WHEEL ALIGNMENT PROCEDURES

PRE-ALIGNMENT INSTRUCTIONS

Before making wheel alignment adjustments, check the following:

- All tires of same construction and tread style, approximately equal in tread wear and overall diameter, radial and axial runout not excessive, and inflation at manufacturer's specifications.
- Steering linkage and suspension must not have excessive looseness. Check for wear in tie rod ends and ball joints. Springs must not be sagging. Control arm and strut rod bushings must not have excessive play. See *Fig. 1.*

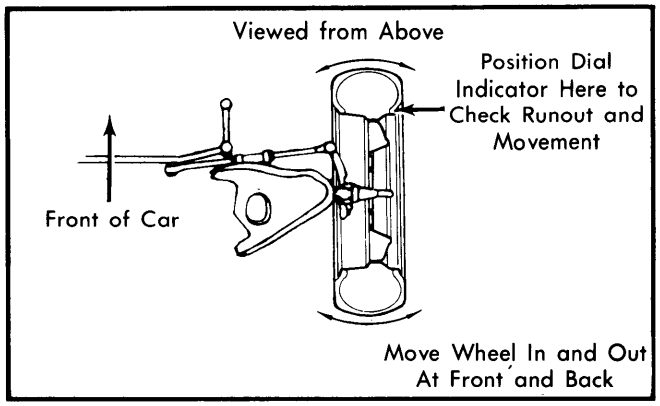

Fig. 1 Checking Steering Linkage

- Car must be on level floor with full fuel tank, no passenger load, spare tire in place and no load in trunk. Bounce front and rear end of car a number of times, releasing bumper at bottom of down stroke. Check that car is at normal running height.
- Ensure that steering wheel is centered with front wheels in straight ahead position. If required, shorten one tie rod adjusting sleeve and lengthen opposite sleeve. See *Fig. 2.*

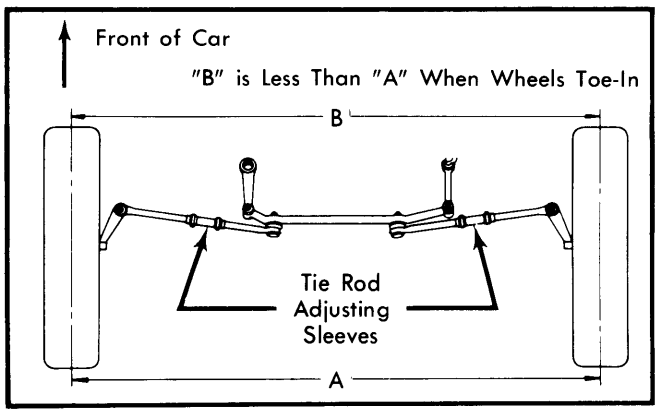

Fig. 2 Adjusting Tie Rod Sleeves (Top View)

- Wheel bearings must be properly adjusted and lug nuts tightened to manufacturer's specifications. Adjust camber, caster and toe-in in order. Follow instructions of alignment equipment manufacturer.

CAMBER

1) Camber is the tilting of the wheel, outward at either top or bottom, as viewed from the front of vehicle. See *Fig. 3.*

WHEEL LUG NUTS TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
American Motors	75
Buick	
Skylark	102
Riviera, Electra & LeSabre Wagon	100
Century Aluminum	90
All Others	80
Cadillac	100
Chevrolet	
Chevette	70
Citation	102
Corvette	80
Camaro Aluminum	90
Impala & Caprice Wagon	100
All Others	80
Chrysler Corp.	
Omni, Horizon	80
All Others	85
Ford Motor Co.	80-105
Oldsmobile	
Omega	102
88 Wagon, 98, Toronado	100
Cutlass Aluminum	90
All Others	80
Pontiac	
Phoenix	102
Aluminum	90
All Others	80

2) When wheels tilt outward at the top (from centerline of vehicle), camber is said to be positive. When wheels tilt inward at the top, camber is said to be negative. Amount of tilt is measured in degrees from vertical.

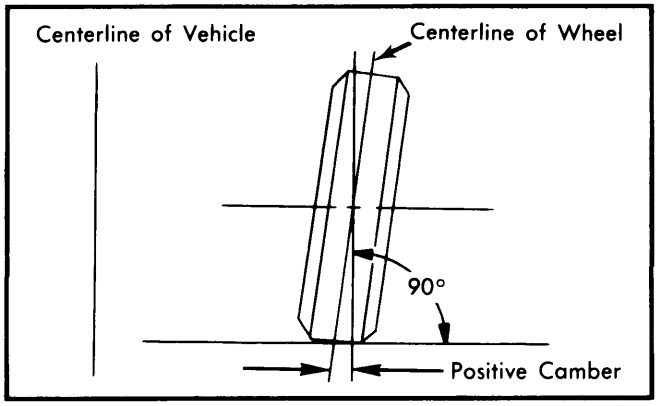

Fig. 3 Determining Camber Angle

CASTER

1) Caster is the tilting of the front steering axis either forward or backward from vertical, as viewed from the side of the car. See *Fig. 4.*

2) When axis is tilted backward from vertical, caster is said to be positive. This creates a trailing action on front wheels. When axis is tilted forward, caster is negative, causing a leading action on front wheels.