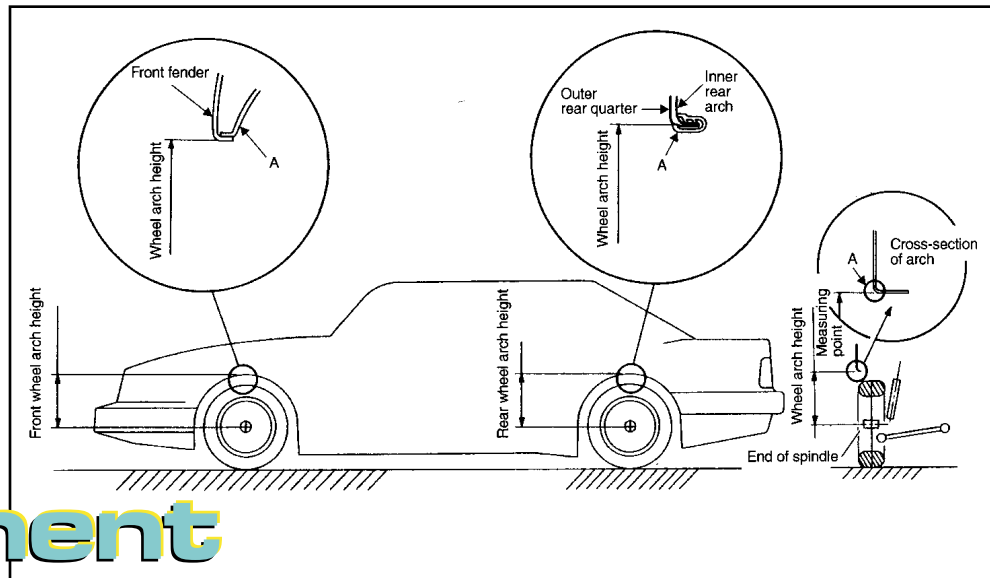


Wheel Alignment



Wheel arch height (vehicle ride height) as well as front and rear wheel alignment should be inspected at 30 month/30,000 mile intervals. Winter driving and its attendant chuckholes may shorten that maintenance interval for some drivers.

While inspecting wheel alignment, also check for obvious signs of damage to suspension components, tightness of bolts and nuts and the condition of other undercar components.

Check, adjust and/or measure wheel alignment in accordance with the following procedures:

1. Wheel arch height (front and rear)
2. Camber (front and rear)
3. Caster (front)
4. Front toe-in
5. Rear toe-in
6. Thrust angle (rear)
7. Wheel steering angle

1. Wheel Arch Height

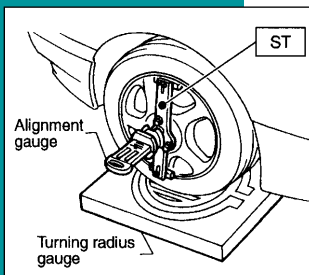
1. Adjust the tire pressures to specifications.
2. Set the vehicle under "curb weight" conditions (empty luggage compartment, install spare tire, jack, service tools, and top off fuel tank).
3. Set steering wheel in a wheel-forward position.
4. Suspend a thread from the wheel arch (point "A" in figure above) to determine a point directly above the center of the spindle.
5. Measure the distance between the measuring point and the center of the spindle.
6. Consult the service manual for Wheel Arch Height specifications.

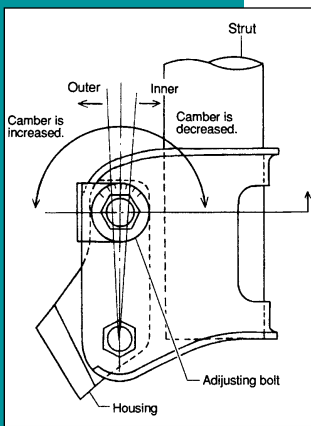
2. Camber And Caster

Inspection

1. Place the front wheel on a turning radius gauge. Make sure the ground contacting surfaces of the front and rear wheels are set at the same height.
2. Set the ST 927380000 Adapter into the center of the wheel, then install the wheel alignment gauge.

Note: Refer to the "Specifications And Service Data" section in the applicable service manual for the camber and caster values.





Front Camber Adjustment

1. Loosen the two self-locking nuts located at the lower front portion of strut.

Caution: When the adjusting bolt is loosened or tightened, hold its head with a wrench and turn the self-locking nut. Discard the loosened self-locking nut and replace with a new one.

2. Turn the camber adjusting bolt to set camber at the specification.

Note: Moving the adjusting bolt by one scale graduation changes camber by approximately $0^{\circ} 10'$.

3. Tighten the two self-locking nuts.

Tightening torque: $152 \pm 20 \text{ N-m}$ ($15.5 \pm 2.0 \text{ kg-m}$,

$112 \pm 14 \text{ ft-lb}$)

3. Front Wheel Toe-In

1. Using a toe gauge, measure the front wheel toe-in.

Toe-in: $0 \pm 3 \text{ mm}$ ($0 \pm 0.12 \text{ in}$)

2. Mark the rear sides of the left and right tires at a height corresponding to the center of the spindles and measure the distance "B" between the marks.

3. Move the vehicle forward so the marks line up with the front sides at a height corresponding to the center of the spindles.

