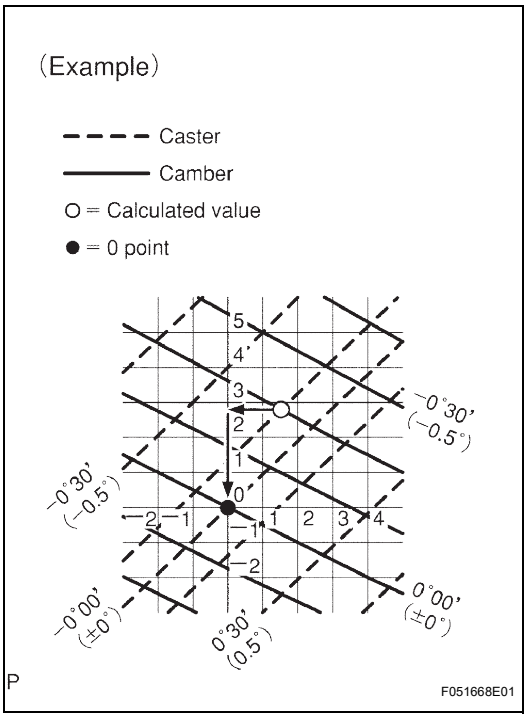
(b) Turn camber adjust cam No. 2 and the toe adjust cam and adjust the camber and the caster.

HINT:

Try to adjust the camber and caster to the central values.

SP





(c) How to read the adjustment chart (using examples).

(1) Measure the present alignment.

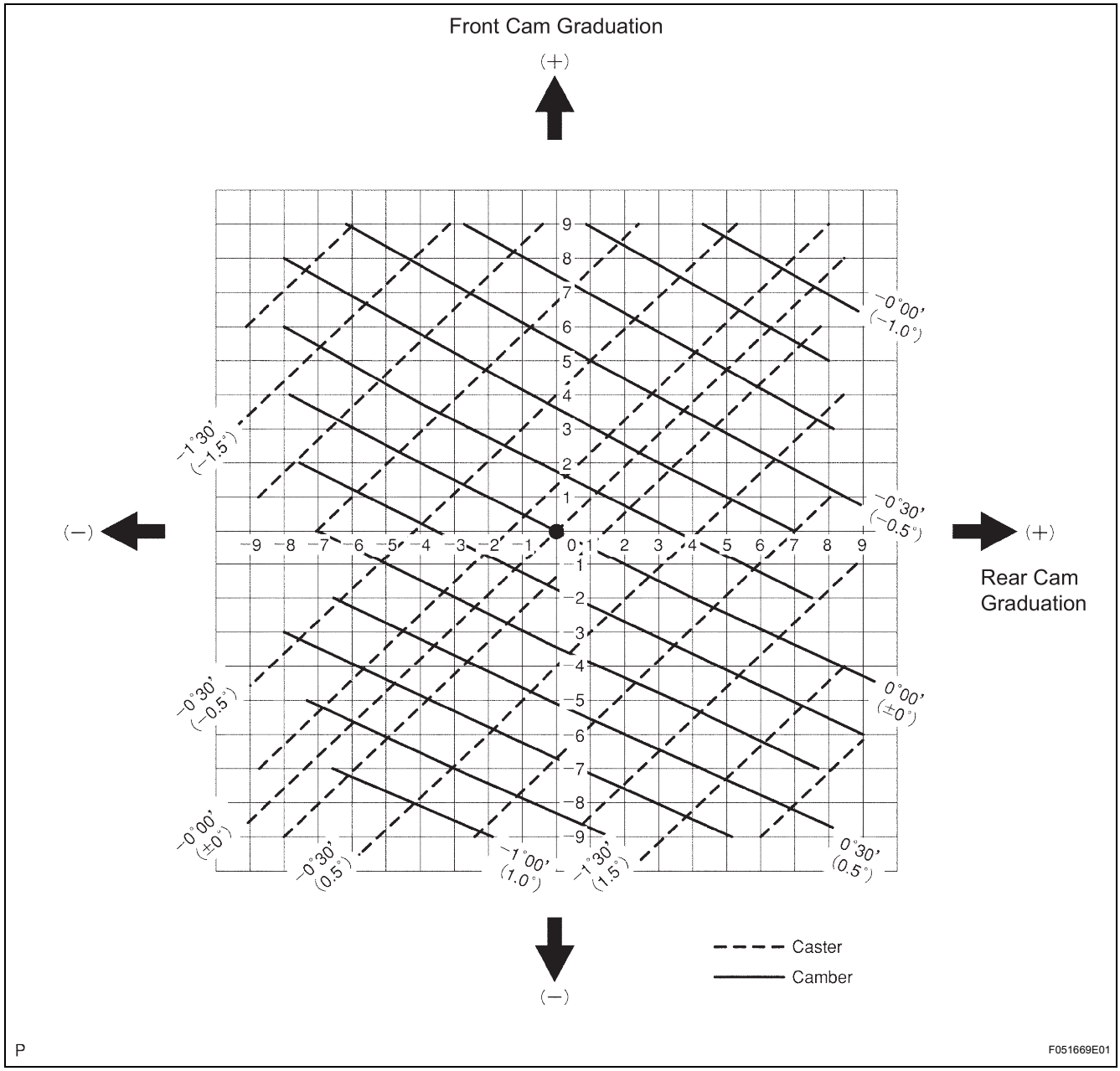
Camber:
0°17' (0.28°)
Caster:
1°28' (1.47°)

(2) Calculate the difference between the standard value (A) and the measured value (B) on the adjustment chart.

Standard value:
Camber:
0°37' (0.61°)
Caster:
1°38' (1.64°)
Formula:
B - A = C
Camber:
0°17' - (0°37') = -0°20'
Caster:
1°28' - (1°38') = -0°10'

(3) As shown in the chart, read the distance from the marked point to 0 point, and adjust the front and/or rear adjusting cams accordingly.

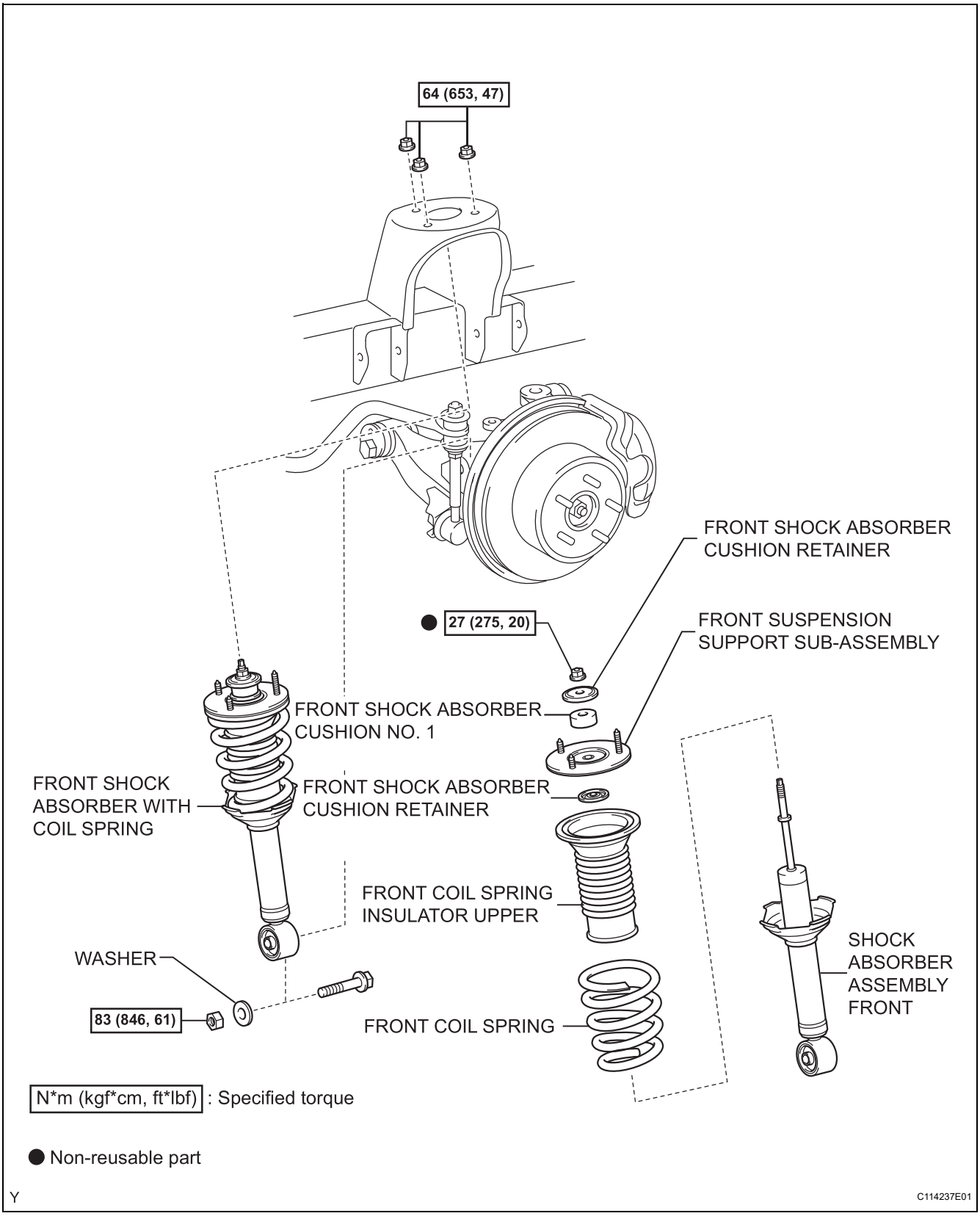
Toe adjust cam:
- (Shorter) 2.8
Camber adjust cam:
- (Shorter) 1.5


Front Cam Graduation
(+)
(−)
(−)
(+)
Rear Cam Graduation
9
8
7
6
5
4
3
2
1
−9 −8 −7 −6 −5 −4 −3 −2 −1 0 1 2 3 4 5 6 7 8 9
−1 −2 −3 −4 −5 −6 −7 −8 −9
−0°00' (−1.0°)
−0°30' (−0.5°)
0°00' (±0°)
0°30' (0.5°)
−1°30' (−1.5°)
−0°30' (−0.5°)
−0°00' (±0°)
−0°30' (0.5°)
−1°00' (1.0°)
−1°30' (1.5°)
0°30' (0.5°)
Caster
Camber
P
F051669E01

SP

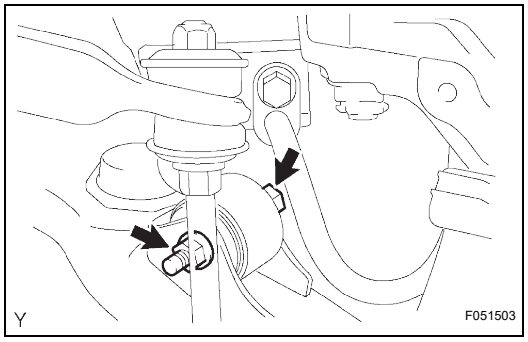
FRONT SHOCK ABSORBER WITH COIL SPRING (for 2WD)

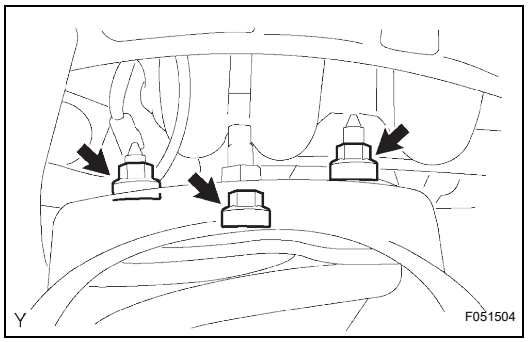
COMPONENTS



REMOVAL

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE FRONT WHEEL**
3. **SEPARATE SKID CONTROL SENSOR WIRE (See page SP-26)**
4. **SEPARATE FRONT FLEXIBLE HOSE (See page SP-26)**
5. **REMOVE FRONT SUSPENSION UPPER ARM (See page SP-26)**
6. **REMOVE FRONT SHOCK ABSORBER WITH COIL SPRING**
   (a) Remove the bolt, nut and washer.



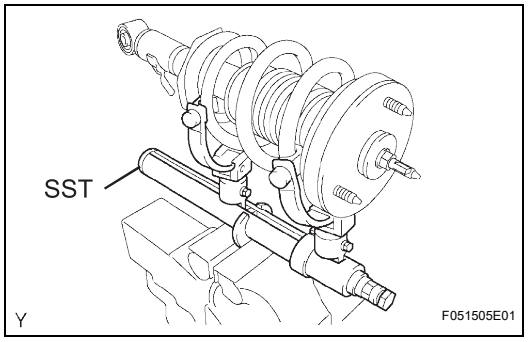


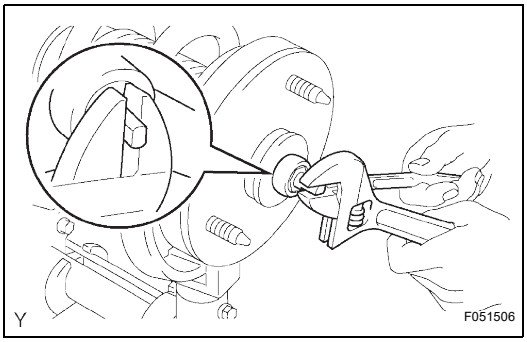
   (b) Remove the 3 nuts on the upper side of the front shock absorber with coil spring.
   (c) Remove the front shock absorber with coil spring.

SP

DISASSEMBLY

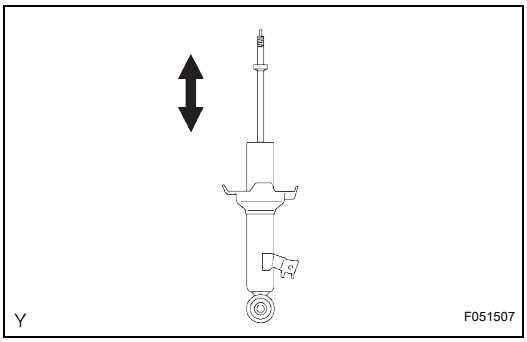
1. **REMOVE FRONT SUPPORT TO FRONT SHOCK ABSORBER NUT**
   (a) Using SST, compress the coil spring.
   SST 09727-30021 (09727-00010, 09727-00031), 09727-00060
   NOTICE:
   Do not use an impact wrench. It will damage SST.





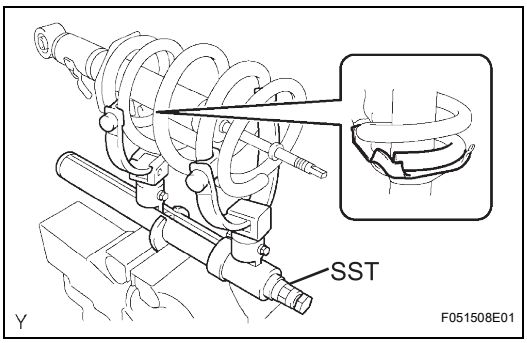
(b) While holding the shock absorber rod, remove the nut.
NOTICE:
Do not use an impact wrench. It will damage the shock absorber rod.

2. **REMOVE FRONT SHOCK ABSORBER CUSHION RETAINER**
3. **REMOVE FRONT SHOCK ABSORBER CUSHION NO. 1**
4. **REMOVE FRONT SUSPENSION SUPPORT SUB-ASSEMBLY**
5. **REMOVE FRONT COIL SPRING INSULATOR UPPER**
6. **REMOVE FRONT SHOCK ABSORBER CUSHION RETAINER**
7. **REMOVE FRONT COIL SPRING**



INSPECTION

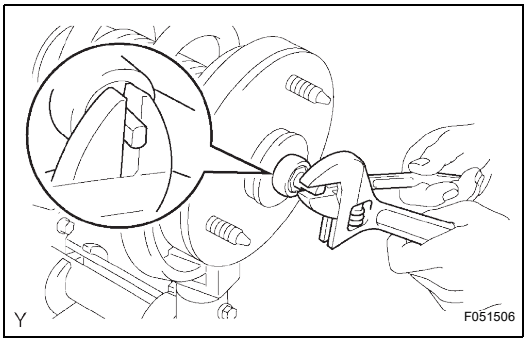
1. **INSPECT SHOCK ABSORBER ASSEMBLY FRONT**
   (a) Compress and extend the shock absorber rod and check that there is no abnormal resistance or unusual sound during operation.
   If there is any abnormality, replace the shock absorber front with a new one.
   NOTICE:
   When disposing of the shock absorber front, see DISPOSAL on page SP-18.



REASSEMBLY

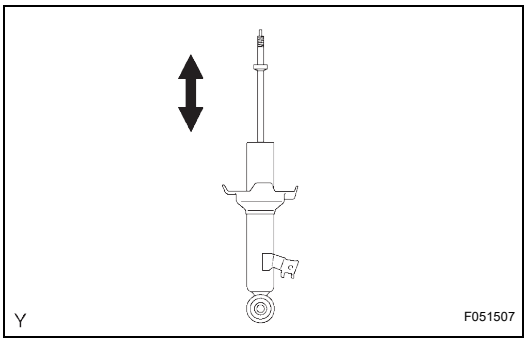
1. **INSTALL FRONT COIL SPRING**
   (a) Using SST, compress the front coil spring LH.
   SST 09727-30021 (09727-00010, 09727-00031), 09727-00060
   NOTICE:
   Do not use an impact wrench. It will damage SST.
   (b) Install the front coil spring onto the shock absorber front.
   HINT:
   Fit the lower end of the front coil spring into the gap of the spring lower seat.
2. **INSTALL FRONT SHOCK ABSORBER CUSHION RETAINER**
3. **INSTALL FRONT COIL SPRING INSULATOR UPPER**
4. **INSTALL FRONT SUSPENSION SUPPORT SUB-ASSEMBLY**
5. **INSTALL FRONT SHOCK ABSORBER CUSHION NO. 1**
6. **INSTALL FRONT SHOCK ABSORBER CUSHION RETAINER**

SP



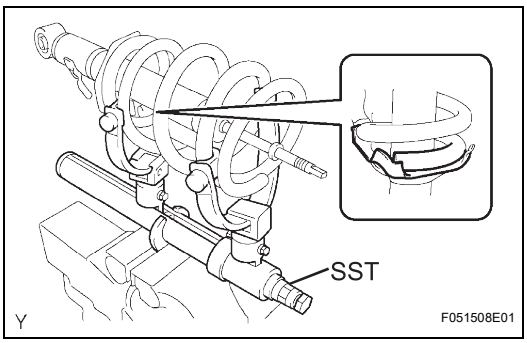
(b) While holding the shock absorber rod, remove the nut.
NOTICE:
Do not use an impact wrench. It will damage the shock absorber rod.

2. **REMOVE FRONT SHOCK ABSORBER CUSHION RETAINER**
3. **REMOVE FRONT SHOCK ABSORBER CUSHION NO. 1**
4. **REMOVE FRONT SUSPENSION SUPPORT SUB-ASSEMBLY**
5. **REMOVE FRONT COIL SPRING INSULATOR UPPER**
6. **REMOVE FRONT SHOCK ABSORBER CUSHION RETAINER**
7. **REMOVE FRONT COIL SPRING**



INSPECTION

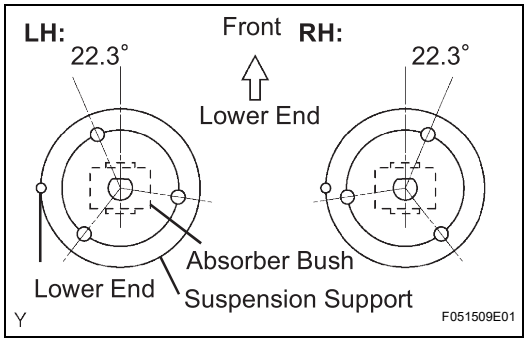
1. **INSPECT SHOCK ABSORBER ASSEMBLY FRONT**
   (a) Compress and extend the shock absorber rod and check that there is no abnormal resistance or unusual sound during operation.
   If there is any abnormality, replace the shock absorber front with a new one.
   NOTICE:
   When disposing of the shock absorber front, see DISPOSAL on page SP-18.

