

2-4 FRONT SUSPENSION AND STEERING LINKAGE

tilted from true vertical. It has a fixed relationship with camber settings and does not change except when components are damaged or bent. This angle is not adjustable and damaged parts must be replaced.

Toe-out on Turns (Turning Radius) is measured in degrees and is the amount one front wheel turns sharper than the other on a turn. This angle is designed into the steering arms in relationship to the wheelbase of the vehicle and is not adjustable. When checking the turning radius and it is found not to be within the recommended specifications, look for possible bent or damaged components.

PRE-ALIGNMENT INSPECTION

Before any attempt is made to change or correct the wheel alignment factors, the following inspection and necessary corrections must be made on those parts which influence the steering of the vehicle.

(1) Check and inflate tire to recommended pressure. All tires should be same size and be in good condition and have approximately same wear. Note type of tire tread wear which will aid in diagnosing (Group 22).

(2) Check and adjust front wheel bearings (Group 22).

(3) Check front wheel and tire assembly for radial and lateral runout (follow the Equipment Manufacturers Instructions (Group 22)).

(4) Inspect ball joints and all steering linkage pivot points for excessive looseness.

(5) Check rear springs for cracks or broken leaves and "U" bolts for proper tightness. (Vehicle should be on level floor or on alignment rack) with a full tank of fuel and no luggage or passenger load.

(6) Front suspension heights must only be checked after vehicle has the recommended tire pressures, full tank of fuel, no passenger or luggage compartment load and is on a level floor or alignment rack.

To obtain accurate readings, vehicle should be jounced in following manner just prior to taking each measurement (Height - Caster - Camber and Toe) Grasp bumpers at center (rear bumper first) and jounce up and down several times. Always release bumpers at bottom of down cycle after jouncing both rear and front ends an equal number of times.

WHEEL ALIGNMENT ADJUSTMENTS

Front wheel alignment settings must be held to specifications to hold tire wear to a minimum and to maintain steering ease and handling of vehicle.

The equipment manufacturers recommended procedure should always be followed. Any parts of the front suspension system should be replaced if they are found to be bent. **Do not attempt to straighten any bent part.**

Height

Front suspension heights must be measured with the recommended tire pressures (See Group 22) with no passenger or luggage compartment load. Vehicle should have a full tank of gasoline or equivalent weight compensation. Car must be on a level surface.

Typically a new car will settle some during the first 2,000 miles of operation. To compensate for this initial front height loss, the assembly plants set front suspension heights somewhat higher than the service specification. Therefore on new cars, front heights **should not** be reset if they are no more than 1/2 inch higher than the height specified.

(1) Clean all foreign material from bottom of torsion bar front anchors (carlines H and N, clean underside of lower control arm pivot bushings).

(2) Jounce vehicle several times releasing it at bottom of downward motion.

(3) Measure height as follows:

(a) All except carlines H and N; for measurement "A" (Fig. 2), measure the distance from the lowest point of the lower control arm torsion bar anchor at a point one inch forward of the rear face of anchor, to the floor. Floor must be level with plane of tire contact surfaces (Fig. 3).

(b) Carlines H and N; for measurement "A" (Fig. 2), measure the distance from the lowest point of lower control arm inner pivot bushing to floor. Floor must be level with plane of tire contact surfaces (Fig. 3).

(4) Compare measurement "A", front suspension height, with specifications (and "New Car" recommendations described above). To adjust, if necessary, turn torsion bar adjusting bolt clockwise to increase height and counterclockwise to reduce height.

(5) After each adjustment, jounce vehicle as in (2) above before remeasuring. Both sides must be measured even though only one side has been adjusted.

(6) Front heights should not vary more than 1/8 inch from the specification when resetting and also should be within 1/8 inch side to side.

Camber and Caster

(1) Prepare vehicle for measuring wheel alignment.

(2) Determine initial camber and caster readings to confirm variance to specifications before loosening pivot bar bolts.

(3) Remove foreign material from exposed threads of pivot bar bolts.

(4) Loosen nuts slightly holding pivot (caster camber) bar (Fig. 5). Slightly loosening the pivot bar nuts will allow the upper control arm to be repositioned without slipping to end of adjustment slots.

(5) Position claw of Tool C-4387 on pivot bar and pin of tool into holes provided in tower or bracket