

FRONT AXLE AND SUSPENSION

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FA

TROUBLESHOOTING

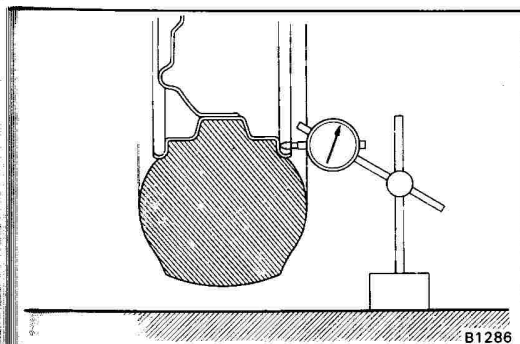
Problem	Possible cause	Remedy	Page
Wanders/pulls	Tires worn or improperly inflated	Replace tire or inflate tires to proper pressure	A-6
	Alignment incorrect	Check front end alignment	FA-3
	Wheel bearing adjusted too tight	Adjust wheel bearing	FA-9
	Front or rear suspension parts loose or broken	Tighten or replace suspension part	FA-14
	Steering linkage loosen or worn	Tighten or replace steering linkage	SR-54
	Steering gear out of adjustment or broken	Adjust or repair steering gear	SR-17, 46
Bottoming	Vehicle overloaded	Check loading	FA-30
	Leaf springs weak	Replace leaf spring	
Sways/pitches	Tires improperly inflated	Inflate tires to proper pressure	A-6
Front wheel shimmy	Tires worn or improperly inflated	Replace tire or inflate tires to proper pressure	A-6
	Wheels out of balance	Balance wheels	FA-3
	Alignment incorrect	Check front end alignment	
	Wheel bearings worn or improperly adjusted	Replace or adjust wheel bearings	FA-9
	Bushings worn	Inspect bushings	FA-14
	Steering linkage loosen or worn	Tighten or replace steering linkage	SR-54
Abnormal tire wear	Steering gear out of adjustment or broken	Adjust or repair steering gear	SR-17, 46
	Tires improperly inflated	Inflate tires to proper pressure	FA-3
	Alignment incorrect	Check toe-in	FA-4
	Suspension parts worn	Replace suspension parts	FA-30

FRONT WHEEL ALIGNMENT

1. MAKE FOLLOWING CHECKS AND CORRECT ANY PROBLEMS

- (a) Check the tires for wear and proper inflation.

Correct tire pressure: See page A-6, 7



- (b) Check the wheel runout.

Lateral runout:

Model	Wheel	Runout (Lateral and Length)
Single tire	5.50F x 15 - 30 6.00GS x 15 - 30 5.50F x 16 - 30	below 1.8 mm (0.071 in.)
Double tire (BU, YU, RU)	5.50F x 16 - 108 5.50F x 16 - 115	below 2.0 mm (0.079 in.)
Double tire (WU)	5.50F x 16 - 123 5.50F x 16 - 115	below 1.5 mm (0.059 in.)
Just low	4½ x 14 - 102	

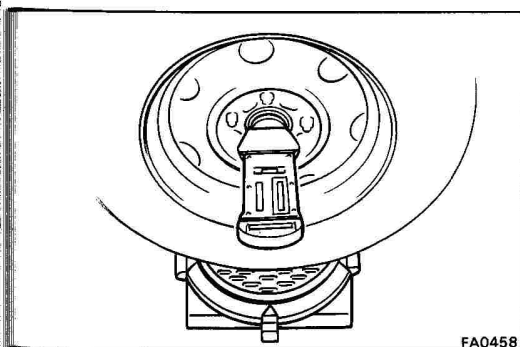
- (c) Check the front wheel bearings for looseness.

- (d) Check the front suspension for looseness.

- (e) Check the steering linkage for looseness.

2. INSTALL WHEEL ALIGNMENT EQUIPMENT

Follow the specific instructions of the equipment manufacturer.