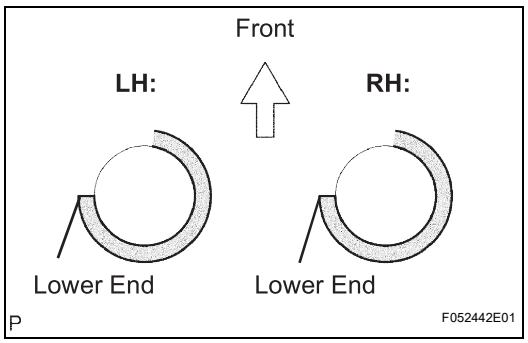


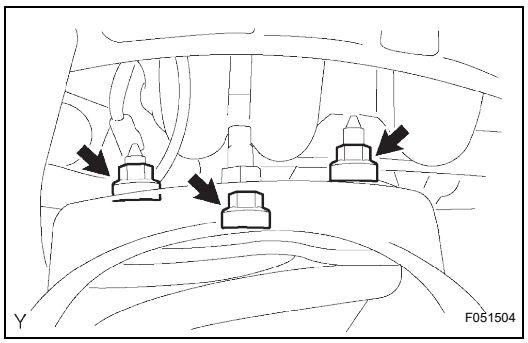
REASSEMBLY

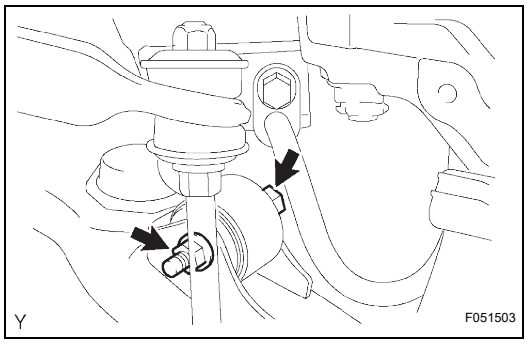
1. **INSTALL FRONT COIL SPRING**
   (a) Using SST, compress the front coil spring LH.
   SST 09727-30021 (09727-00010, 09727-00031), 09727-00060
   NOTICE:
   Do not use an impact wrench. It will damage SST.
   (b) Install the front coil spring onto the shock absorber front.
   HINT:
   Fit the lower end of the front coil spring into the gap of the spring lower seat.
2. **INSTALL FRONT SHOCK ABSORBER CUSHION RETAINER**
3. **INSTALL FRONT COIL SPRING INSULATOR UPPER**
4. **INSTALL FRONT SUSPENSION SUPPORT SUB-ASSEMBLY**
5. **INSTALL FRONT SHOCK ABSORBER CUSHION NO. 1**
6. **INSTALL FRONT SHOCK ABSORBER CUSHION RETAINER**

SP









7. INSTALL FRONT SUPPORT TO FRONT SHOCK ABSORBER NUT

(a) Align the suspension support and the absorber bush as shown in the illustration.

(b) Fit and tighten a new lock nut.
Torque: 27 N*m (275 kgf*cm, 20 ft.*lbf)
NOTICE:
Do not use an impact wrench. It will damage the shock absorber rod.

(c) Release the coil spring while checking the position of the suspension support.

INSTALLATION

1. TEMPORARILY TIGHTEN FRONT SHOCK ABSORBER WITH COIL SPRING

(a) LH Side:

(1) Install the coil spring onto the body with the lower end of the coil spring facing the outer side of the vehicle.

(b) RH Side:

(1) Install the coil spring onto the body with the lower end of the coil spring facing the inner side of the vehicle.

(c) Install the 3 nuts onto the upper side of the front shock absorber with coil spring.
Torque: 64 N*m (653 kgf*cm, 47 ft.*lbf)

SP

(d) Temporarily tighten the bolt, nut and washer as shown in the illustration.

2. TEMPORARILY TIGHTEN FRONT SUSPENSION UPPER ARM (See page SP-28)

3. INSTALL FRONT FLEXIBLE HOSE (See page SP-28)

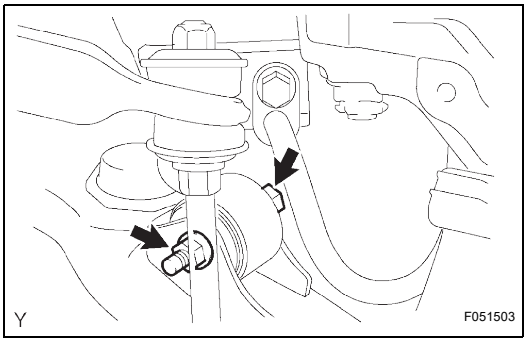
4. INSTALL SKID CONTROL SENSOR WIRE (See page SP-28)

5. INSTALL FRONT WHEEL
Torque: 113 N*m (1,152 kgf*cm, 83 ft.*lbf)

6. STABILIZE SUSPENSION

(a) Jack down the vehicle.

(b) Bounce the vehicle up and down several times to stabilize the suspension.



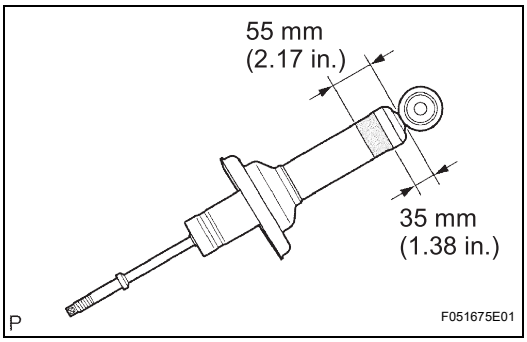
7. **FULLY TIGHTEN FRONT SHOCK ABSORBER WITH COIL SPRING**
   (a) Fully tighten the nut.
   Torque: 83 N*m (846 kgf*cm, 61 ft.*lbf)

8. **FULLY TIGHTEN FRONT SUSPENSION UPPER ARM (See page SP-28)**

9. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
   Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)
   (See page IN-5)

10. **INSPECT AND ADJUST FRONT WHEEL ALIGNMENT**
    (See page SP-2)

DISPOSAL

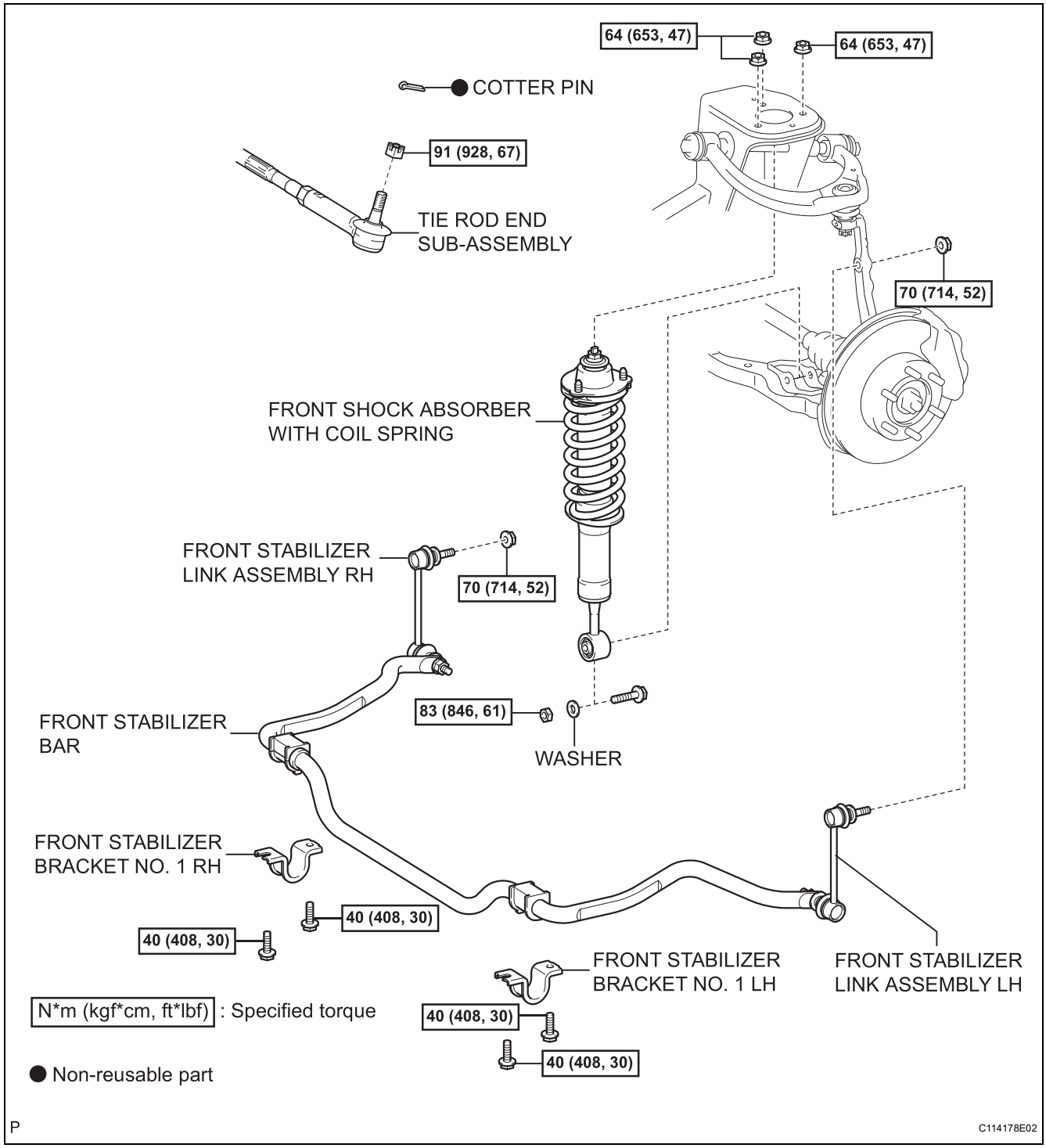


1. **DISPOSE OF SHOCK ABSORBER ASSEMBLY FRONT**
   (a) Fully extend the shock absorber piston rod, and fix it at an angle in a vise or similar tool.
   (b) Using a drill or similar tool, slowly make a hole in the shaded area shown in the illustration, and discharge the gas inside.
   CAUTION:
   - **The gas is colorless, odorless and harmless.**
   - **Since the discharged gas may cause chips to scatter, cover the drill with a shop rag when making the hole.**

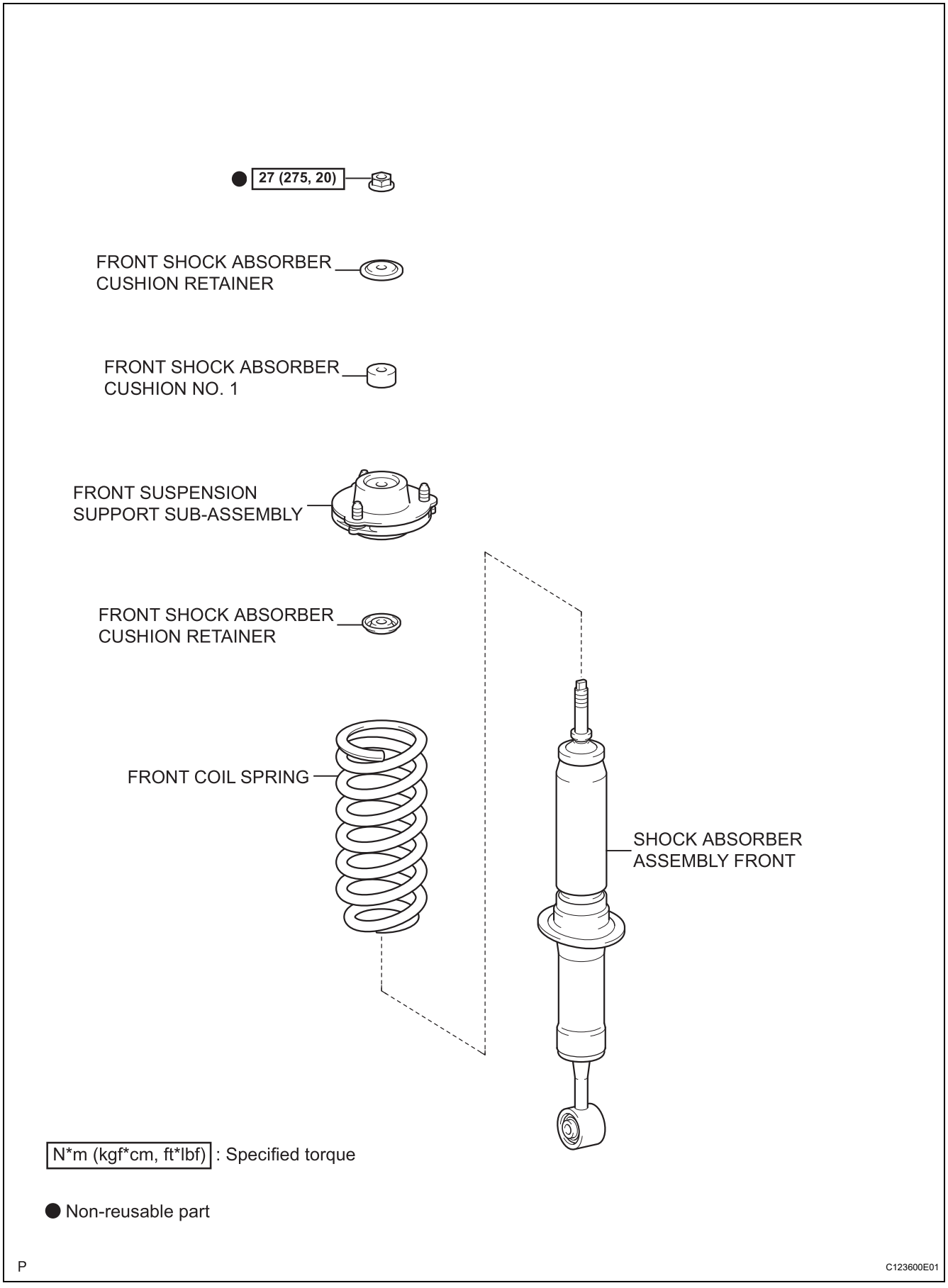
SP

FRONT SHOCK ABSORBER WITH COIL SPRING (for 4WD and Pre-Runner)

COMPONENTS



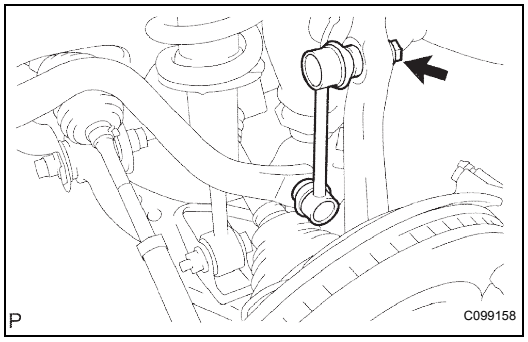
SP


● 27 (275, 20)
FRONT SHOCK ABSORBER CUSHION RETAINER
FRONT SHOCK ABSORBER CUSHION NO. 1
FRONT SUSPENSION SUPPORT SUB-ASSEMBLY
FRONT SHOCK ABSORBER CUSHION RETAINER
FRONT COIL SPRING
SHOCK ABSORBER ASSEMBLY FRONT
N*m (kgf*cm, ft*lbf) : Specified torque
● Non-reusable part
P
C123600E01

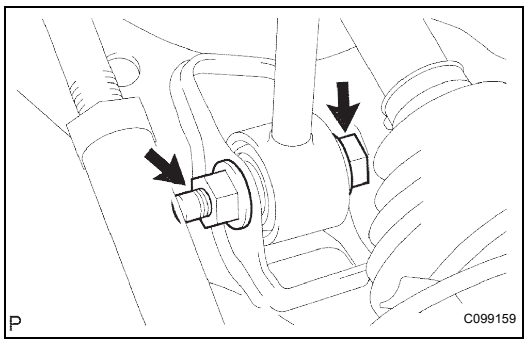
SP

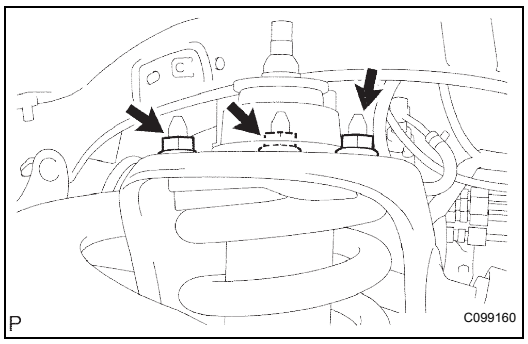
REMOVAL

1. **REMOVE FRONT WHEELS**
2. **REMOVE ENGINE UNDER COVER SUB-ASSEMBLY NO. 1**
3. **SEPARATE FRONT STABILIZER LINK ASSEMBLY LH**
   (a) Remove the nut and disconnect the stabilizer link from the steering knuckle.
   HINT:
   If the ball joint turns together with the nut, use a hexagon (6 mm) wrench to hold the stud.



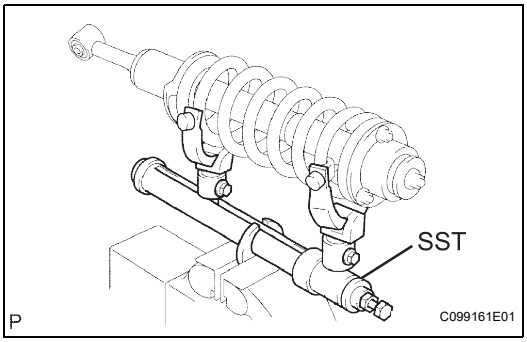
4. **SEPARATE FRONT STABILIZER LINK ASSEMBLY RH**
   HINT:
   The removal procedure for the RH side is the same as that for the LH side.
5. **REMOVE FRONT STABILIZER BRACKET NO. 1 LH (See page SP-50)**
6. **REMOVE FRONT STABILIZER BRACKET NO. 1 RH**
   HINT:
   The removal procedure for the RH side is the same as that for the LH side.
7. **REMOVE FRONT STABILIZER BAR**
8. **SEPARATE TIE ROD END SUB-ASSEMBLY (See page PS-54)**
9. **REMOVE FRONT SHOCK ABSORBER WITH COIL SPRING**
   (a) Remove the bolt, nut and washer.

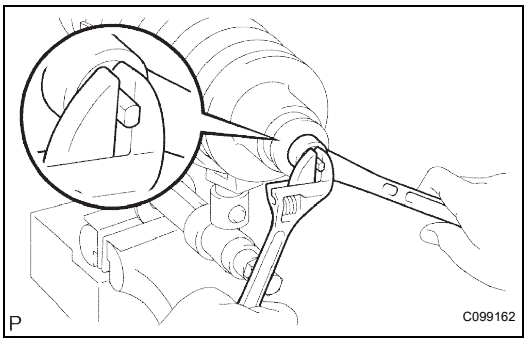


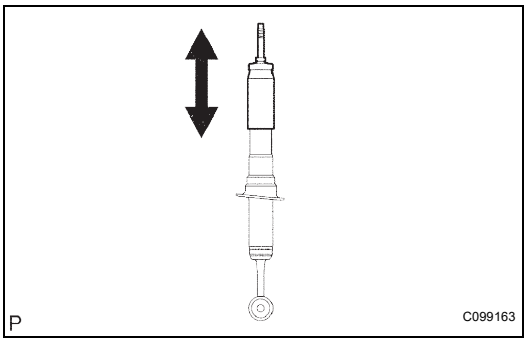


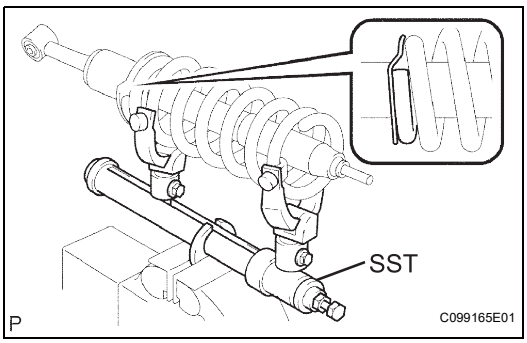
   (b) Remove the 3 nuts on the upper side of the front shock absorber with coil spring.
   (c) Remove the front shock absorber with coil spring.

SP









DISASSEMBLY

1. **REMOVE FRONT SUPPORT TO FRONT SHOCK ABSORBER NUT**
   (a) Using SST, compress the coil spring.
   SST 09727-30021 (09727-00010, 09727-00031), 09727-00060
   NOTICE:
   Do not use an impact wrench. It will damage SST.

