



- 6) Tighten the steering wheel with a new steering wheel nut.

TORQUE: 50 N·m (5.0 kg-m, 36 lb-ft)

NOTE: On steering wheel nut removal/installation, be sure to remove the center lock pin from the rear steering gearbox to prevent damage to the gearbox.

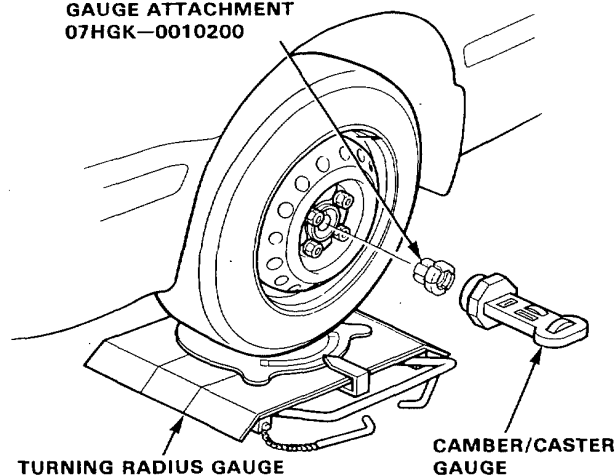
4. Place the car on level surface.
5. Release the parking brake.
6. Move the car 1 m (3.28 ft.) forward and take off the slack in the bushing.
7. Turn the steering wheel to the straight-ahead position and hold it.
8. Alignment should be checked/adjusted in one continuous procedure: caster, front camber, rear camber, rear toe, front toe and re-check.

Front Caster:

1. Remove the center cap or wheel cap. Install the Wheel Alignment Gauge Attachments on the wheels.
NOTE: Make sure the wheel hubs are clean and rust-free before installing the wheel alignment attachments.
2. Install a camber/caster gauge on the Wheel Alignment Gauge Attachment and apply the front brake. Turn the wheel 20° inward.
3. Turn the adjust screw so that the bubble in the caster gauge is at 0°
4. Turn the wheel 20° outward and read the caster on the gauge with the bubble at the center of the gauge.

Caster Angle: 3°00' ± 1°

**WHEEL ALIGNMENT
GAUGE ATTACHMENT
07HGK-0010200**



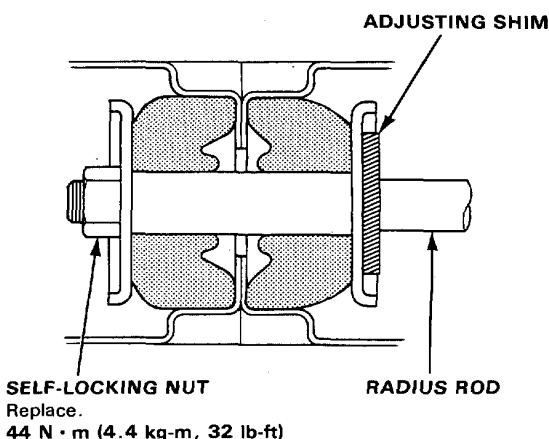
5. If adjustment is required, record the caster reading, then go to step 6. If adjustment is not required, proceed to step 11.

NOTE: Caster angle can be adjusted by increasing/decreasing the number of the adjusting shims. Remove and install the radius rod each time the caster angle is adjusted.

6. Raise the front end of the car and place safety stands in the proper locations.
7. Remove the self-locking nut on the end of the radius rod.
8. Remove the radius rod attaching bolts at the lower arm, and radius rod.
9. Adjust the caster angle by increasing/decreasing the adjusting shims.
 - One adjusting shim changes the caster angle by 25' and the caster angle can be adjusted by 50' maximum.
 - One adjusting shim is 3.2 mm (0.126 in) in thickness.

NOTE:

- Do not use more than two adjusting shims.
- After the adjustment, tighten the self-locking nut to the specified torque.