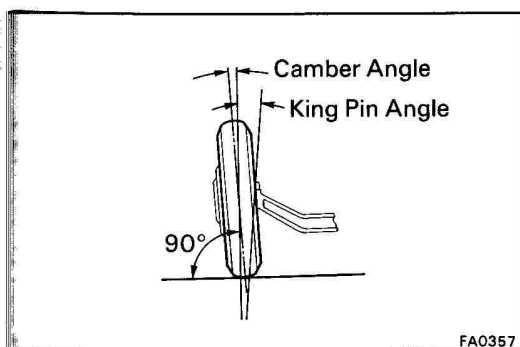


3. CHECK CAMBER, KING PIN ANGLE AND CASTER

- (a) Check the camber and the king pin angle.

	Regular Cab	Wide Cab
Camber	0°30' ± 1°	1°00' ± 1°
King pin angle	7°30' ± 1°	7°00' ± 1°

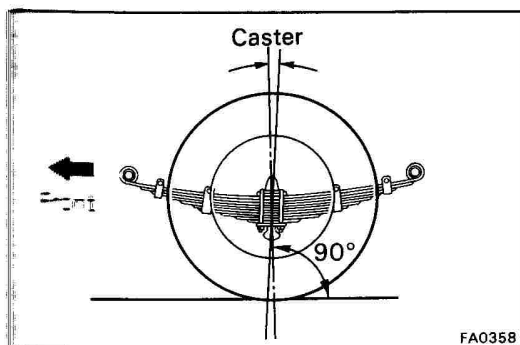
NOTE: If measurements are off standard, inspect each part thoroughly and adjust.

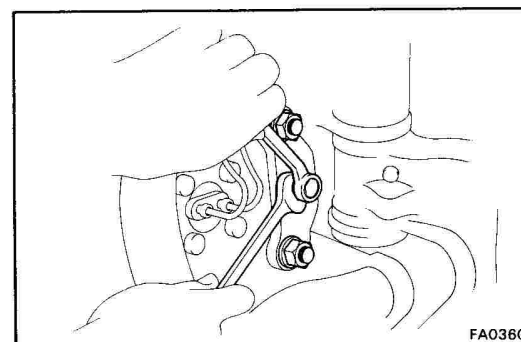
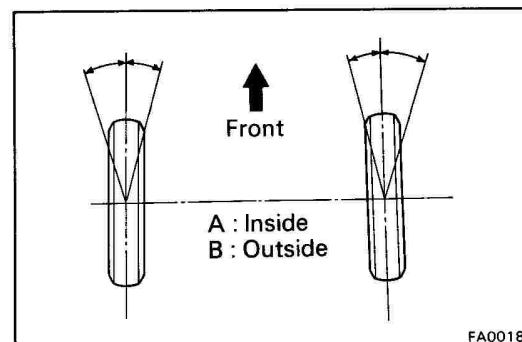
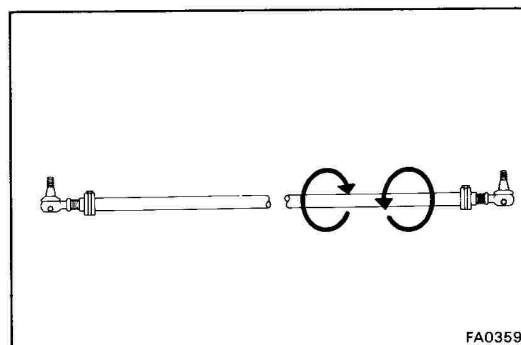
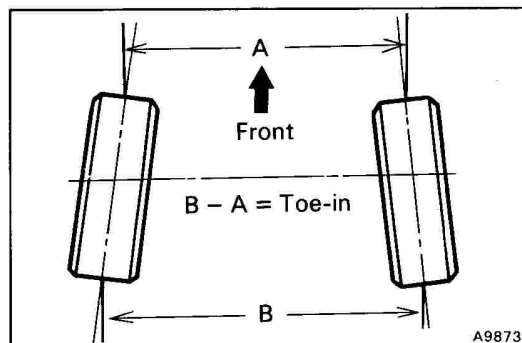
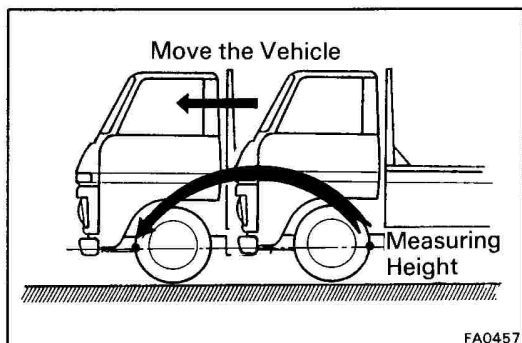


- (b) Check the caster.