   (b) While holding the shock absorber rod, remove the nut.
   NOTICE:
   Do not use an impact wrench. It will damage the shock absorber rod.
2. **REMOVE FRONT SHOCK ABSORBER CUSHION RETAINER**
3. **REMOVE FRONT SHOCK ABSORBER CUSHION NO. 1**
4. **REMOVE FRONT SUSPENSION SUPPORT SUB-ASSEMBLY**
5. **REMOVE FRONT SHOCK ABSORBER CUSHION RETAINER**
6. **REMOVE FRONT COIL SPRING**

INSPECTION

1. **INSPECT SHOCK ABSORBER ASSEMBLY FRONT**
   (a) Compress and extend the shock absorber rod and check that there is no abnormal resistance or unusual sound during operation.
   If there is any abnormality, replace the shock absorber front with a new one.
   NOTICE:
   When disposing of the shock absorber front, see DISPOSAL on page SP-24.

REASSEMBLY

1. **INSTALL FRONT COIL SPRING**
   (a) Using SST, compress the front coil spring.
   SST 09727-30021 (09727-00010, 09727-00031), 09727-00060
   NOTICE:
   Do not use an impact wrench. It will damage SST.
   (b) Install the front coil spring onto the shock absorber front.
   HINT:
   Fit the lower end of the front coil spring into the gap of the spring lower seat.
2. **INSTALL FRONT SHOCK ABSORBER CUSHION RETAINER**

3. INSTALL FRONT SUSPENSION SUPPORT SUB-ASSEMBLY

4. INSTALL FRONT SHOCK ABSORBER CUSHION NO. 1

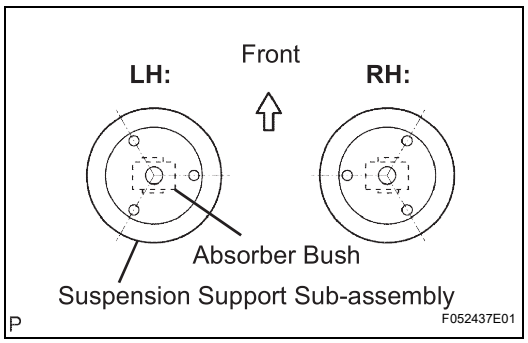
5. INSTALL FRONT SHOCK ABSORBER CUSHION RETAINER

6. INSTALL FRONT SUPPORT TO FRONT SHOCK ABSORBER NUT

(a) Align the suspension support and the absorber bush as shown in the illustration.

(b) Fit and tighten a new lock nut.
Torque: 27 N*m (275 kgf*cm, 20 ft.*lbf)
NOTICE:
Do not use an impact wrench. It will damage the shock absorber rod.

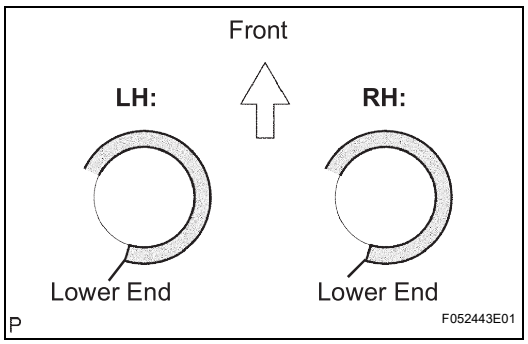
(c) Release the coil spring while checking the position of the suspension support.



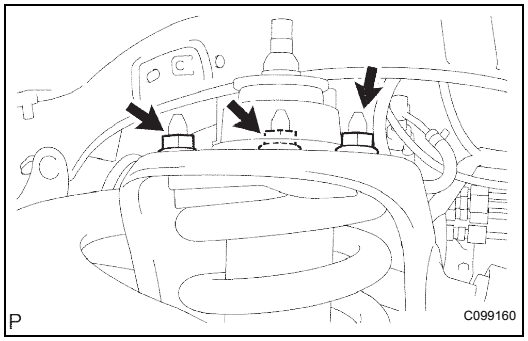
INSTALLATION

1. TEMPORARILY TIGHTEN FRONT SHOCK ABSORBER WITH COIL SPRING

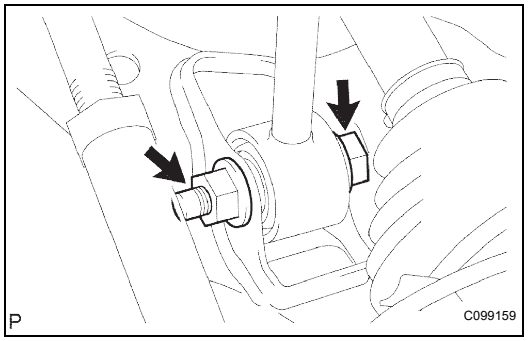
(a) Install the coil spring onto the body with the lower end of the coil spring facing the rear side of the vehicle.



(b) Install the 3 nuts onto the upper side of the front shock absorber with coil spring.
Torque: 64 N*m (653 kgf*cm, 47 ft.*lbf)



(c) Temporarily tighten the bolt, nut and washer as shown in the illustration.



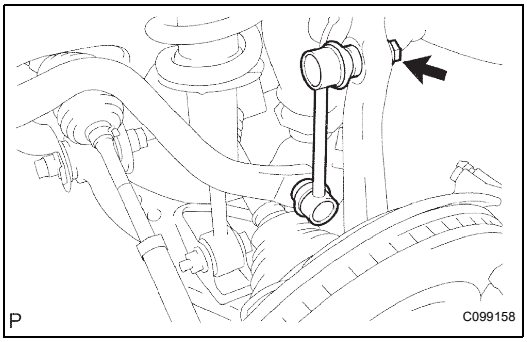
2. INSTALL TIE ROD END SUB-ASSEMBLY (See page PS-68)

3. INSTALL FRONT STABILIZER BAR

4. INSTALL FRONT STABILIZER BRACKET NO. 1 LH (See page SP-51)

5. INSTALL FRONT STABILIZER BRACKET NO. 1 RH
HINT:
The installation procedure for the RH side is the same as that for the LH side.

SP



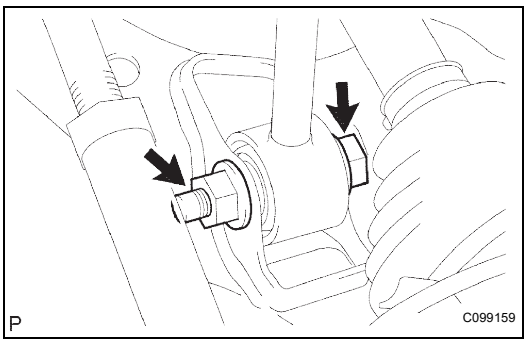
6. **INSTALL FRONT STABILIZER LINK ASSEMBLY LH**
   (a) Connect the stabilizer link to the steering knuckle with the nut.
   Torque: 70 N*m (714 kgf*cm, 52 ft.*lbf)
   HINT:
   If the ball joint turns together with the nut, use a hexagon (6 mm) wrench to hold the stud.

7. **INSTALL FRONT STABILIZER LINK ASSEMBLY RH**
   HINT:
   The installation procedure for the RH side is the same as that for the LH side.

8. **INSTALL ENGINE UNDER COVER SUB-ASSEMBLY NO. 1**
   Torque: 30 N*m (306 kgf*cm, 22 ft.*lbf)

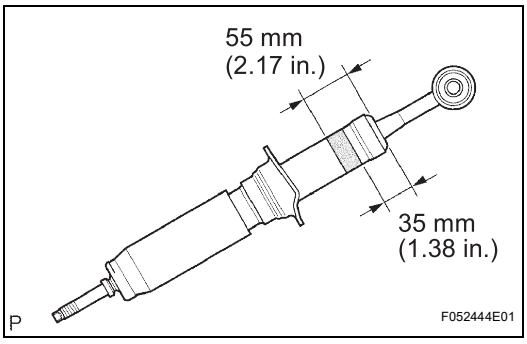
9. **INSTALL FRONT WHEELS**
   Torque: 113 N*m (1,152 kgf*cm, 83 ft.*lbf)

10. **STABILIZE SUSPENSION**
    (a) Jack down the vehicle.
    (b) Bounce the vehicle up and down several times to stabilize the suspension.



11. **FULLY TIGHTEN FRONT SHOCK ABSORBER WITH COIL SPRING**
    (a) Fully tighten the nut.
    Torque: 83 N*m (846 kgf*cm, 61 ft.*lbf)

12. **INSPECT AND ADJUST FRONT WHEEL ALIGNMENT**
    (See page SP-7)

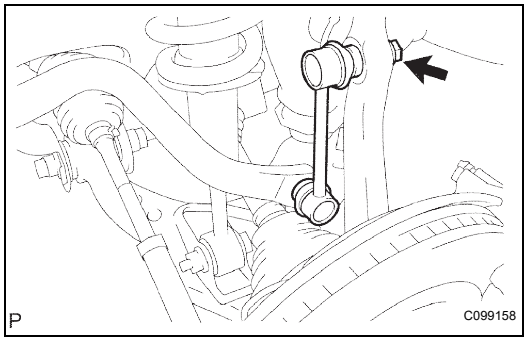


DISPOSAL

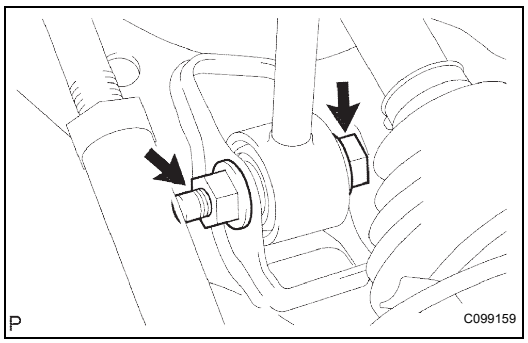
1. **DISPOSE OF SHOCK ABSORBER ASSEMBLY FRONT**
   (a) Fully extend the shock absorber piston rod, and fix it at an angle in a vise or similar tool.
   (b) Using a drill or similar tool, slowly make a hole in the shaded area shown in the illustration, and discharge the gas inside.
   CAUTION:
   - **The gas is colorless, odorless and harmless.**
   - **Since the discharged gas may cause chips to scatter, cover the drill with a shop rag when making the hole.**

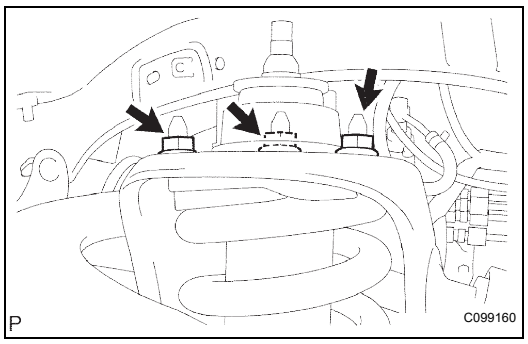
REMOVAL

1. **REMOVE FRONT WHEELS**
2. **REMOVE ENGINE UNDER COVER SUB-ASSEMBLY NO. 1**
3. **SEPARATE FRONT STABILIZER LINK ASSEMBLY LH**
   (a) Remove the nut and disconnect the stabilizer link from the steering knuckle.
   HINT:
   If the ball joint turns together with the nut, use a hexagon (6 mm) wrench to hold the stud.



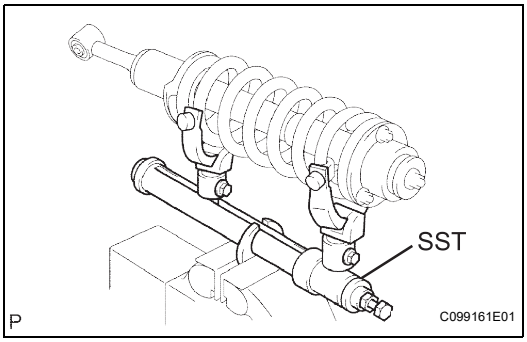
4. **SEPARATE FRONT STABILIZER LINK ASSEMBLY RH**
   HINT:
   The removal procedure for the RH side is the same as that for the LH side.
5. **REMOVE FRONT STABILIZER BRACKET NO. 1 LH (See page SP-50)**
6. **REMOVE FRONT STABILIZER BRACKET NO. 1 RH**
   HINT:
   The removal procedure for the RH side is the same as that for the LH side.
7. **REMOVE FRONT STABILIZER BAR**
8. **SEPARATE TIE ROD END SUB-ASSEMBLY (See page PS-54)**
9. **REMOVE FRONT SHOCK ABSORBER WITH COIL SPRING**
   (a) Remove the bolt, nut and washer.

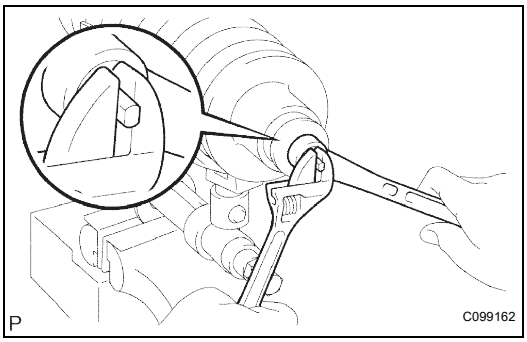


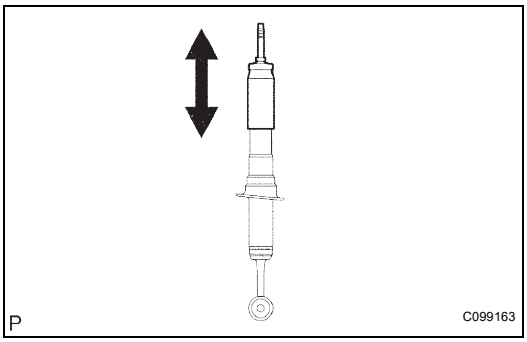


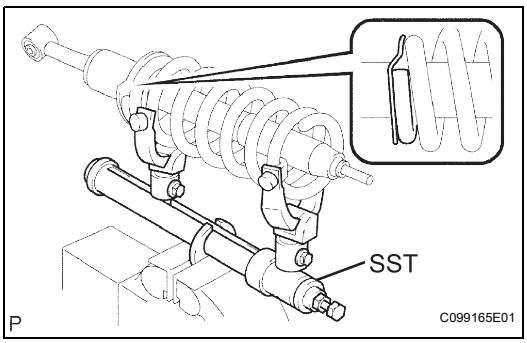
   (b) Remove the 3 nuts on the upper side of the front shock absorber with coil spring.
   (c) Remove the front shock absorber with coil spring.

SP









DISASSEMBLY

1. **REMOVE FRONT SUPPORT TO FRONT SHOCK ABSORBER NUT**
   (a) Using SST, compress the coil spring.
   SST 09727-30021 (09727-00010, 09727-00031), 09727-00060
   NOTICE:
   Do not use an impact wrench. It will damage SST.

   (b) While holding the shock absorber rod, remove the nut.
   NOTICE:
   Do not use an impact wrench. It will damage the shock absorber rod.
2. **REMOVE FRONT SHOCK ABSORBER CUSHION RETAINER**
3. **REMOVE FRONT SHOCK ABSORBER CUSHION NO. 1**
4. **REMOVE FRONT SUSPENSION SUPPORT SUB-ASSEMBLY**
5. **REMOVE FRONT SHOCK ABSORBER CUSHION RETAINER**
6. **REMOVE FRONT COIL SPRING**

INSPECTION

1. **INSPECT SHOCK ABSORBER ASSEMBLY FRONT**
   (a) Compress and extend the shock absorber rod and check that there is no abnormal resistance or unusual sound during operation.
   If there is any abnormality, replace the shock absorber front with a new one.
   NOTICE:
   When disposing of the shock absorber front, see DISPOSAL on page SP-24.

REASSEMBLY

1. **INSTALL FRONT COIL SPRING**
   (a) Using SST, compress the front coil spring.
   SST 09727-30021 (09727-00010, 09727-00031), 09727-00060
   NOTICE:
   Do not use an impact wrench. It will damage SST.
   (b) Install the front coil spring onto the shock absorber front.
   HINT:
   Fit the lower end of the front coil spring into the gap of the spring lower seat.
2. **INSTALL FRONT SHOCK ABSORBER CUSHION RETAINER**

3. INSTALL FRONT SUSPENSION SUPPORT SUB-ASSEMBLY

4. INSTALL FRONT SHOCK ABSORBER CUSHION NO. 1

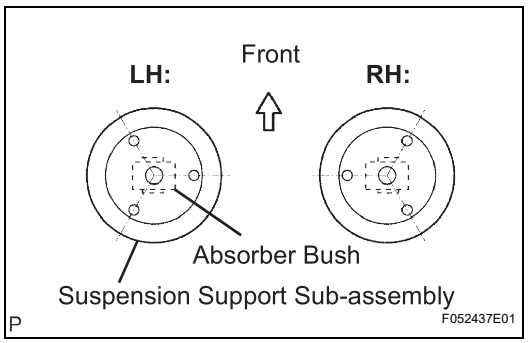
5. INSTALL FRONT SHOCK ABSORBER CUSHION RETAINER

6. INSTALL FRONT SUPPORT TO FRONT SHOCK ABSORBER NUT

(a) Align the suspension support and the absorber bush as shown in the illustration.

(b) Fit and tighten a new lock nut.
Torque: 27 N*m (275 kgf*cm, 20 ft.*lbf)
NOTICE:
Do not use an impact wrench. It will damage the shock absorber rod.

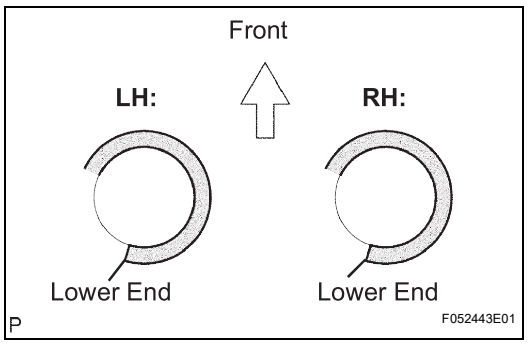
(c) Release the coil spring while checking the position of the suspension support.



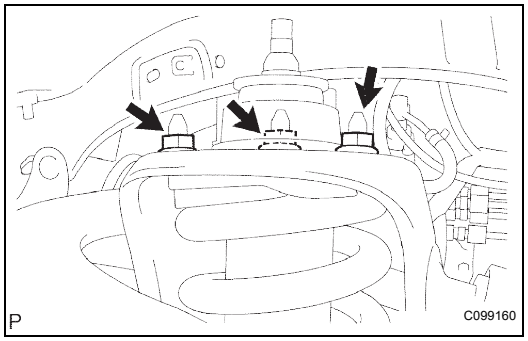
INSTALLATION

1. TEMPORARILY TIGHTEN FRONT SHOCK ABSORBER WITH COIL SPRING

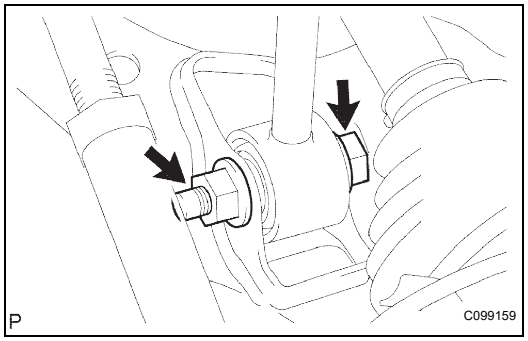
(a) Install the coil spring onto the body with the lower end of the coil spring facing the rear side of the vehicle.



(b) Install the 3 nuts onto the upper side of the front shock absorber with coil spring.
Torque: 64 N*m (653 kgf*cm, 47 ft.*lbf)



(c) Temporarily tighten the bolt, nut and washer as shown in the illustration.



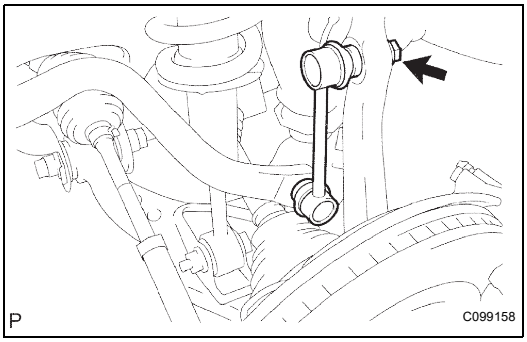
2. INSTALL TIE ROD END SUB-ASSEMBLY (See page PS-68)

3. INSTALL FRONT STABILIZER BAR

4. INSTALL FRONT STABILIZER BRACKET NO. 1 LH (See page SP-51)

5. INSTALL FRONT STABILIZER BRACKET NO. 1 RH
HINT:
The installation procedure for the RH side is the same as that for the LH side.