10. Recheck the caster angle.

(cont'd)

Wheel Alignment

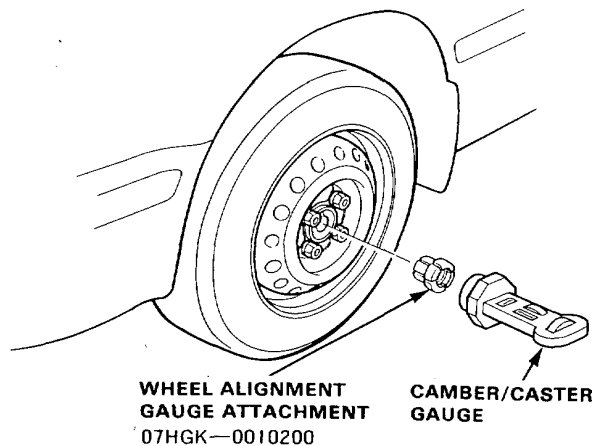
Four Wheel Steering-4WS (cont'd)

Front Camber:

11. Return the steering wheel to the straight-ahead position.
12. Read the front camber on the gauge with the bubble at the center of the gauge.

Front Camber Angle: $0^{\circ}00' \pm 1^{\circ}$

13. If out of specification, check for bent or damaged suspension components.

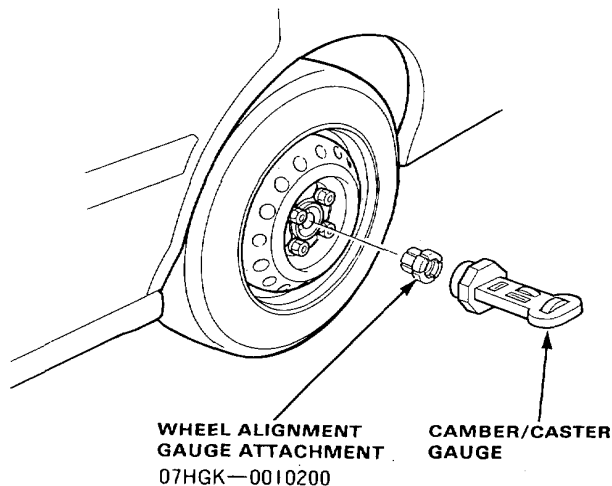


Rear Camber:

14. Read the rear camber on the gauge with the bubble at the center of the gauge.

Rear Camber: $-0^{\circ}20' \pm 1^{\circ}$

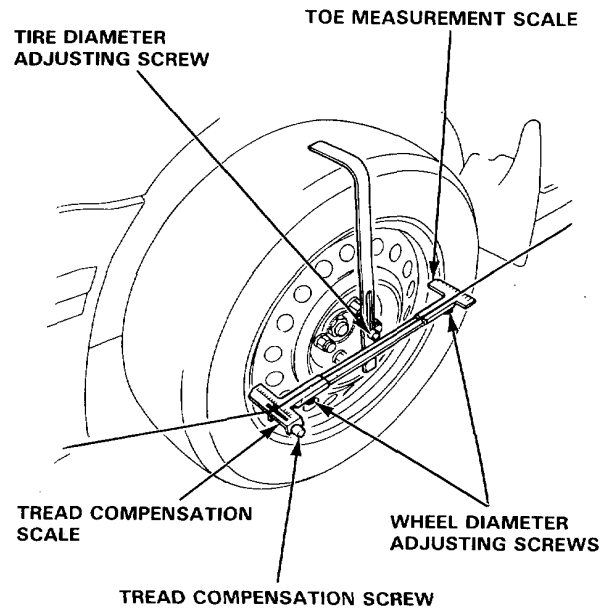
15. If out of specification, check for bent or damaged suspension components.



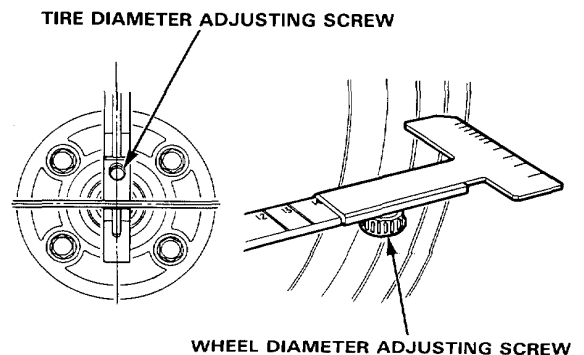
Toe:

16. Install the toe inspection gauge set attachment on each wheel and turn the wheel diameter adjusting screws and tire diameter adjusting screw right or left so that the attachment fits on the wheel disc securely.

