Automotive Technology 6th Edition
Chapter 124 - Wheel Alignment Principles
Chapter 124

Name_____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

1) What are the definitions for camber, caster, and toe?

_____
_____

2) Why can knowing SAI, TOOT, and included angle help in the correct diagnosis of an alignment problem?

_____
_____

3) What happens to tire wear and vehicle handling if toe, camber, and caster are out of specification or not equal side-to-side?

_____
_____
_____
_____

4) How does SAI cause the vehicle to straighten the front tires after a turn?

_____
_____

5) What does thrust angle mean?

_____
_____

1) Camber is the tilt of the wheel from true vertical as viewed from the front or rear of the vehicle. Caster is the forward or rearward tilt of the steering axis. Toe is the difference in distance between the front and rear of the tires.
Page Ref: 1524-1529
2) SAI, TOOT and included angle are all considered to be diagnostic angles. Bent or damaged chassis parts are the result of angles not within specification and must be corrected to assure a proper alignment.
Page Ref: 1531-1534
3) If toe is incorrect, excessive tire wear occurs. If toe is unequal side to side, the steering wheel will not be straight when the vehicle is driven straight on a level road. Camber can cause a pull if unequal side to side, and tire wear if out of specification. Caster can cause a pull only if the caster is different side to side.
Page Ref: 1524-1529
4) Vehicle weight tends to keep the front wheels in a straight-ahead position when driving, thereby increasing vehicle stability, directional control, and steering wheel returnability.
Page Ref: 1531
5) Thrust angle is the total toe angle of the rear wheels.
Page Ref: 1535