SP



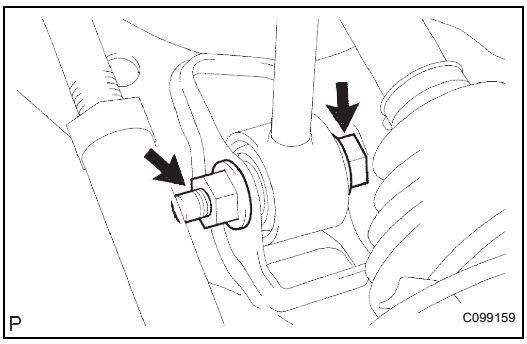
6. **INSTALL FRONT STABILIZER LINK ASSEMBLY LH**
   (a) Connect the stabilizer link to the steering knuckle with the nut.
   Torque: 70 N*m (714 kgf*cm, 52 ft.*lbf)
   HINT:
   If the ball joint turns together with the nut, use a hexagon (6 mm) wrench to hold the stud.

7. **INSTALL FRONT STABILIZER LINK ASSEMBLY RH**
   HINT:
   The installation procedure for the RH side is the same as that for the LH side.

8. **INSTALL ENGINE UNDER COVER SUB-ASSEMBLY NO. 1**
   Torque: 30 N*m (306 kgf*cm, 22 ft.*lbf)

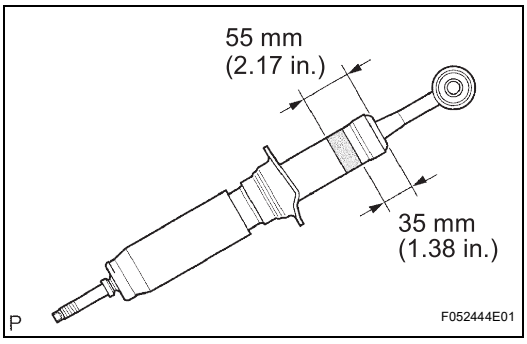
9. **INSTALL FRONT WHEELS**
   Torque: 113 N*m (1,152 kgf*cm, 83 ft.*lbf)

10. **STABILIZE SUSPENSION**
    (a) Jack down the vehicle.
    (b) Bounce the vehicle up and down several times to stabilize the suspension.



11. **FULLY TIGHTEN FRONT SHOCK ABSORBER WITH COIL SPRING**
    (a) Fully tighten the nut.
    Torque: 83 N*m (846 kgf*cm, 61 ft.*lbf)

12. **INSPECT AND ADJUST FRONT WHEEL ALIGNMENT**
    (See page SP-7)

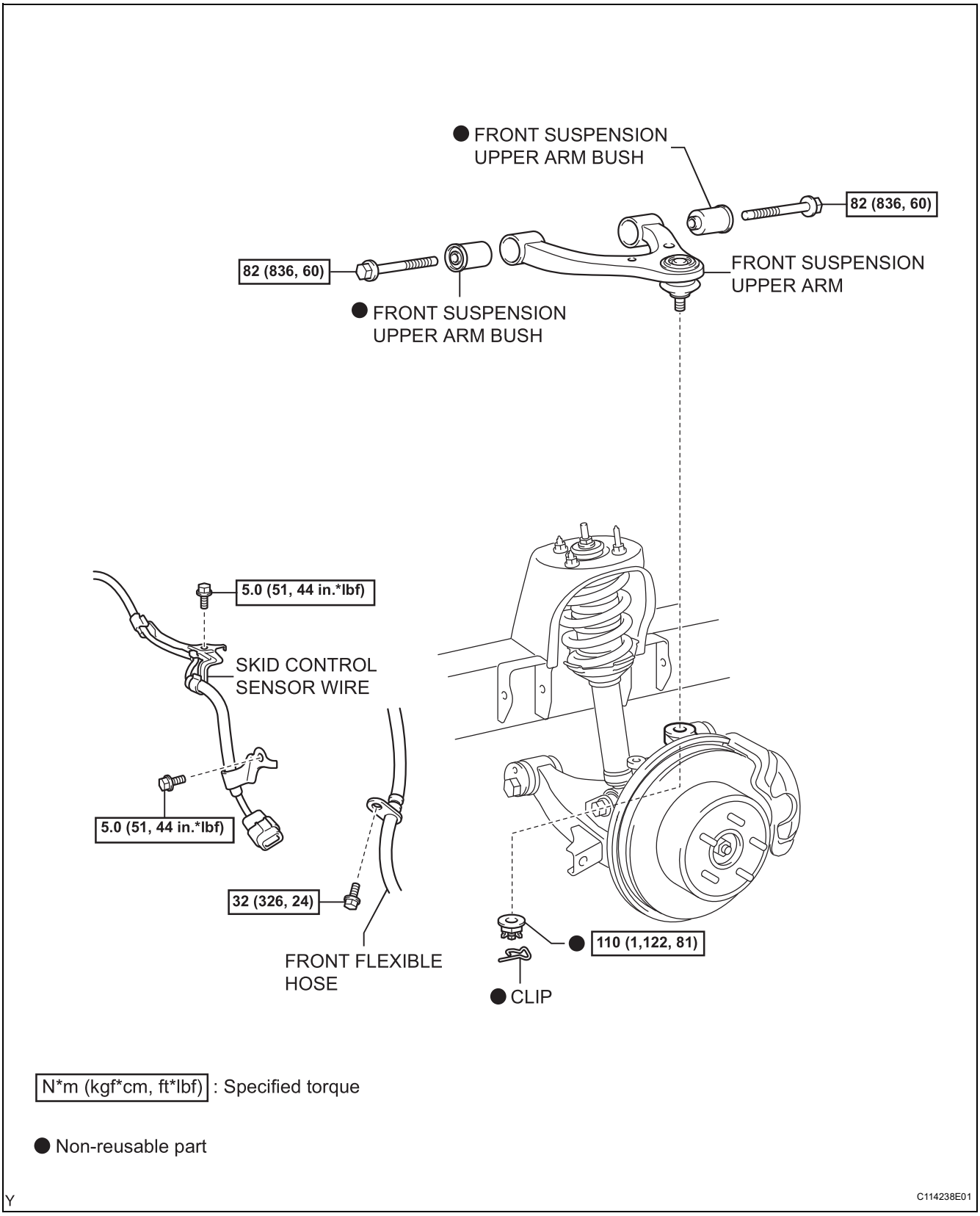


DISPOSAL

1. **DISPOSE OF SHOCK ABSORBER ASSEMBLY FRONT**
   (a) Fully extend the shock absorber piston rod, and fix it at an angle in a vise or similar tool.
   (b) Using a drill or similar tool, slowly make a hole in the shaded area shown in the illustration, and discharge the gas inside.
   CAUTION:
   - **The gas is colorless, odorless and harmless.**
   - **Since the discharged gas may cause chips to scatter, cover the drill with a shop rag when making the hole.**

FRONT UPPER SUSPENSION ARM (for 2WD)

COMPONENTS



SP

REMOVAL

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

2. REMOVE FRONT WHEEL

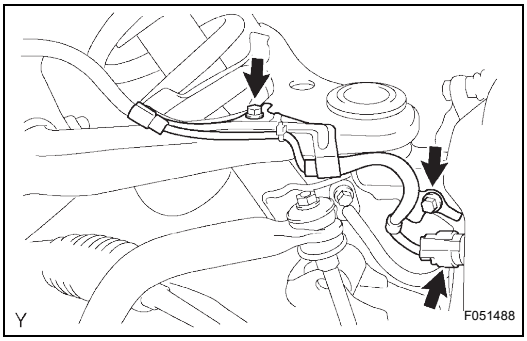
3. INSPECT FRONT SUSPENSION UPPER ARM

(a) Check that there is no slack on the ball joint by shaking the upper arm up and down by hand.

4. SEPARATE SKID CONTROL SENSOR WIRE

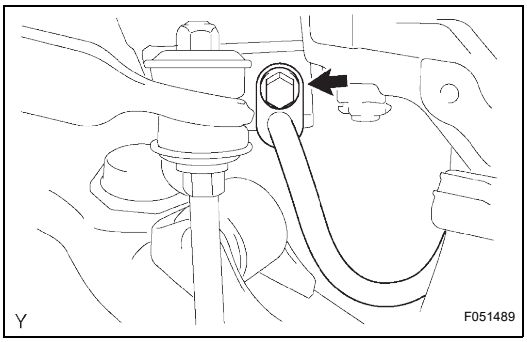
(a) Remove the speed sensor connector.

(b) Remove the 2 bolts, and separate the skid control sensor wire.



5. SEPARATE FRONT FLEXIBLE HOSE

(a) Remove the bolt, and separate the front flexible hose.



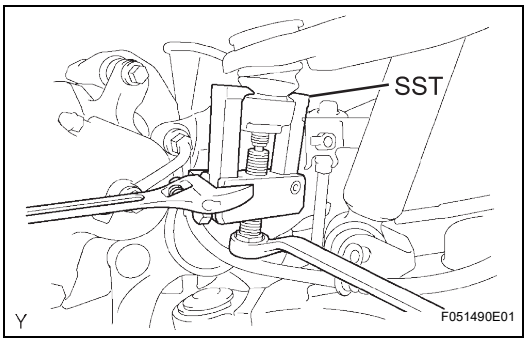
6. REMOVE FRONT SUSPENSION UPPER ARM

(a) Support the front suspension lower arm with a jack.

(b) Remove the clip and nut.

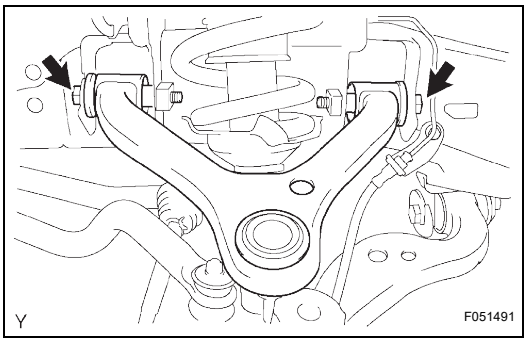
(c) Using SST, separate the upper ball joint from the steering knuckle.

SST 09628-62011

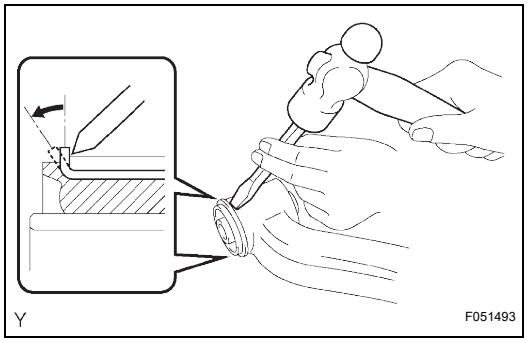


(d) Remove the 2 bolts.

(e) Remove the front suspension upper arm.



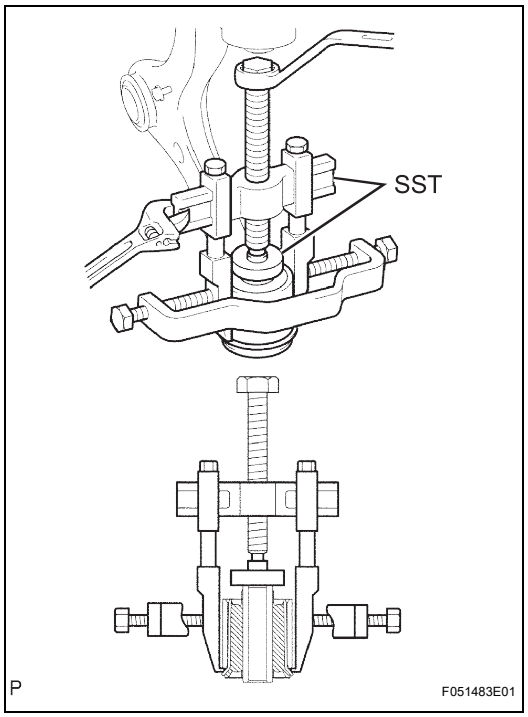
SP



DISASSEMBLY

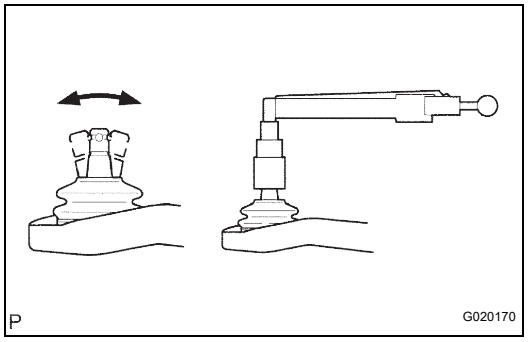
1. REMOVE FRONT SUSPENSION UPPER ARM BUSH

(a) Using a hammer and chisel, raise the flange of the bushing diagonally as shown in the illustration.



(b) Using SST, remove the upper arm bush.
SST 09950-40011 (09951-04010, 09952-04010, 09953-04020, 09954-04010, 09955-04011, 09957-04010, 09958-04011), 09950-60010 (09951-00380)

(c) The removal procedure for the rear side is the same as that for the front side.



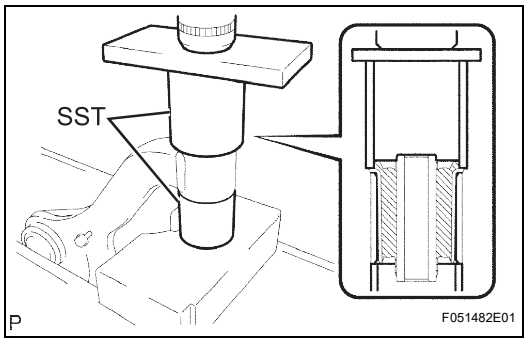
INSPECTION

1. INSPECT FRONT SUSPENSION UPPER ARM

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

(b) Using a torque wrench, turn the nut continuously at a rate of 3 to 5 seconds per turn and take the torque reading on the 5th turn.
Torque: 4.5 N*m (46 kgf*cm, 40 in.*lbf) or less

(c) Check for any cracks and grease leakage on the ball joint dust cover.



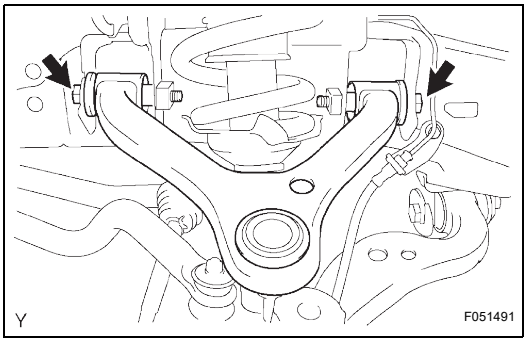
REASSEMBLY

1. INSTALL FRONT SUSPENSION UPPER ARM BUSH

(a) Using SST and a press, install a new upper arm bush (front side).
SST 09631-20081, 09710-04081

(b) The installation procedure for the rear side is the same as that for the front side.

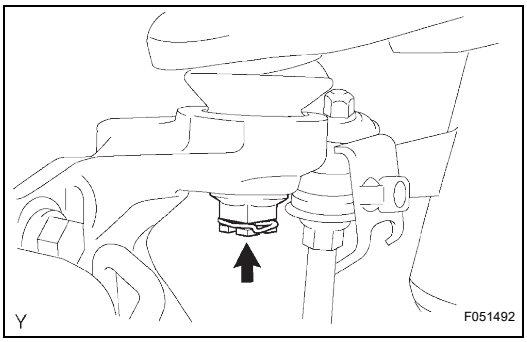
SP



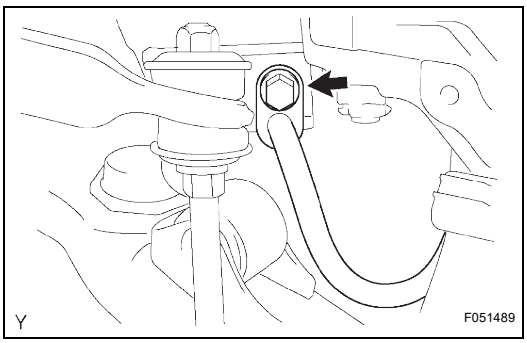
INSTALLATION

1. TEMPORARILY TIGHTEN FRONT SUSPENSION UPPER ARM

(a) Install the front suspension upper arm, and temporarily tighten the 2 bolts.

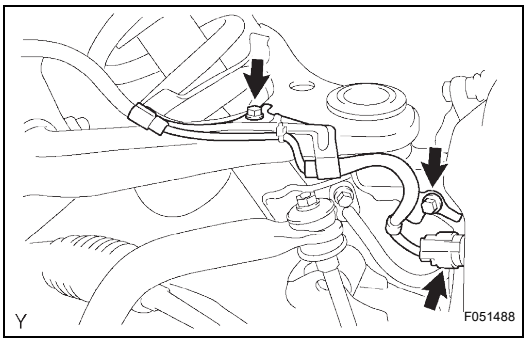


(b) Install a new nut and a new clip.
Torque: 110 N*m (1,122 kgf*cm, 81 ft.*lbf)



2. INSTALL FRONT FLEXIBLE HOSE

(a) Install the front flexible hose with the bolt.
Torque: 32 N*m (326 kgf*cm, 24 ft.*lbf)



3. INSTALL SKID CONTROL SENSOR WIRE

(a) Install the skid control sensor wire with the 2 bolts.
Torque: 5.0 N*m (51 kgf*cm, 44 in.*lbf)

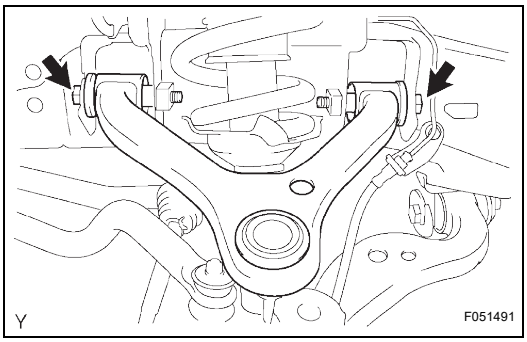
(b) Connect the speed sensor connector.

4. INSTALL FRONT WHEEL
Torque: 113 N*m (1,152 kgf*cm, 83 ft.*lbf)

5. STABILIZE SUSPENSION

(a) Jack down the vehicle.

(b) Bounce the vehicle up and down several times to stabilize the suspension.