- Be sure that the tread compensation screw is on the front of the front wheel disc and on the rear of the rear wheel disc.



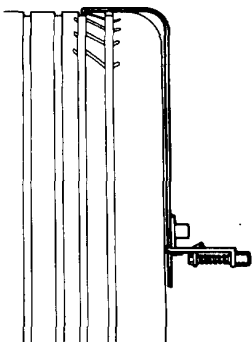
- Align the center of the gauge with the center of the wheel.



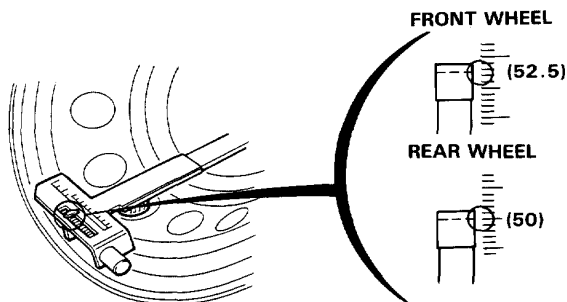


- Set the toe inspection gauge on each wheel so that it makes right angle to the wheel.

NOTE: Be sure that the toe gauge does not interfere with the balance weight of the wheel.



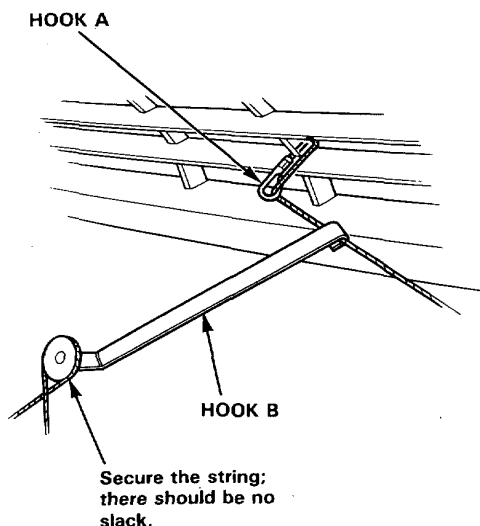
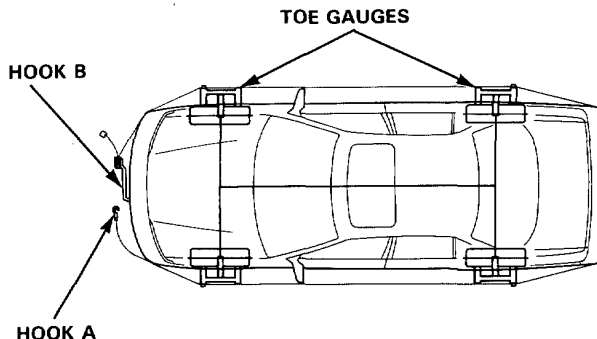
17. Set the tread compensation scale on the front wheel at 52.5 and on the rear wheel at 50.



18. Attach the string to the bumper and secure with the hook A.

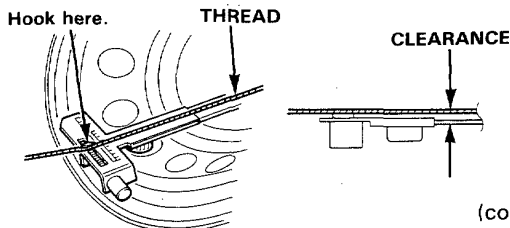
19. Route the string around the car and secure with the hook B. Be sure that there is no slack in the string.

NOTE: Be sure that the string does not contact the exhaust pipe.



20. Hook the string on each tread compensation scale.

- Keep a slight clearance between the string and toe gauge.
- Be sure that the toe gauge is parallel with the ground.