Model	Caster
Van and Bus Just low (Short wheel base)	3°00' ± 1°
Single tire (Pick-up) Just low (Long wheel base)	2°30' ± 1°
WU series	1°20' ± 1°
Others	2°00' ± 1°

NOTE: If measurements are off standard, inspect each part and adjust.





4. ADJUST TOE-IN

- Make sure the wheels are positioned straight ahead.
- Mark the center of each rear tread and measure the distance between the marks of the right and left tires.
- Advance the vehicle until the marks on the rear side of the tires come to the front.

NOTE: The toe-in should be measured at the same point on the tire and at the same level.

- Measure the distance between the marks on the front side of the tires.

Inspection STD

	Regular Cab mm (in.)	Wide Cab mm (in.)
Bias tire	1.5 ± 1.5 (0.059 $\pm$ 0.059)	3.5 ± 1.5 (0.138 $\pm$ 0.059)
Radial tire	0.5 ± 1.5 (0.020 $\pm$ 0.059)	1.5 ± 1.5 (0.059 $\pm$ 0.059)

- Make sure the steering gear is centered.
- Loosen nuts holding the clamps on the tie rods.

- Adjust toe-in to the correct value by turning the tie rod tubes an equal amount.

Adjustment STD

	Regular Cab mm (in.)	Wide Cab mm (in.)
Bias tire	1.5 ± 0.5 (0.059 $\pm$ 0.020)	3.5 ± 0.5 (0.138 $\pm$ 0.020)
Radial tire	0.5 ± 0.5 (0.020 $\pm$ 0.020)	1.5 ± 0.5 (0.059 $\pm$ 0.020)

- Torque the nuts holding the tube clamps.

Torque:

BU, YU, RU series 375 kg-cm (27 ft-lb, 37 N·m)
WU series 760 kg-cm (55 ft-lb, 74 N·m)

5. ADJUST WHEEL ANGLE

Check the steering angle.

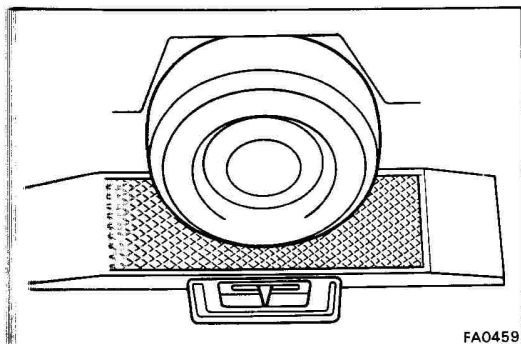
			Inside Wheel	Outside Wheel
Max	Regular cab		39°00' +0° -3°	28°47' (Reference)
	Wide cab	BU, RU series	38°30' +1° -2°	29°15' (Reference)
		WU series	40°00' +0° -3°	30°35' (Reference)
at 20°	Regular cab		23°30'	20°00'
	Wide cab		23°00'	20°00'

NOTE: When the steering wheel is fully turned, make sure that the wheel is not touching the body or brake flexible hose.

If the maximum steering angles differ from standard value, adjust the wheel angle with the knuckle stopper bolts.

Torque: 440 kg-cm (32 ft-lb, 43 N·m)

If the wheel angle still cannot be adjusted within limits, inspect and replace any damaged or worn steering parts.

**6. INSPECT SIDE SLIP WITH SIDE SLIP TESTER****Side slip limit:****Less than 3.0 mm/m (0.118 in./3.3 ft)**

If the side slip exceeds the limit, the toe-in or other front wheel alignment may not be correct.