6. FULLY TIGHTEN FRONT SUSPENSION UPPER ARM

(a) Fully tighten the 2 bolts.
Torque: 82 N*m (836 kgf*cm, 60 ft.*lbf)

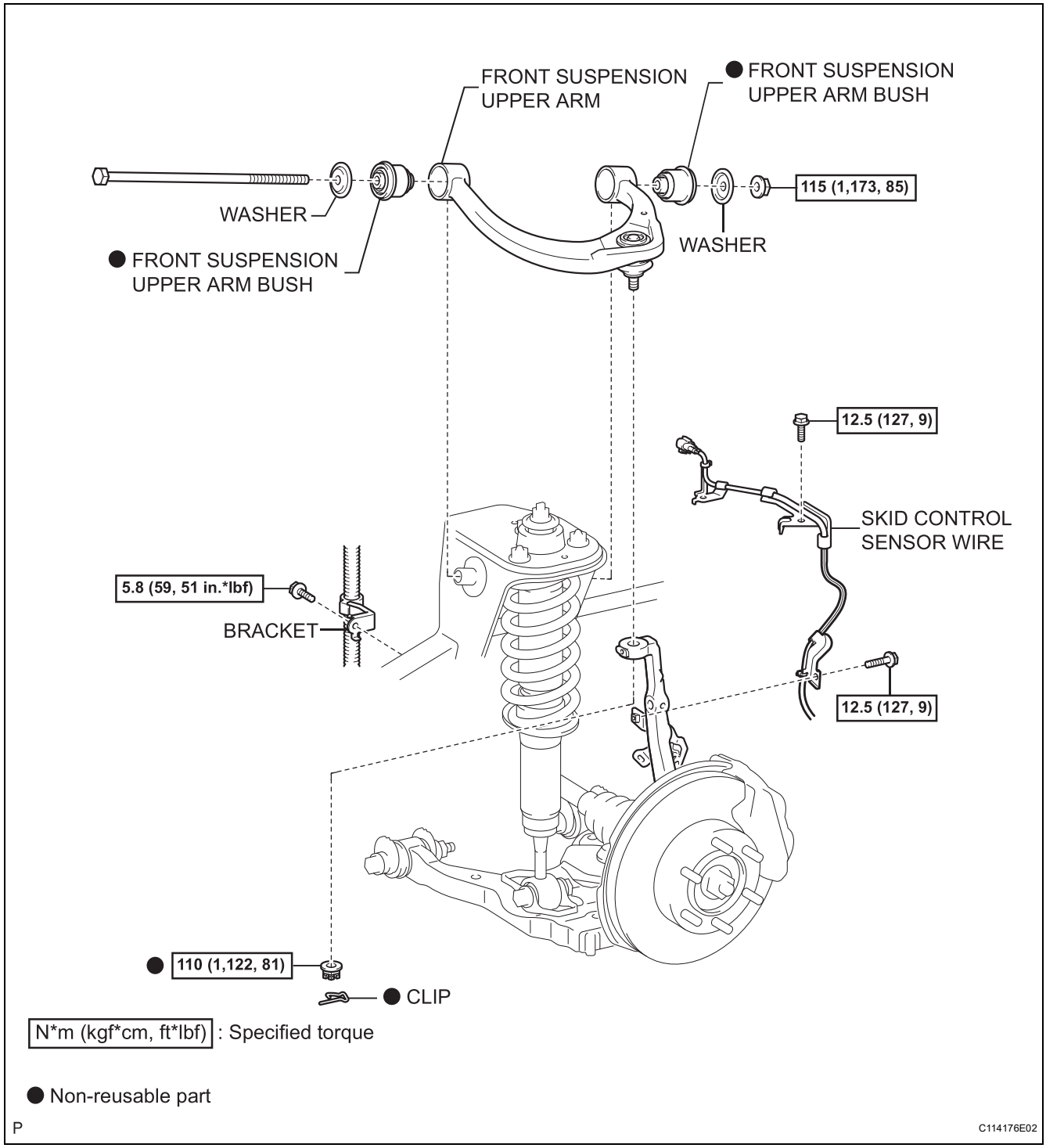
7. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL
Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)
(See page IN-5)

8. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT
(See page SP-2)

SP

FRONT UPPER SUSPENSION ARM (for 4WD and Pre-Runner)

COMPONENTS



SP

REMOVAL

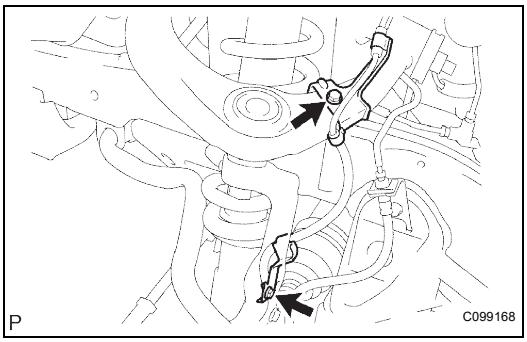
1. REMOVE FRONT WHEEL

2. INSPECT FRONT SUSPENSION UPPER ARM

(a) Check that there is no slack on the ball joint by shaking the upper arm up and down by hand.

3. SEPARATE SKID CONTROL SENSOR WIRE

(a) Remove the 2 bolts, and separate the skid control sensor wire.

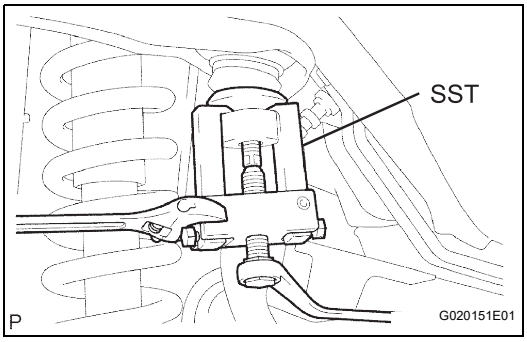


4. REMOVE FRONT SUSPENSION UPPER ARM

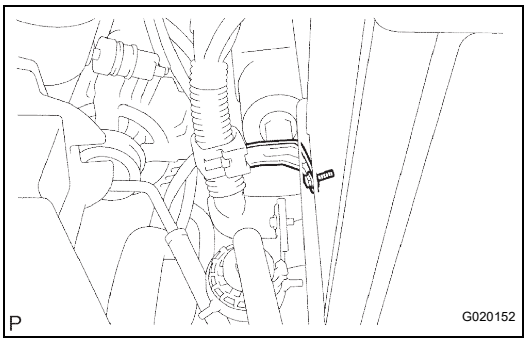
(a) Support the front suspension lower arm LH with a jack.

(b) Remove the clip and nut.

(c) Using SST, separate the upper ball joint from the steering knuckle.
SST 09628-62011

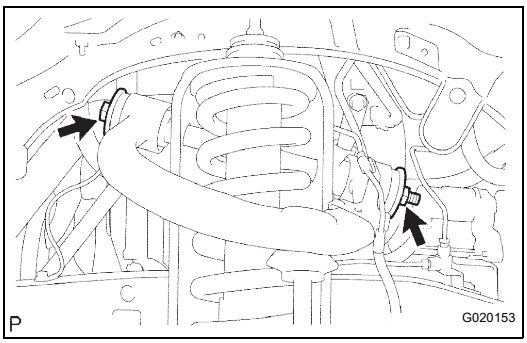


(d) Remove the bolt and bracket.

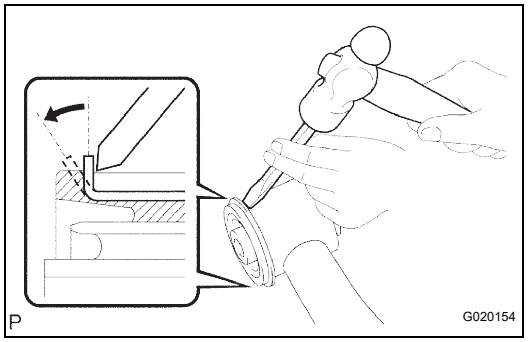


(e) Remove the bolt, 2 washers and nut.

(f) Remove the front suspension upper arm.



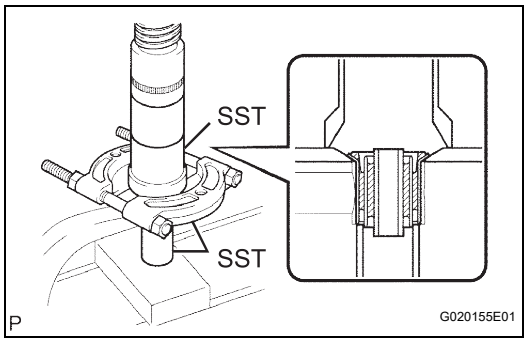
SP



DISASSEMBLY

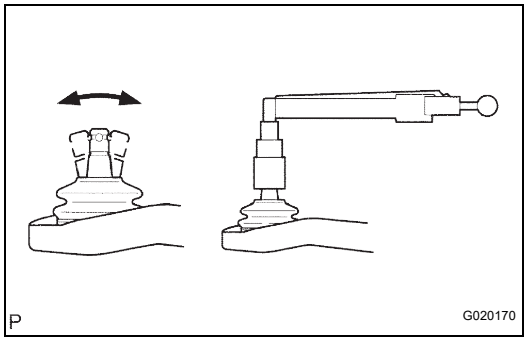
1. REMOVE FRONT SUSPENSION UPPER ARM BUSH

(a) Using a hammer and chisel, raise the flange of the bushing diagonally as shown in the illustration.



(b) Using SST and a press, remove the front suspension upper arm bush LH (front side).
SST 09613-26010, 09710-22021 (09710-01031), 09950-00020

(c) The removal procedure for the rear side is the same as that for the front side.



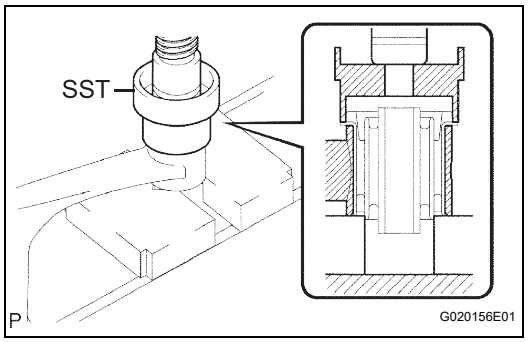
INSPECTION

1. INSPECT FRONT SUSPENSION UPPER ARM

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

(b) Using a torque wrench, turn the nut continuously at a rate of 3 to 5 seconds per turn and take the torque reading on the 5th turn.
Torque: 4.5 N*m (46 kgf*cm, 40 in.*lbf) or less

(c) Check for any cracks and grease leakage on the ball joint dust cover.

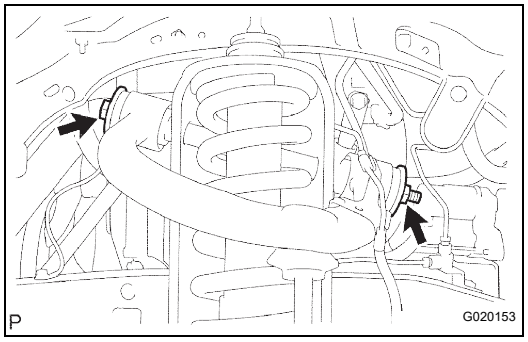


REASSEMBLY

1. INSTALL FRONT SUSPENSION UPPER ARM BUSH

(a) Using SST and a press, install a new upper arm bush (front side).
SST 09710-26010 (09710-05061)

(b) The installation procedure for the rear side is the same as that for the front side.

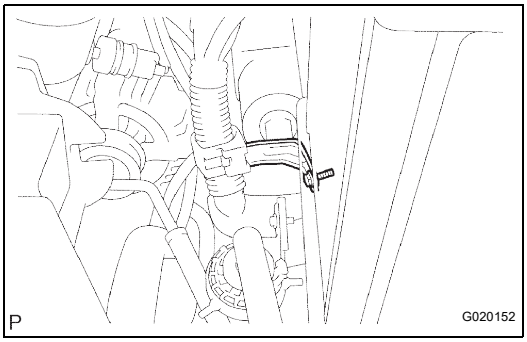


INSTALLATION

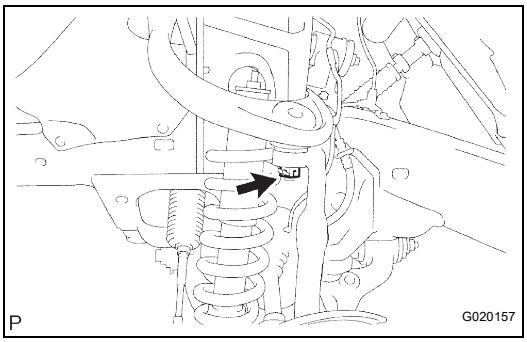
1. TEMPORARILY TIGHTEN FRONT SUSPENSION UPPER ARM

(a) Install the front suspension upper arm, and temporarily tighten the bolt, 2 washers and nut.

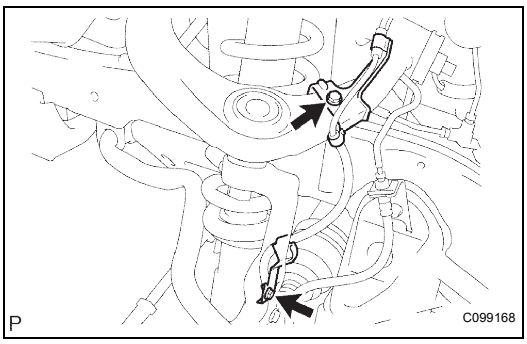
SP



(b) Install the bracket with the bolt.
Torque: 5.8 N*m (59 kgf*cm, 51 in.*lbf)



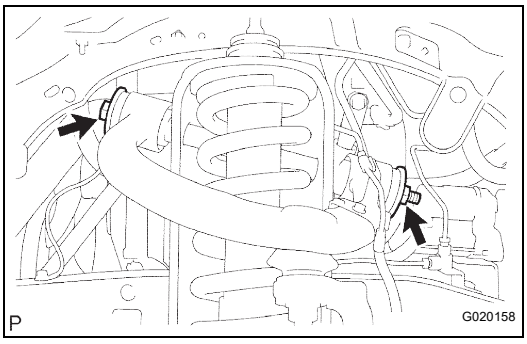
(c) Install a new nut and a new clip.
Torque: 110 N*m (1,122 kgf*cm, 81 ft.*lbf)



2. INSTALL SKID CONTROL SENSOR WIRE
(a) Install the skid control sensor wire with the 2 bolts.
Torque: 12.5 N*m (127 kgf*cm, 9 ft.*lbf)

3. INSTALL FRONT WHEEL
Torque: 113 N*m (1,152 kgf*cm, 83 ft.*lbf)

4. STABILIZE SUSPENSION
(a) Jack down the vehicle.
(b) Bounce the vehicle up and down several times to stabilize the suspension.



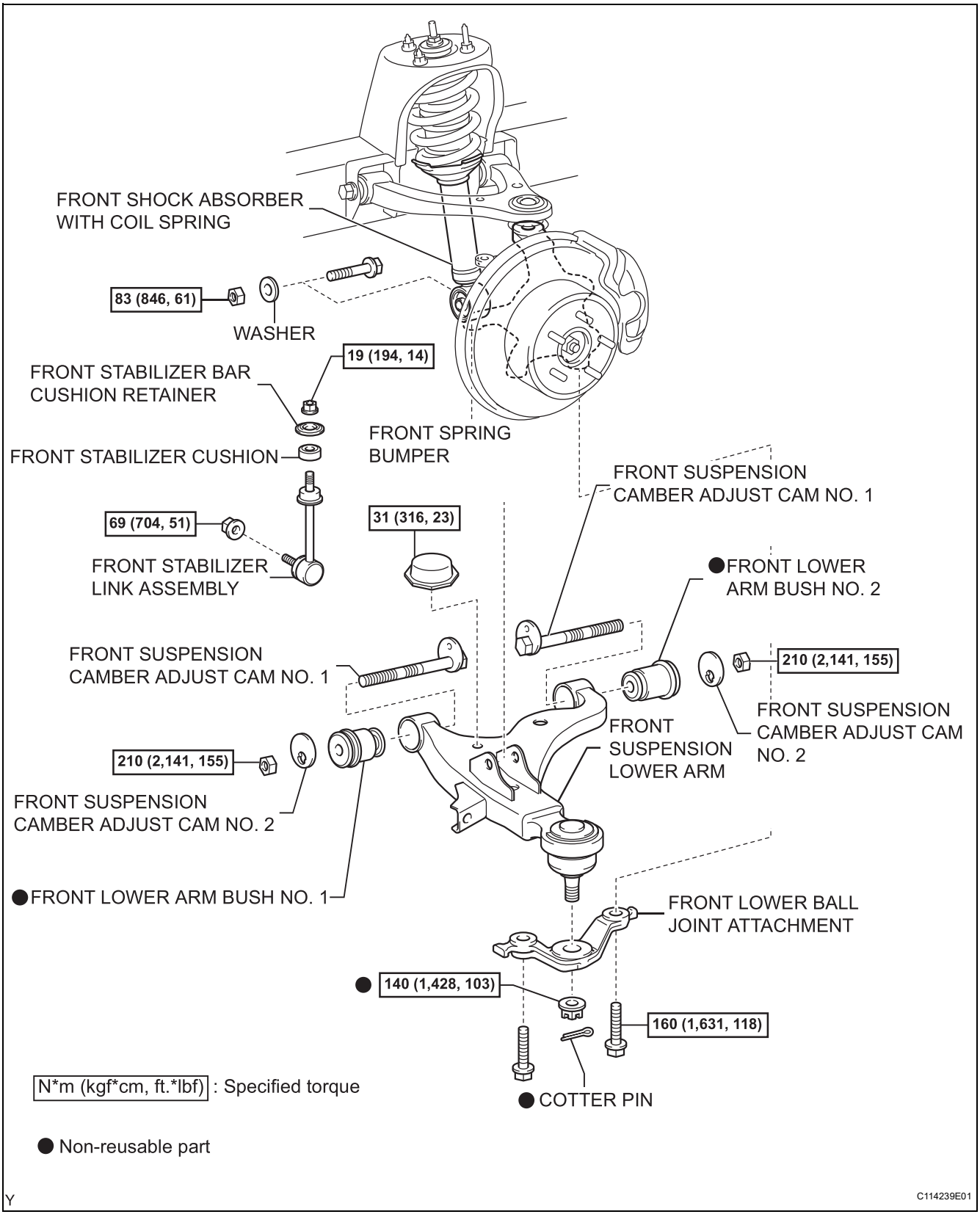
5. FULLY TIGHTEN FRONT SUSPENSION UPPER ARM
(a) Fully tighten the nut.
Torque: 115 N*m (1,173 kgf*cm, 85 ft.*lbf)

6. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT
(See page SP-7)

SP

FRONT LOWER SUSPENSION ARM (for 2WD)

COMPONENTS

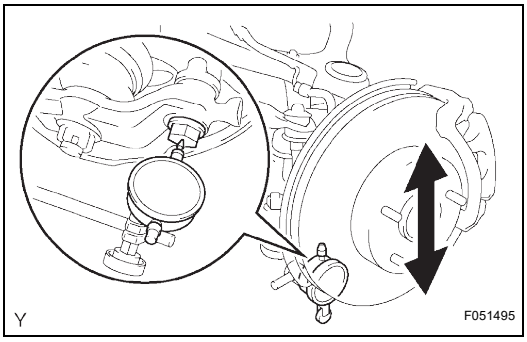


SP

REMOVAL

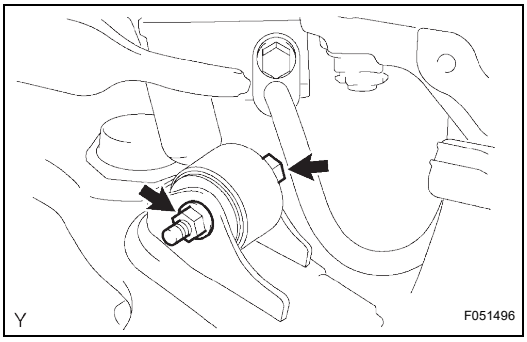
1. **REMOVE FRONT WHEEL**

2. **INSPECT FRONT SUSPENSION LOWER ARM**
   (a) Install the hub nuts onto the disc.
   (b) Using a dial indicator, check the lower ball joint for excessive play when you push the hub nuts up and down with a force of 294 N (30 kgf, 66 lbf).
   Maximum:
   0.5 mm (0.020 in.)
   HINT:
   If it is not within the specification, replace the lower arm.



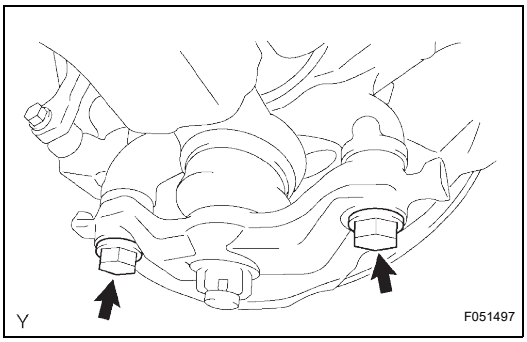
3. **REMOVE FRONT STABILIZER LINK ASSEMBLY (See page SP-47)**

4. **SEPARATE FRONT SHOCK ABSORBER WITH COIL SPRING**
   (a) Remove the bolt, nut and washer.
   (b) Separate the front shock absorber with coil spring from the suspension lower arm.

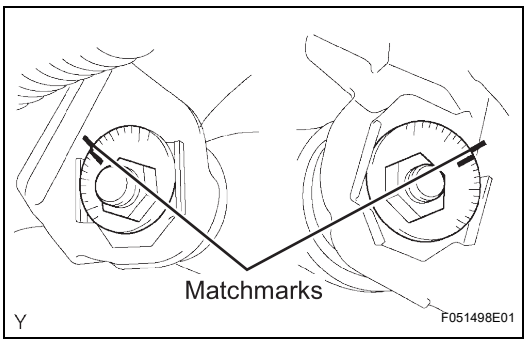


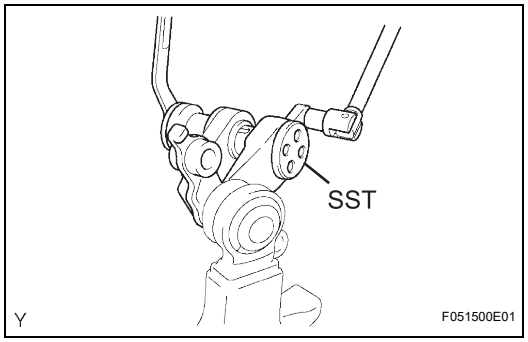
SP

5. **REMOVE FRONT SUSPENSION LOWER ARM**
   (a) Remove the 2 bolts, and separate the front lower ball joint attachment from the front axle.