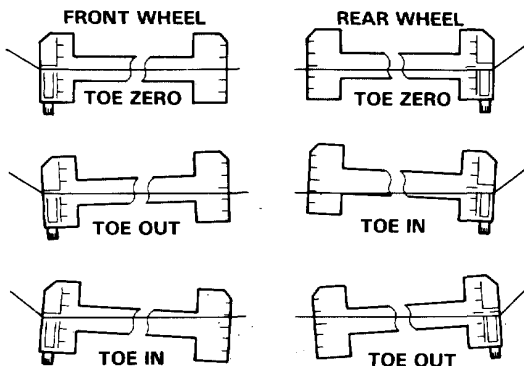


Wheel Alignment

Four Wheel Steering (4WS) (cont'd)

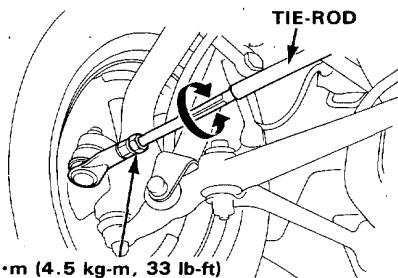
21. Read the tread compensation scale and measurement scale and calculate their difference.

- Measurement varies according to the angle you are looking.
Read all the measurements at the same height.
- Check the side of the string that is closer to a division of the tread compensation scale, and read the measurement scale at the same side of the string.
- Toe of all wheels is zero if the measurements of the tread compensation scale and measurement scale on each wheel are the same.



22. Adjust so that the front toe and rear toe are 0 when the front camber is 0° and rear camber $-0^{\circ} 20'$.
23. After the front and rear toe are adjusted to zero, loosen the right and left rear wheel tie-rods 60° and set the rear toe-in to 2 mm (0.079 in).
24. After adjusting, tighten the tie-rod locknuts.

NOTE: Reposition the tie-rod boots if twisted or displaced after adjustment has been made.



25. Recheck the camber. If camber still as specified alignment is finished.

Front Camber Angle: $0^{\circ} 00' \pm 1^{\circ}$
Rear Camber Angle: $-0^{\circ} 20' \pm 1^{\circ}$

Using Full-floating Turn Table:

Preparation

NOTE: Alignment equipment must be capable of 4 wheel alignment and must use full-floating turntables at all four wheels.

1. Check the tire pressure.
2. Jack up the car and temporarily place on safety stands.
3. Install the 4WS Center Lock Pin (see page 12-6). Install lock pins in the full floating turntables.
4. Lower the car onto the turntables. Remove the turntable lock pins and "settle" the suspension by pushing the car up and down several times. Remove the 4WS Center Lock Pin.
5. Check the steering wheel angle. If significantly off center, it may be necessary to remove the steering wheel and reposition it on the splines (page 12-6). Turn the steering wheel to the straight-ahead position.

NOTE: If the wheel removal is necessary, loosen the nut, then temporarily reinstall the 4WS Center Lock Pin before repositioning the wheel.

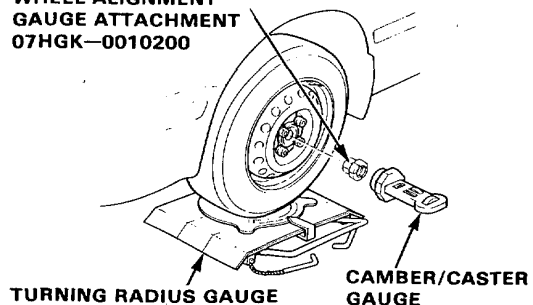
6. Alignment should be checked/adjusted in one continuous procedure: caster, front camber, rear camber, rear toe, front toe and re-check.

Front Caster:

1. Remove the center cap or wheel cap. Install the Wheel Alignment Gauge Attachments on the Wheels.
NOTE: Make sure the wheel hubs are clean and rust-free before installing the wheel alignment attachment.
2. Install a camber/caster gauge on the Wheel Alignment Gauge Attachment and apply the front brake. Turn the wheel 20° inward.
3. Turn the adjust screw so that the bubble in the caster gauge is at 0° .
4. Turn the wheel 20° outward and read the caster on the gauge with the bubble at the center of the gauge.