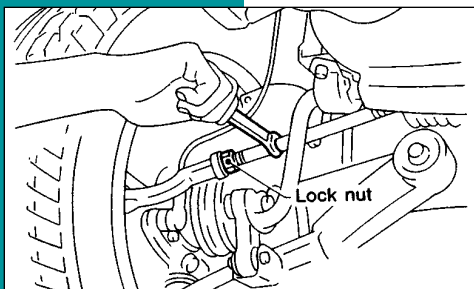
4. Measure distance "A" between the left and right marks. Toe-in can then be obtained by the following equation: $B - A = \text{Toe-in}$

Adjustment

1. Loosen the left and right side steering tie-rods lock nuts.

2. Turn the left and right tie rods equal amounts until the toe-in is at the specification.

Both the left and right tie-rods are right-hand thread. To increase toe-in, turn both tie-rods clockwise equal amounts (as viewed from the inside of the vehicle).



3. Tighten the tie-rod lock nut.

Tightening torque: $83 \pm 5 \text{ Nm}$ ($61.5 \pm 3.6 \text{ ft-lb}$)

Caution: Straighten the tie-rod boot, if it is twisted.

Note: Compare the left and right wheel steering angles to specifications.

4. Rear Wheel Toe-In (FWD Model)

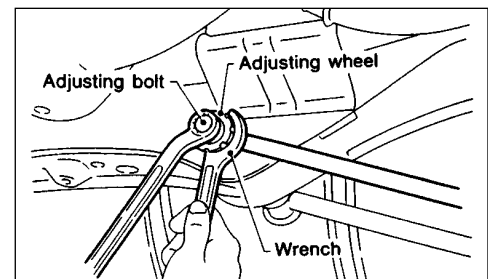
Inspection

1. Using a toe-in gauge, measure the rear wheel toe-in.

Toe-in: $0 \pm 3 \text{ mm}$ ($0 \pm 0.12 \text{ in}$)

2. Mark the rear sides of the left and right tires at a height corresponding to the center of the spindles and measure distance "B" between the marks.

3. Move the vehicle forward so the marks line up with the front sides at a height corresponding to the center of the spindles.



4. Measure distance "A" between left and right marks. Toe-in can then be obtained by the following equation: $B - A = \text{Toe-in}$

Adjustment

1. Remove the cap from lateral link and loosen self-locking nut.

Caution: When loosening or tightening the adjusting bolt, hold the bolt head and loosen the self-locking nut. Replace the self-locking nut with a new one.

2. Using two wrenches, turn the adjusting wheel and adjusting bolt equally in opposite directions until toe-in is at the specification.

Note: When the left and right wheels are adjusted for toe-in at the same time, moving one scale graduation changes toe-in by approximately 4 mm (0.16 in). Turn the adjusting wheel and adjusting bolt equally in opposite

	Left side	Right side
Toe-in is increased.	 BIM0751A	 BIM0251A
Toe-in is decreased.	 BIM0751A	 BIM0251A

directions so the same scale graduations are positioned directly above the center of the adjusting bolt.

3. Tighten the self-locking nut.

Tightening torque: 137 ± 20 Nm (101 ± 14 ft-lb)

5. Rear Wheel Toe-In (AWD Model)

Inspection

1. Using a toe-in gauge, measure the rear wheel toe-in.

Toe-in: 0 ± 3 mm (0 ± 0.12 in)

2. Mark the rear sides of the left and right tires at a height corresponding to the center of the spindles and measure distance “B” between the marks.
3. Move the vehicle forward so the marks line up with the front sides at a height corresponding to the center of the spindles.
4. Measure distance “A” between the left and right marks.

Toe-in can then be obtained by the following equation: B - A = Toe-in

Adjustment

1. Loosen the self-locking nut on the inner side of the rear lateral link.

Caution: When loosening or tightening the adjusting bolt, hold the bolt head and turn the self-locking nut. Discard the loosened self-locking nut and replace with a new one.

2. Turn the adjusting bolt head until toe-in is at the specification.

Note: When left and right wheels are adjusted for toe-in at the same time, the movement of one scale graduation changes toe-in by approximately 3 mm (0.12 in).

3. Tighten self-locking nut.

Tightening torque: 98 ± 15 Nm (72 ± 11 ft-lb)

6. Thrust Angle

Inspection

1. Position the vehicle on a level surface.
2. Move the vehicle 3-4 meters directly forward.
3. Determine the locus of both front and rear axles.

4. Measure distance “L” between center line of loci of the axles.

For reference: Thrust angle is less than 20' when “L” is equal to or less than 15 mm (0.59 in).

Adjustment

Make thrust angle adjustments by turning the toe-in adjusting bolts of the rear suspension equally in the same direction.

For reference: When one rear wheel is adjusted in a toe-in direction, adjust the other rear wheel equally in a toe-out direction, in order to make the thrust angle adjustment. When left and right adjusting bolts are turned incrementally by one graduation in the same direction, the thrust angle of the AWD model will change approximately 10' [“L” is almost equal to 7.5 mm (0.295 in)] and the thrust angle of the FWD model will change approximately 12' [“L” is almost equal to 9 mm (0.35 in)].

Thrust angle: 0° ± 20'

Note: Thrust angle refers to a mean value of left and right rear wheel toe angles in relation to vehicle body center line. Vehicle is driven straight in the thrust angle direction while swinging in the oblique direction depending on the degree of the mean thrust angle. Thrust angle = r

$$r = \frac{\partial - \beta}{2}$$

∂: Right rear wheel toe angle

β: Left rear wheel toe angle

Note: Use only positive toe-in values from each wheel to substitute ∂ for and β in the equation.

7. Steering Angle

Inspection

1. Place the vehicle on a turning radius gauge.
2. While depressing the brake pedal, turn the steering wheel fully to the left and right. With the steering wheel held at each fully turned position, measure both the inner and outer wheel steering angle.

Steering angle:

Inner wheel 37.6° ± 1.5°

Outer wheel 32.6° ± 1.5°

Adjustment

Turn the tie-rod to adjust the steering angle of both inner and outer wheels.