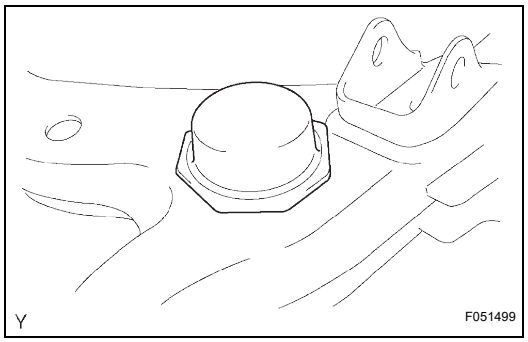


   (b) Place matchmarks on the camber adjust cam No. 2.
   (c) Remove the 2 nuts, 2 No. 2 camber adjust cams, 2 No. 1 camber adjust cams and front suspension lower arm.



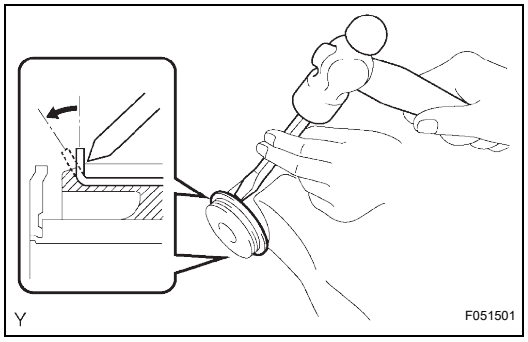


(d) Remove the cotter pin and nut.
(e) Using SST, remove the front lower ball joint attachment.
SST 09628-00011



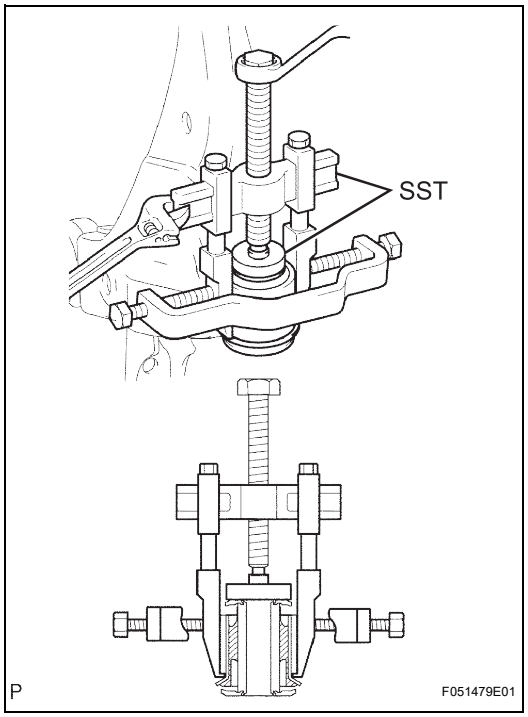
6. REMOVE FRONT SPRING BUMPER
(a) Remove the front spring bumper.

DISASSEMBLY

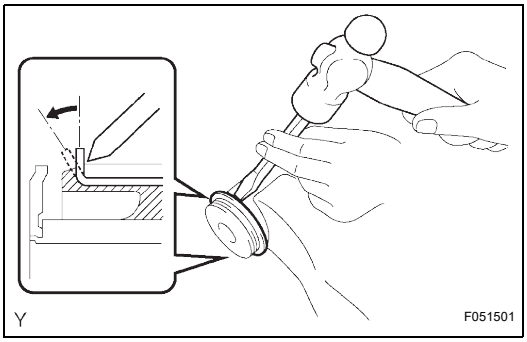


1. REMOVE FRONT LOWER ARM BUSH NO. 1
(a) Using a hammer and chisel, raise the flange of the bush diagonally as shown in the illustration.

SP

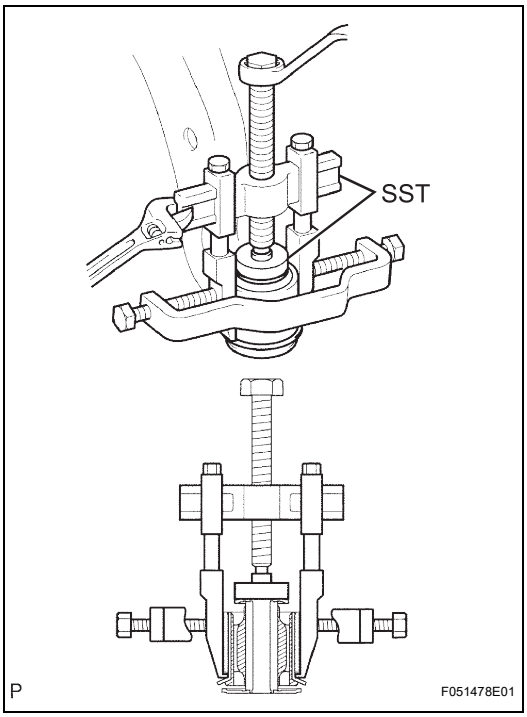


(b) Using SST, remove the lower arm bush.
SST 09950-40011 (09951-04010, 09952-04010, 09953-04020, 09954-04010, 09955-04011, 09957-04010, 09958-04011), 09950-60010 (09951-00450)



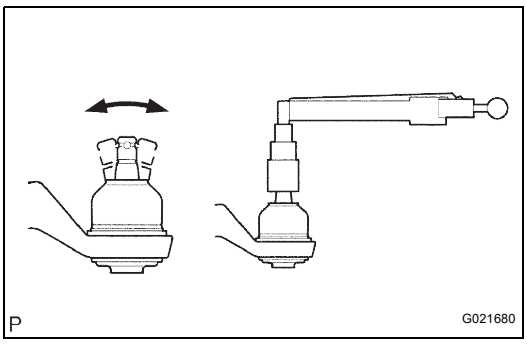
2. REMOVE FRONT LOWER ARM BUSH NO. 2

(a) Using a hammer and chisel, raise the flange of the bush diagonally as shown in the illustration.



(b) Using SST, remove the lower arm bush.
SST 09950-40011 (09951-04010, 09952-04010, 09953-04020, 09954-04010, 09955-04011, 09957-04010, 09958-04011), 09950-60010 (09951-00450)

INSPECTION

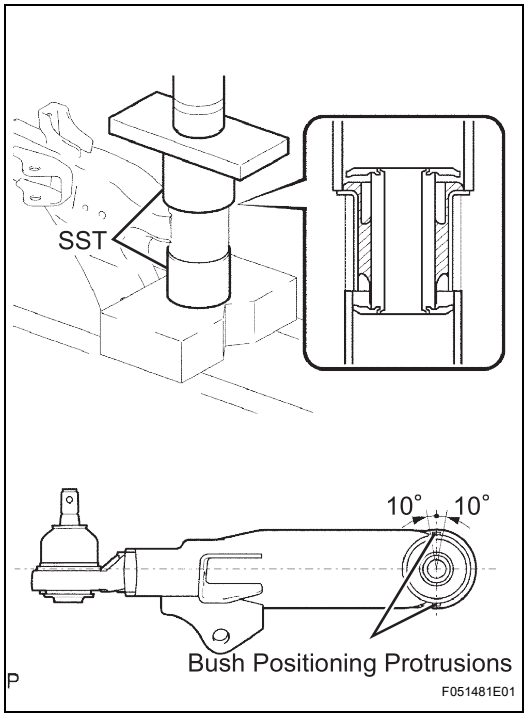


1. INSPECT FRONT SUSPENSION LOWER ARM

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

(b) Using a torque wrench, turn the nut continuously at a rate of 2 to 4 seconds per turn and take the torque reading on the 5th turn.
Torque: 3.0 N*m (31 kgf*cm, 27 in.*lbf) or less

(c) Check for any cracks and grease leakage on the ball joint dust cover.



REASSEMBLY

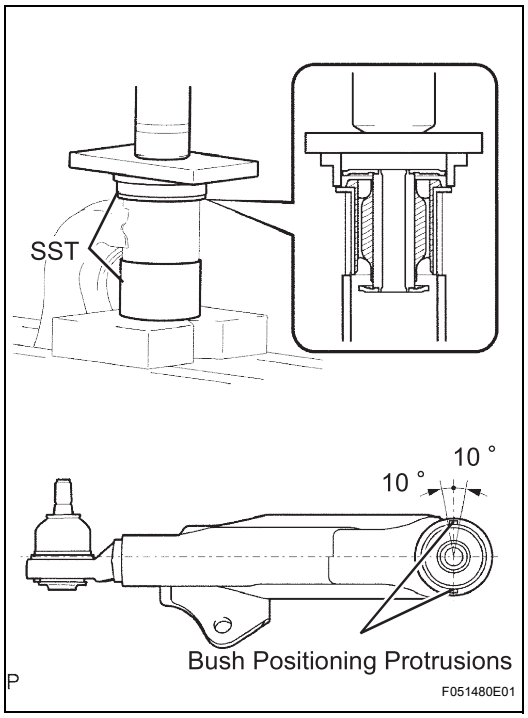
1. INSTALL FRONT LOWER ARM BUSH NO. 1

(a) Using SST, a press and steel plate, install a new lower arm bush.

SST 09631-12090, 09631-32020

NOTICE:

Push the lower arm bush in until the bush positioning protrusions come to the positions shown in the illustration.



2. INSTALL FRONT LOWER ARM BUSH NO. 2

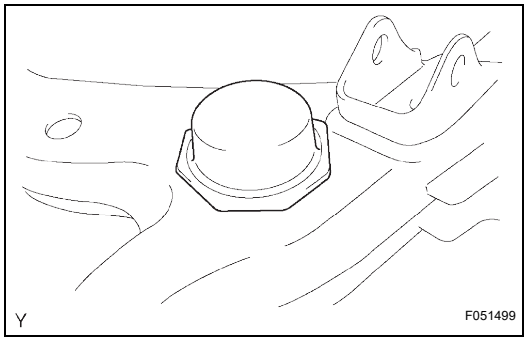
(a) Using SST, a press and steel plate, install a new lower arm bush.

SST 09502-12010, 09631-12090

NOTICE:

Push the lower arm bush in until the bush positioning protrusions come to the positions shown in the illustration.

SP

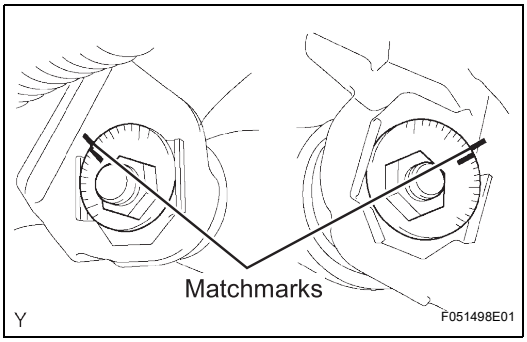


INSTALLATION

1. INSTALL FRONT SPRING BUMPER

(a) Install the front spring bumper.

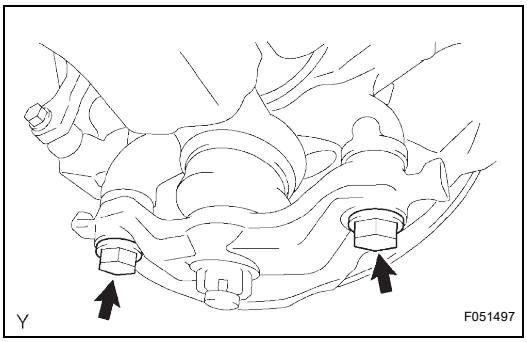
Torque: 31 N*m (316 kgf*cm, 23 ft.*lbf)



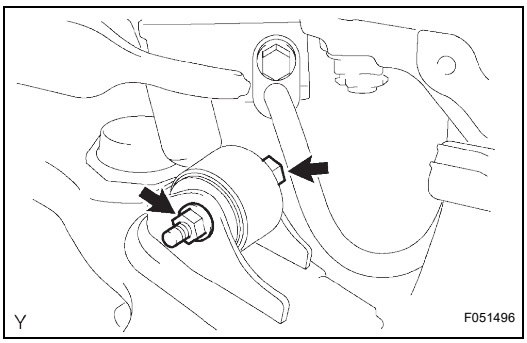
2. TEMPORARILY TIGHTEN FRONT SUSPENSION LOWER ARM

(a) Align the matchmarks on the 2 camber adjust cams and temporarily tighten the 2 nuts.

(b) Install the front lower ball joint attachment LH, a new nut and a new cotter pin.
Torque: 140 N*m (1,428 kgf*cm, 103 ft.*lbf)



(c) Install the front lower ball joint attachment LH with the 2 bolts.
Torque: 160 N*m (1,631 kgf*cm, 118 ft.*lbf)



3. TEMPORARILY TIGHTEN FRONT SHOCK ABSORBER WITH COIL SPRING

(a) Install the front shock absorber with coil spring, bolt and washer, and temporarily tighten the nut.

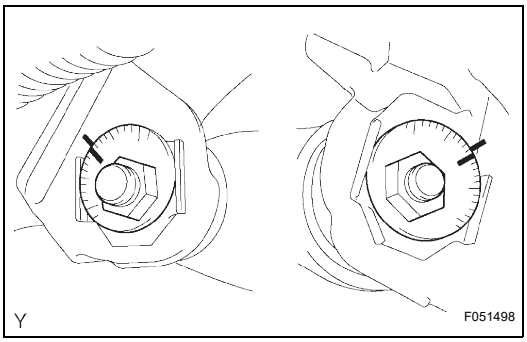
4. INSTALL FRONT STABILIZER LINK ASSEMBLY (See page SP-48)

5. INSTALL FRONT WHEEL
Torque: 113 N*m (1,152 kgf*cm, 83 ft.*lbf)

6. STABILIZE SUSPENSION

(a) Jack down the vehicle.

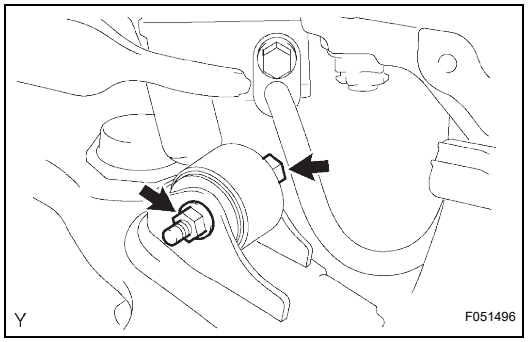
(b) Bounce the vehicle up and down several times to stabilize the suspension.



7. FULLY TIGHTEN FRONT SUSPENSION LOWER ARM

(a) Fully tighten the 2 nuts.
Torque: 210 N*m (2,141 kgf*cm, 155 ft.*lbf)

SP

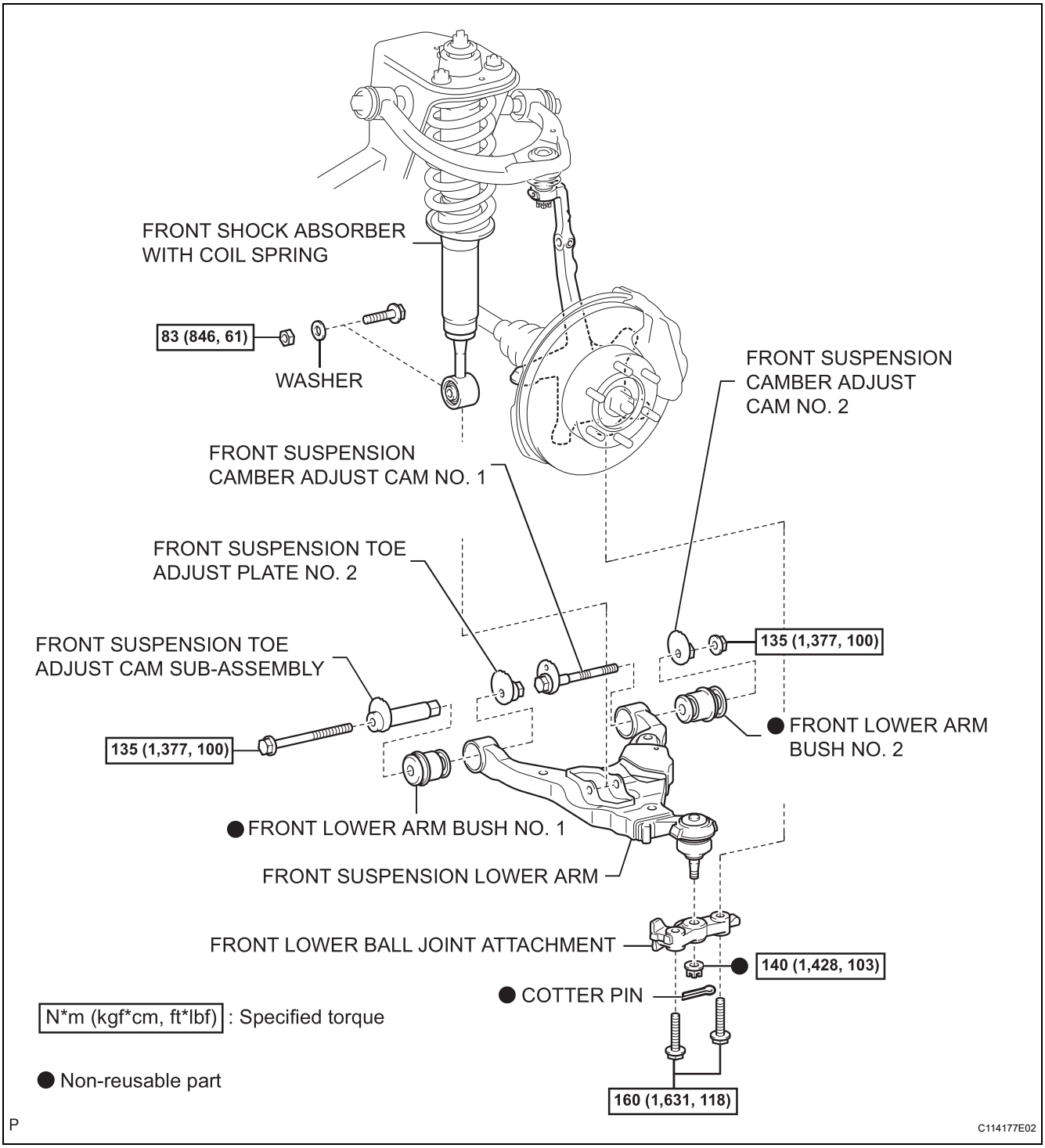


8. **FULLY TIGHTEN FRONT SHOCK ABSORBER WITH COIL SPRING**
   (a) Fully tighten the nut.
   Torque: 83 N*m (846 kgf*cm, 61 ft.*lbf)

9. **INSPECT AND ADJUST FRONT WHEEL ALIGNMENT**
   (See page SP-2)

FRONT LOWER SUSPENSION ARM (for 4WD and Pre-Runner)

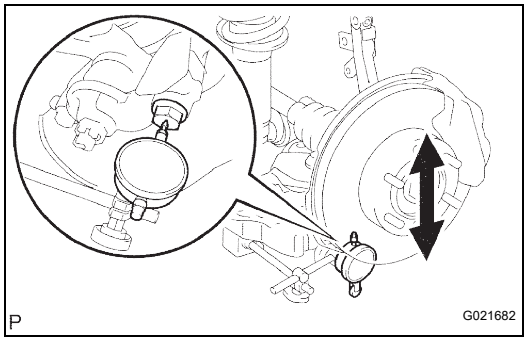
COMPONENTS



REMOVAL

1. REMOVE FRONT WHEEL

2. INSPECT FRONT SUSPENSION LOWER ARM



(a) Install the hub nuts onto the disc.

(b) Using a dial indicator, check the lower ball joint for excessive play when you push the hub nuts up and down with a force of 294 N (30 kgf, 66 lbf).