Caster Angle: $3^{\circ} 00' \pm 1^{\circ}$

WHEEL ALIGNMENT
GAUGE ATTACHMENT
07HGK-0010200

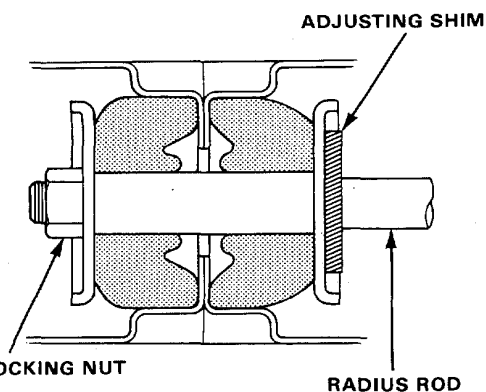




5. If adjustment is required, record the caster reading, then go to step 6. If adjustment is not required, proceed to step 10.

NOTE: Caster angle can be adjusted by increasing/decreasing the number of the adjusting shims. Remove and install the radius rod each time the caster angle is adjusted.

6. Raise the front end of the car and place safety stands in the proper locations.
7. Remove the self-locking nut on the end of the radius rod.
8. Remove the radius rod attaching bolts at the lower arm, and radius rod.
9. Adjust the caster angle by increasing/decreasing the adjusting shims.
 - One adjusting shim changes the caster angle by 25' and the caster angle can be adjusted by 50' maximum.
 - One adjusting shim is 3.2 mm (0.126 in) in thickness.



Replace.
44 N·m (4.4 kg-m, 32 lb-ft)

NOTE:

- Do not use more than two adjusting shims.
- After the adjustment, tighten the self-locking nut to the specified torque.

10. Recheck the caster angle.

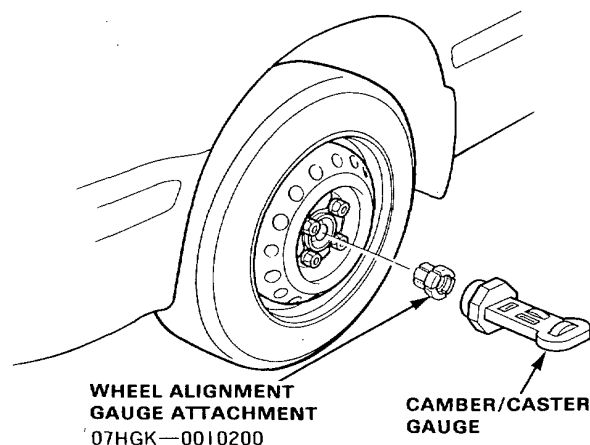
Front Camber:

11. Return the steering wheel to the straight-ahead position.

12. Read the front camber on the gauge with the bubble at the center of the gauge.

Front Camber Angle: $0^{\circ}00' \pm 1^{\circ}$

13. If out of specification, check for bent or damaged suspension components.

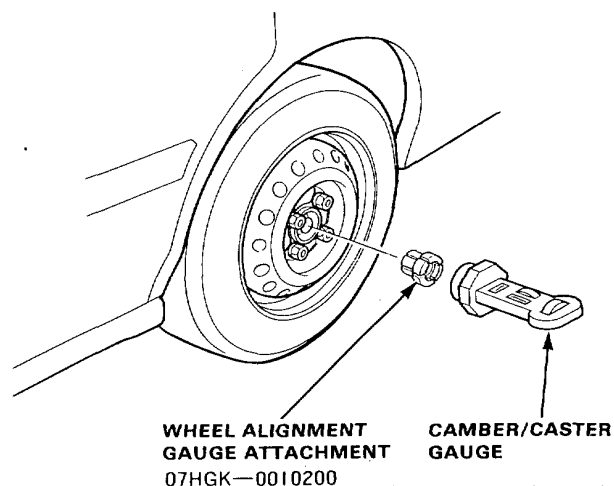


Rear Camber:

14. Read the rear camber on the gauge with the bubble at the center of the gauge.

Rear Camber: $-0^{\circ}20' \pm 1^{\circ}$

15. If out of specification, check for bent or damaged suspension components.



(cont'd)

Wheel Alignment

Four Wheel Steering-4WS (cont'd)

Toe:

16. Check the rear toe-in.

Right Rear : 1.5 mm

Left Rear : 1.5 mm

Total : 3 ± 2 mm (0.12 ± 0.08 in)

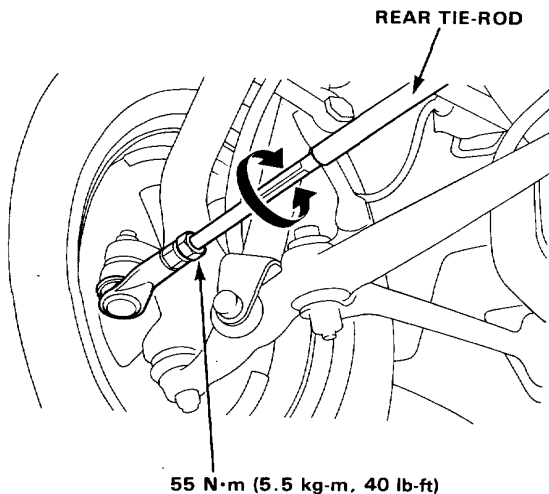
NOTE: Left and right toe should be the same.

- If adjustment is required, go to step 17.
- If no adjustment is required, proceed to step 19.

17. Loosen the tie-rod locknuts.

18. After adjusting, tighten the tie-rod locknuts.

NOTE: Reposition the tie-rod boots if twisted or displaced after adjustment has been made.



19. Check the front toe-in:

Right Front : 0 mm

Left Front : 0 mm

Total : 0 ± 2 mm (0 ± 0.08 in)

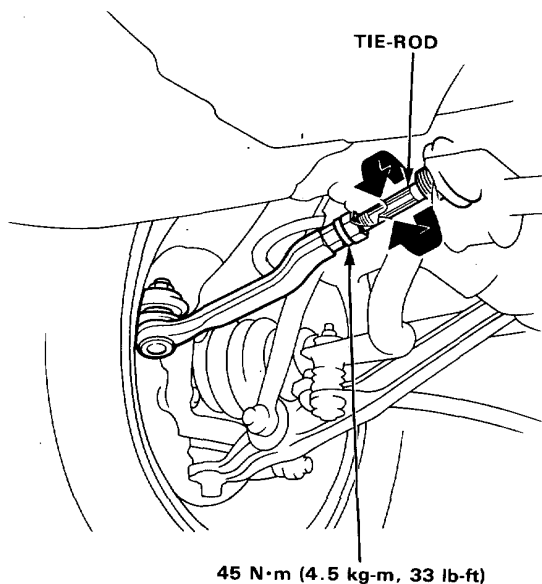
NOTE: Left and right toe should be the same.

- If adjustment is required, go to step 20.
- If no adjustment is required, proceed to step 21.

20. Loosen the tie-rod locknut and turn the tie-rod until toe-in is correct.

21. After adjusting, tighten the tie-rod locknuts.

NOTE: Reposition the tie-rod boots if twisted or displaced after adjustment has been made.



22. Recheck the camber. If camber still as specified alignment is finished.

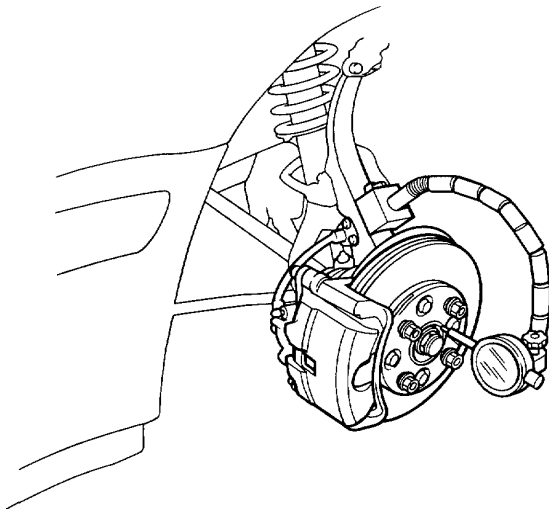
Front Camber Angle: $0^{\circ}00' \pm 1^{\circ}$

Rear Camber Angle: $-0^{\circ}20' \pm 1^{\circ}$



Bearing End Play

Front Wheel End Play
Standard: 0—0.05 mm



Rear Wheel End Play
Standard: 0—0.05 mm