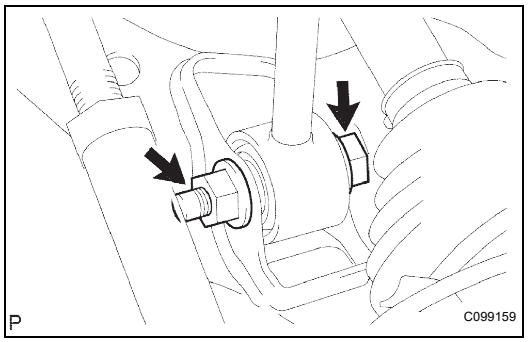
Maximum:

0.5 mm (0.020 in.)

HINT:

If it is not within the specification, replace the lower arm.

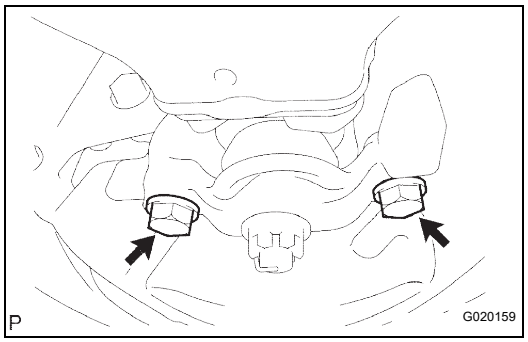
3. SEPARATE FRONT SHOCK ABSORBER WITH COIL SPRING



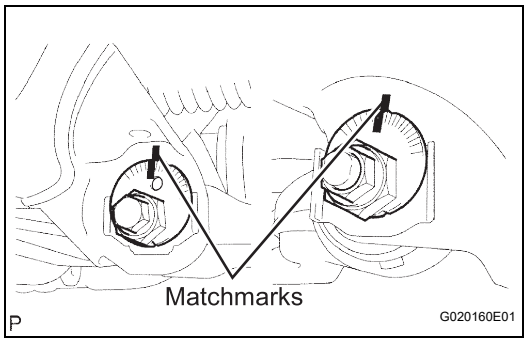
(a) Remove the bolt, nut and washer.

(b) Separate the front shock absorber with coil spring from the suspension lower arm.

4. REMOVE FRONT SUSPENSION LOWER ARM



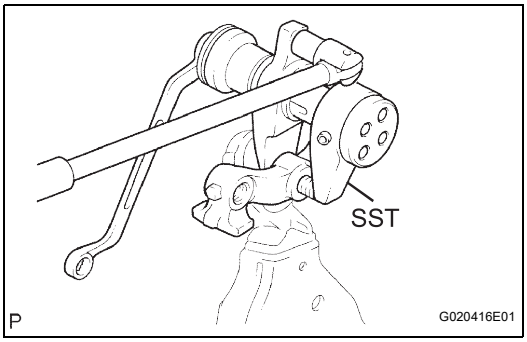
(a) Remove the 2 bolts, and separate the front lower ball joint attachment from the front axle.



(b) Place matchmarks on the camber adjust cam No. 2 and toe adjust cam.

(c) Remove the nut, camber adjust cam No. 2, camber adjust cam No. 1, bolt, toe adjust cam, toe adjust plate No. 2 and front suspension lower arm.

SP

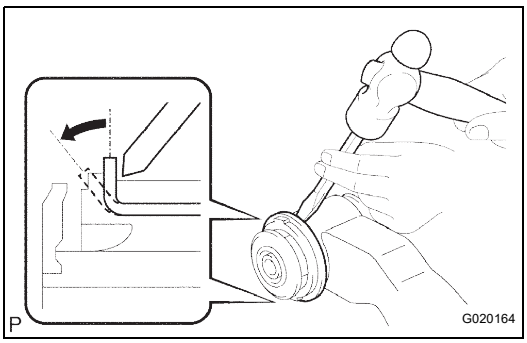


(d) Remove the cotter pin and the nut.
(e) Using SST, remove the front lower ball joint attachment LH.
SST 09628-00011

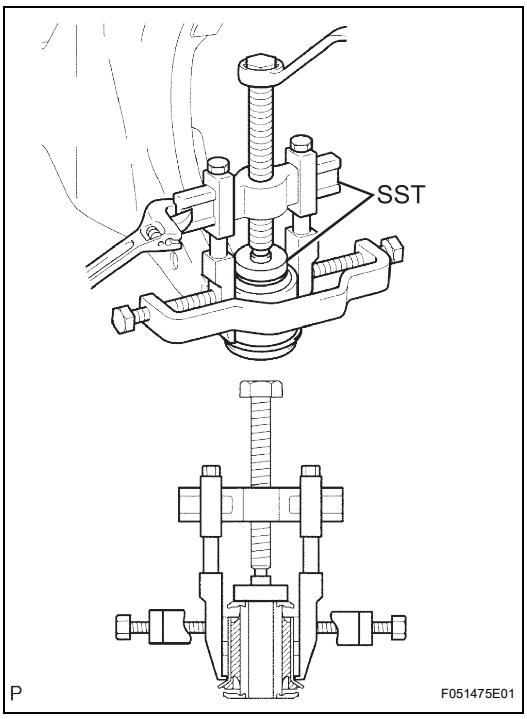
DISASSEMBLY

1. REMOVE FRONT LOWER ARM BUSH NO. 1

(a) Using a hammer and chisel, raise the flange of the bush diagonally as shown in the illustration.

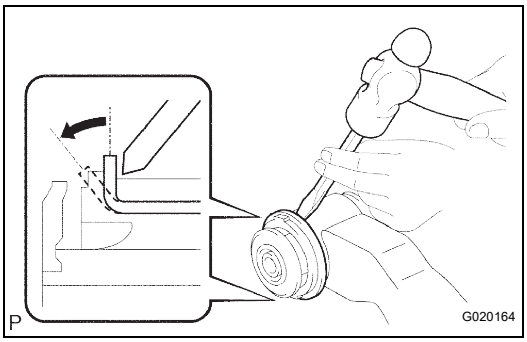


(b) Using SST, remove the lower arm bush.
SST 09950-40011 (09951-04010, 09952-04010, 09953-04020, 09954-04010, 09955-04011, 09957-04010, 09958-04011), 09950-60010 (09951-00470)

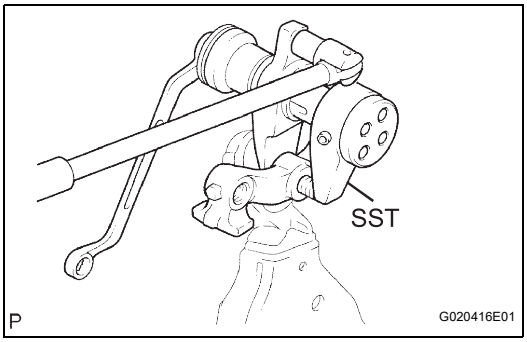


2. REMOVE FRONT LOWER ARM BUSH NO. 2

(a) Using a hammer and chisel, raise the flange of the bush diagonally as shown in the illustration.



SP

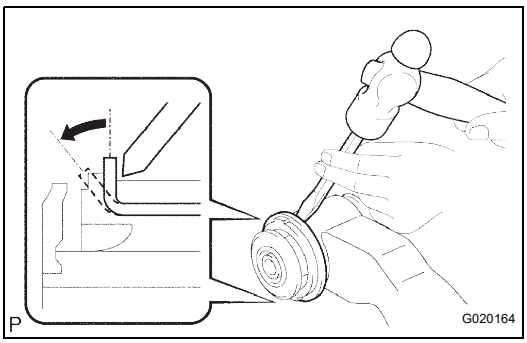


(d) Remove the cotter pin and the nut.
(e) Using SST, remove the front lower ball joint attachment LH.
SST 09628-00011

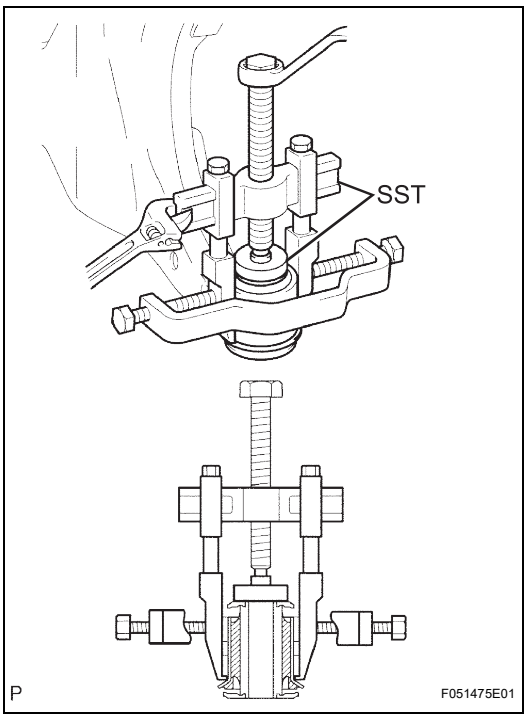
DISASSEMBLY

1. REMOVE FRONT LOWER ARM BUSH NO. 1

(a) Using a hammer and chisel, raise the flange of the bush diagonally as shown in the illustration.

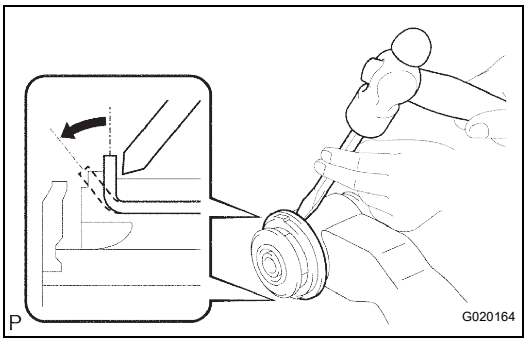


(b) Using SST, remove the lower arm bush.
SST 09950-40011 (09951-04010, 09952-04010, 09953-04020, 09954-04010, 09955-04011, 09957-04010, 09958-04011), 09950-60010 (09951-00470)

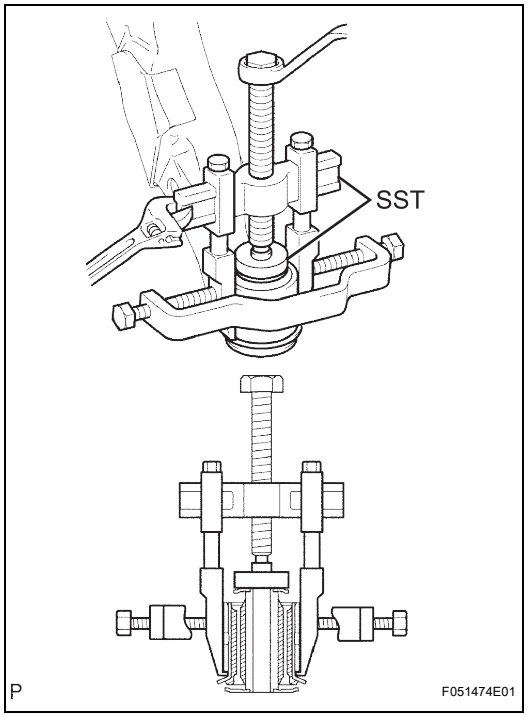


2. REMOVE FRONT LOWER ARM BUSH NO. 2

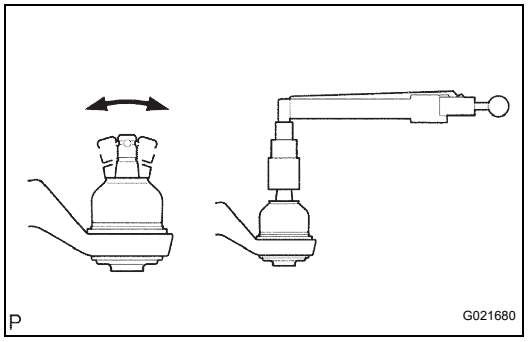
(a) Using a hammer and chisel, raise the flange of the bush diagonally as shown in the illustration.



SP



(b) Using SST, remove the lower arm bush.
SST 09950-40011 (09951-04010, 09952-04010, 09953-04020, 09954-04010, 09955-04011, 09957-04010, 09958-04011), 09950-60010 (09951-00520)



INSPECTION

1. INSPECT FRONT SUSPENSION LOWER ARM

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

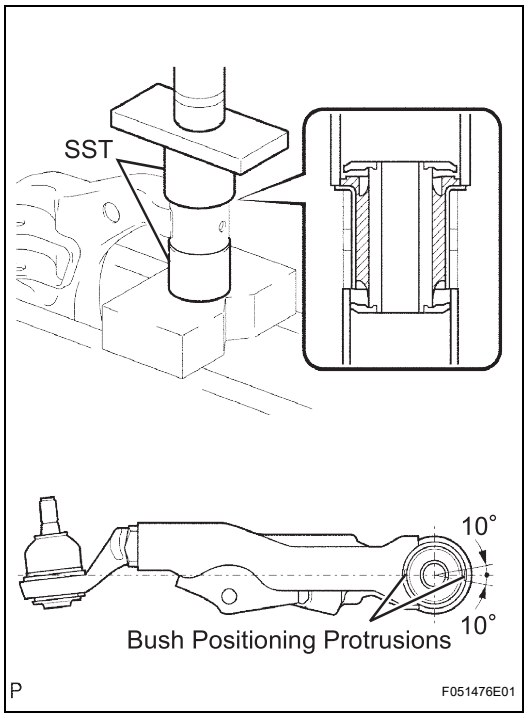
(b) Using a torque wrench, turn the nut continuously at a rate of 2 to 4 seconds per turn and take the torque reading on the 5th turn.
Torque: 3.0 N*m (31 kgf*cm, 27 in.*lbf) or less

(c) Check for any cracks and grease leakage on the ball joint dust cover.

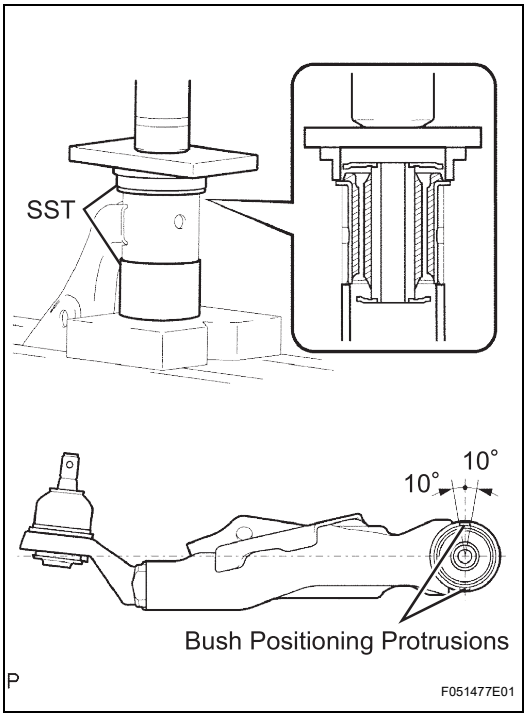
REASSEMBLY

1. INSTALL FRONT LOWER ARM BUSH NO. 1

(a) Install a new lower arm bush using SST, a press and steel plate.
SST 09631-12090, 09631-32020
NOTICE:
Push the lower arm bush in until the bush positioning protrusions come to the positions shown in the illustration.



SP



2. INSTALL FRONT LOWER ARM BUSH NO. 2

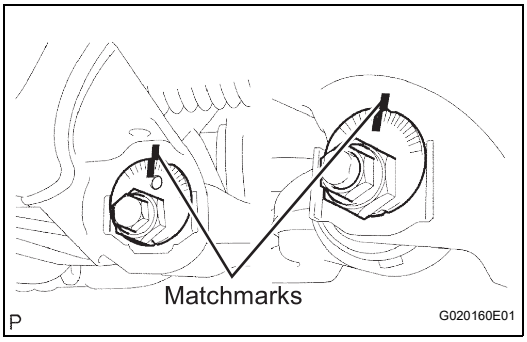
(a) Install a new lower arm bush using SST, a press and steel plate.

SST 09502-12010, 09631-12090

NOTICE:

Push the lower arm bush in until the bush positioning protrusions come to the positions shown in the illustration.

INSTALLATION

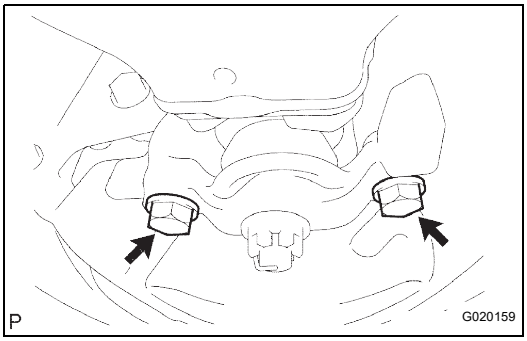


1. TEMPORARILY TIGHTEN FRONT SUSPENSION LOWER ARM

(a) Align the matchmarks on the camber adjust cam No. 2 and toe adjust cam. Temporarily tighten the bolt and the nut.

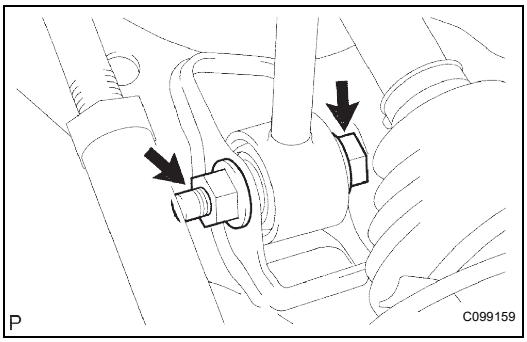
(b) Install the front lower ball joint attachment, a new nut and a new cotter pin.

Torque: 140 N*m (1,428 kgf*cm, 103 ft.*lbf)



(c) Install the front lower ball joint attachment with the 2 bolts.

Torque: 160 N*m (1,631 kgf*cm, 118 ft.*lbf)



2. TEMPORARILY TIGHTEN FRONT SHOCK ABSORBER WITH COIL SPRING

(a) Install the front shock absorber with coil spring, bolt and washer, and temporarily tighten the nut.

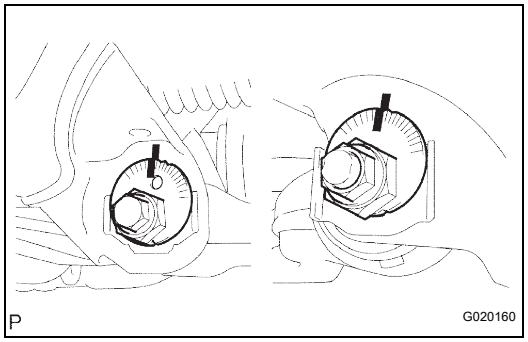
3. INSTALL FRONT WHEEL

Torque: 113 N*m (1,152 kgf*cm, 83 ft.*lbf)

4. STABILIZE SUSPENSION

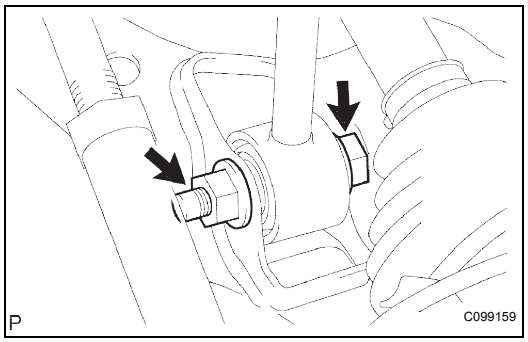
(a) Jack down the vehicle.

(b) Bounce the vehicle up and down several times to stabilize the suspension.



5. FULLY TIGHTEN FRONT SUSPENSION LOWER ARM

(a) Fully tighten the bolt and the nut.
Torque: 135 N*m (1,377 kgf*cm, 100 ft.*lbf)



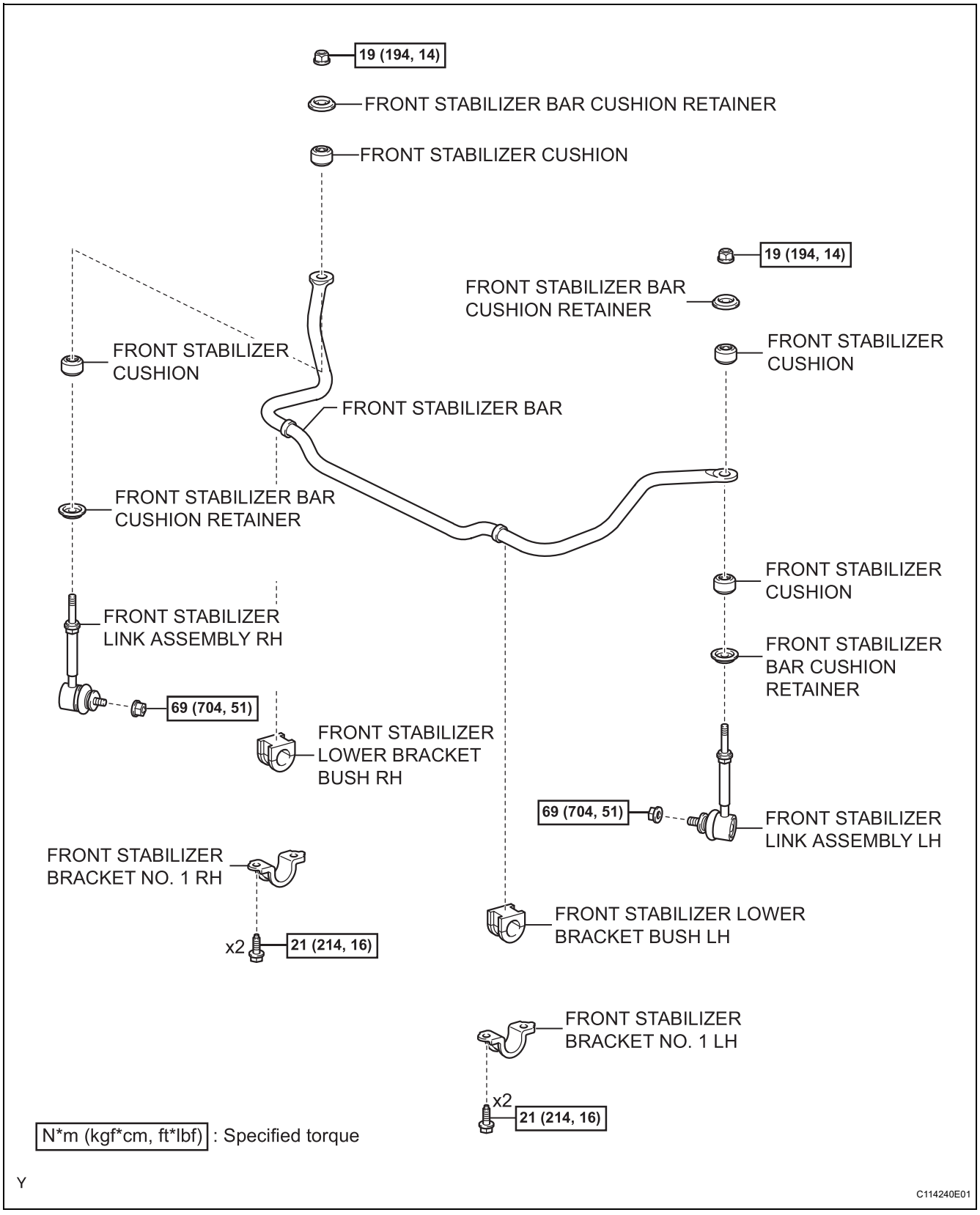
6. FULLY TIGHTEN FRONT SHOCK ABSORBER WITH COIL SPRING

(a) Fully tighten the nut.
Torque: 83 N*m (846 kgf*cm, 61 ft.*lbf)

7. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT
(See page SP-7)

FRONT STABILIZER BAR (for 2WD)

COMPONENTS

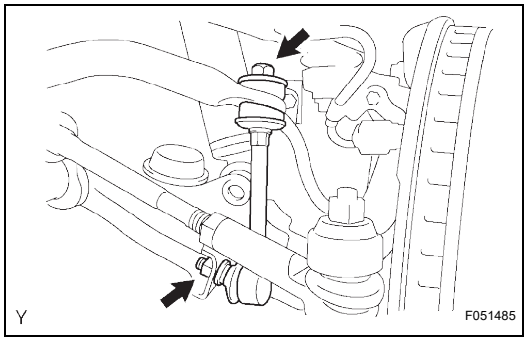


REMOVAL

1. REMOVE FRONT WHEELS

2. REMOVE FRONT STABILIZER LINK ASSEMBLY LH

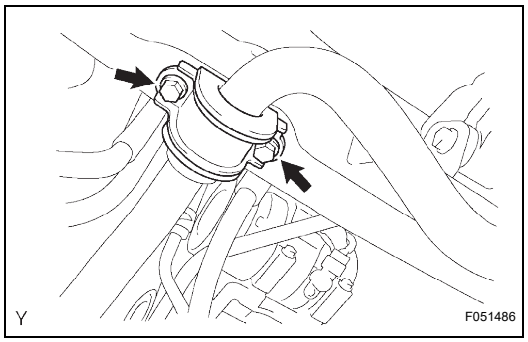
(a) Remove the 2 nuts, 2 retainers, 2 cushions and the front stabilizer link LH.
HINT:
If the ball joint turns together with the nut, use a hexagon (6 mm) wrench to hold the stud.



3. REMOVE FRONT STABILIZER LINK ASSEMBLY RH
HINT:
The removal procedure for the RH side is the same as that for the LH side.

4. REMOVE FRONT STABILIZER BRACKET NO. 1 LH

(a) Remove the 2 bolts and front stabilizer bracket.



5. REMOVE FRONT STABILIZER BRACKET NO. 1 RH
HINT:
The removal procedure for the RH side is the same as that for the LH side.

6. REMOVE FRONT STABILIZER LOWER BRACKET BUSH LH

7. REMOVE FRONT STABILIZER LOWER BRACKET BUSH RH

8. REMOVE FRONT STABILIZER BAR

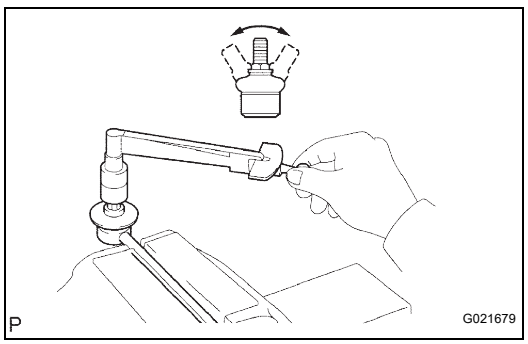
INSPECTION

1. INSPECT FRONT STABILIZER LINK ASSEMBLY

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

(b) Using a torque wrench, turn the nut continuously at a rate of 2 to 4 seconds per turn and take the torque reading on the 5th turn.
Torque: 2.0 N*m (20 kgf*cm, 18 in.*lbf)

(c) Check for any cracks and grease leakage on the ball joint dust cover.



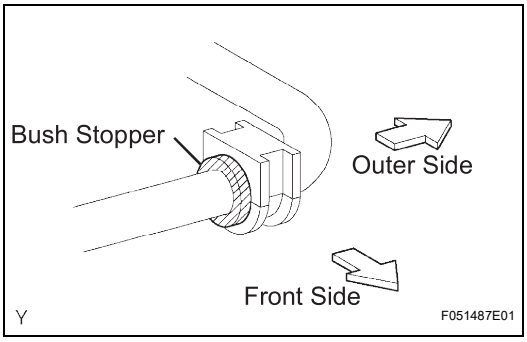
SP

INSTALLATION

1. INSTALL FRONT STABILIZER BAR

2. INSTALL FRONT STABILIZER LOWER BRACKET BUSH LH

(a) Install the front stabilizer lower bracket bush.
HINT:
- Install the bush onto the inner side of the bush stopper on the stabilizer bar.
- Install the bush onto the stabilizer bar with its cut line facing to the front.

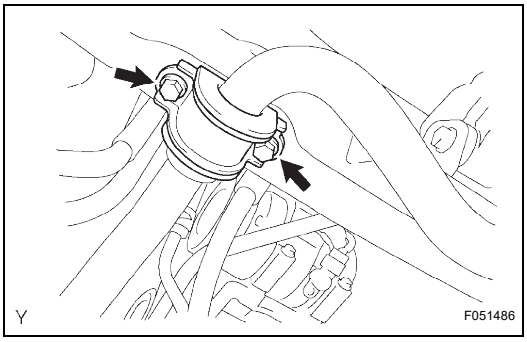


3. INSTALL FRONT STABILIZER LOWER BRACKET BUSH RH

HINT:
The installation procedure for the RH side is the same as that for the LH side.

4. INSTALL FRONT STABILIZER BRACKET NO. 1 LH

(a) Install the front stabilizer bracket with the 2 bolts.
Torque: 21 N*m (214 kgf*cm, 16 ft.*lbf)

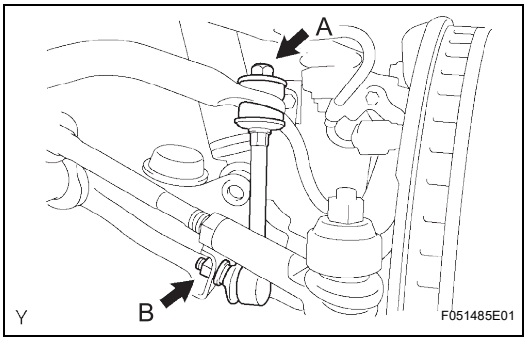


5. INSTALL FRONT STABILIZER BRACKET NO. 1 RH

HINT:
The installation procedure for the RH side is the same as that for the LH side.

6. INSTALL FRONT STABILIZER LINK ASSEMBLY LH

(a) Install the front stabilizer link LH with the 2 nuts, 2 cushions and 2 retainers.
Torque: Nut A
19 N*m (194 kgf*cm, 14 ft.*lbf)
Nut B
69 N*m (704 kgf*cm, 51 ft.*lbf)
HINT:
If the ball joint turns together with the nut, use a hexagon (6 mm) wrench to hold the stud.



7. INSTALL FRONT STABILIZER LINK ASSEMBLY RH

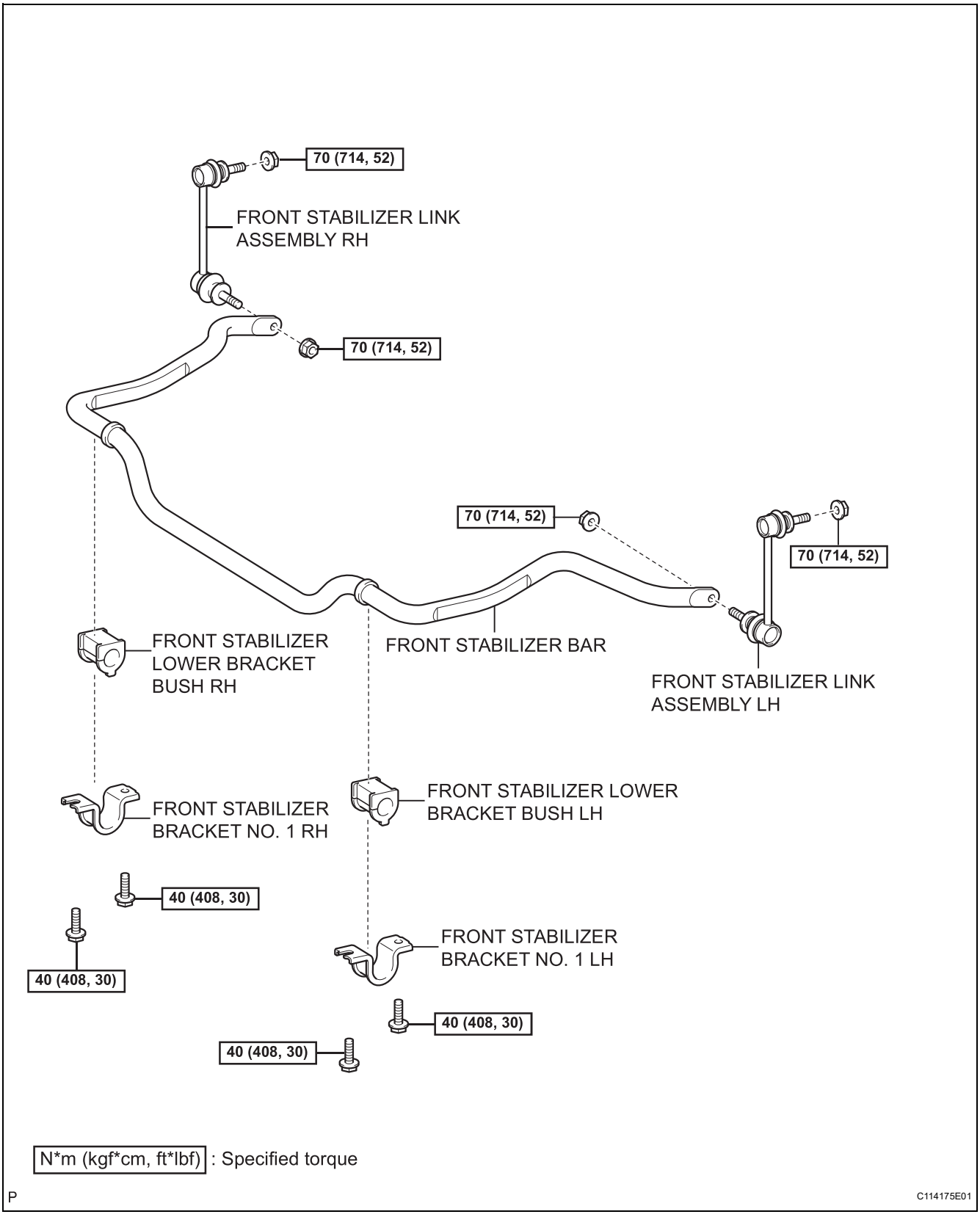
HINT:
The installation procedure for the RH side is the same as that for the LH side.

8. INSTALL FRONT WHEELS
Torque: 113 N*m (1,152 kgf*cm, 83 ft.*lbf)

SP

FRONT STABILIZER BAR (for 4WD and Pre-Runner)

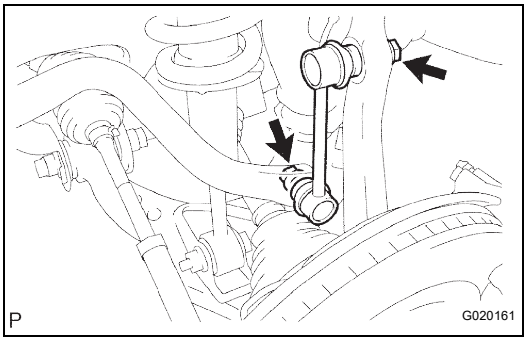
COMPONENTS



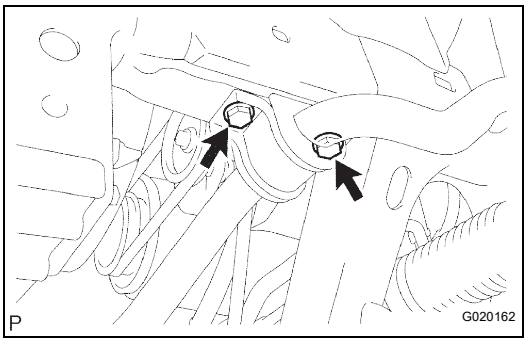
SP

REMOVAL

1. **REMOVE FRONT WHEELS**
2. **REMOVE ENGINE UNDER COVER SUB-ASSEMBLY NO. 1**
3. **REMOVE FRONT STABILIZER LINK ASSEMBLY LH**
   (a) Remove the 2 nuts and front stabilizer link LH.
   HINT:
   If the ball joint turns together with the nut, use a hexagon (6 mm) wrench to hold the stud.



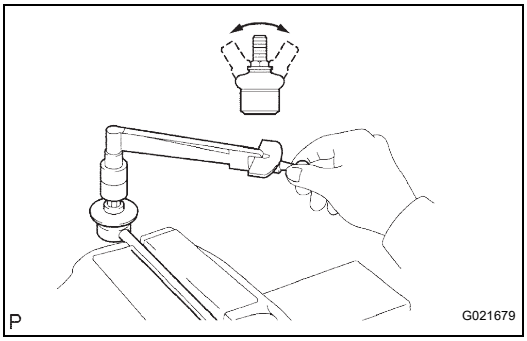
4. **REMOVE FRONT STABILIZER LINK ASSEMBLY RH**
   HINT:
   The removal procedure for the RH side is the same as that for the LH side.
5. **REMOVE FRONT STABILIZER BRACKET NO. 1 LH**
   (a) Remove the 2 bolts and front stabilizer bracket.



6. **REMOVE FRONT STABILIZER BRACKET NO. 1 RH**
   HINT:
   The removal procedure for the RH side is the same as that for the LH side.
7. **REMOVE FRONT STABILIZER LOWER BRACKET BUSH LH**
8. **REMOVE FRONT STABILIZER LOWER BRACKET BUSH RH**
9. **REMOVE FRONT STABILIZER BAR**

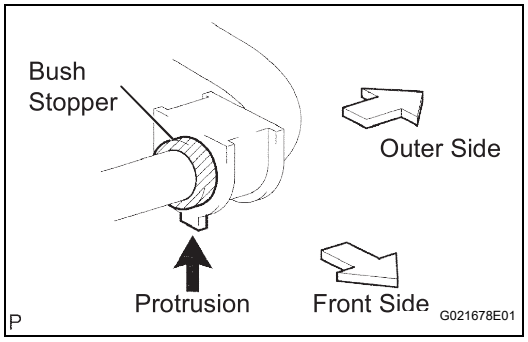
INSPECTION

1. **INSPECT FRONT STABILIZER LINK ASSEMBLY**
   (a) Flip the ball joint stud back and forth 5 times, as shown in the illustration, before installing the nut.
   (b) Using a torque wrench, turn the nut continuously at a rate of 2 to 4 seconds per turn and take the torque reading on the 5th turn.
   Torque: 2.0 N*m (20 kgf*cm, 18 in.*lbf) or less
   (c) Check for any cracks and grease leakage on the ball joint dust cover.



SP

INSTALLATION



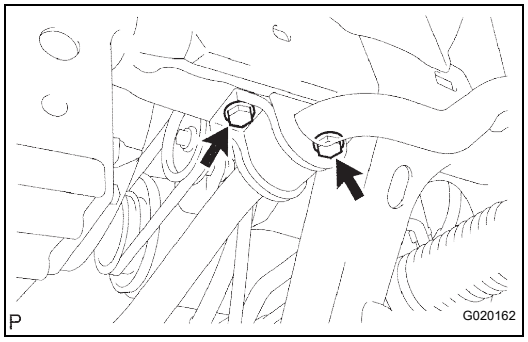
1. INSTALL FRONT STABILIZER BAR

2. INSTALL FRONT STABILIZER LOWER BRACKET BUSH LH

(a) Install the front stabilizer lower bracket bush.
HINT:
- Install the bush onto the inner side of the bush stopper on the stabilizer bar.
- Install the bush as the protrusion to be on the inner side of the vehicle.

3. INSTALL FRONT STABILIZER LOWER BRACKET BUSH RH

HINT:
The installation procedure for the RH side is the same as that for the LH side.

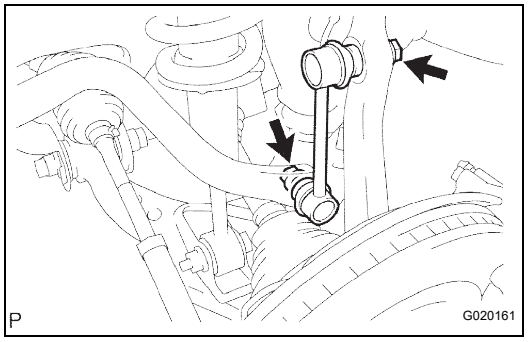


4. INSTALL FRONT STABILIZER BRACKET NO. 1 LH

(a) Install the front stabilizer bracket with the 2 bolts.
Torque: 40 N*m (408 kgf*cm, 30 ft.*lbf)

5. INSTALL FRONT STABILIZER BRACKET NO. 1 RH

NOTICE:
The installation procedure for the RH side is the same as that for the LH side.



6. INSTALL FRONT STABILIZER LINK ASSEMBLY LH

(a) Install the front stabilizer link assembly LH with the 2 nuts.
Torque: 70 N*m (714 kgf*cm, 52 ft.*lbf)
HINT:
If the ball joint turns together with the nut, use a hexagon (6 mm) wrench to hold the stud.

7. INSTALL FRONT STABILIZER LINK ASSEMBLY RH

HINT:
The installation procedure for the RH side is the same as that for the LH side.

8. INSTALL ENGINE UNDER COVER SUB-ASSEMBLY NO. 1
Torque: 30 N*m (306 kgf*cm, 22 ft.*lbf)

9. INSTALL FRONT WHEELS
Torque: 113 N*m (1,152 kgf*cm, 83 ft.*lbf)

SP