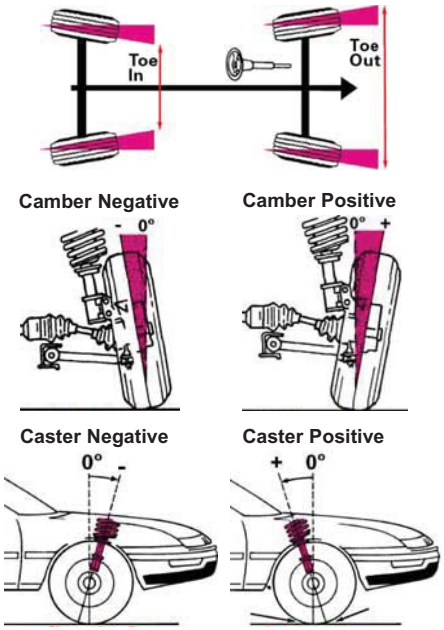
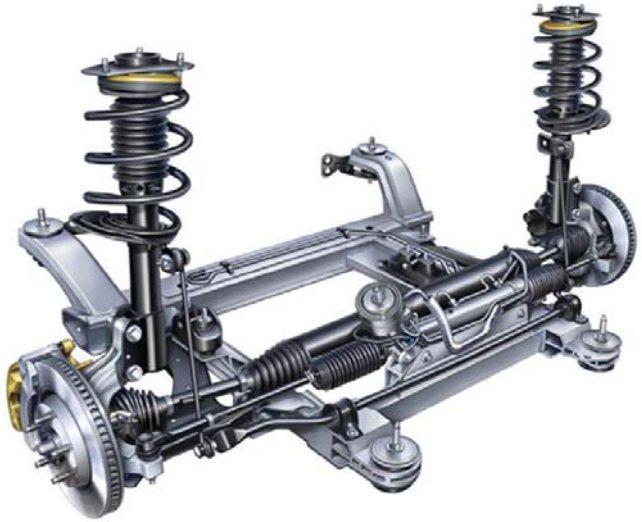
Basic 4-Wheel Alignment Theory



Cause	Problem
Toe In	• Rapid tire wear on outside edge • Unstable steering wheel
Toe Out	• Rapid tire wear on inside edge • Unstable steering wheel
Too-Positive Camber	• Outside edge tire wear • Excessive wear on suspension parts
Too-Negative Camber	• Inside edge tire wear • Excessive wear on suspension parts
Unequal Camber	• Pull to the most camber side
Too Much Caster	• Increased steering effort • Lack of returnability of steering wheel
Unequal Caster	• Pull to less caster side

Benefits of 4-Wheel Alignment Service

- Improved driver safety
- Maintains straight steering wheel position
- Proper return of the steering wheel on turns
- Increased fuel efficiency
- Minimized tire wear
- Eliminates pull
- Improved handling
- Improved life-span for suspension components



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Our Wheel Alignment Systems Help You Drive Comfortably and Safely

Tire wear patterns, such as scuffing, cupping and outside shoulder wear, often are an indication of a larger problem with a vehicle's chassis components.

"The cause of uneven tire wear can be as simple as under-inflation or over-inflation, but it also can result from loose parts such as shocks, struts, ball joints, steering linkage or from weak springs." As a precaution against tire failure, check tires regularly for the following conditions:

Shoulder Wear: Can be caused by under-inflation or hard cornering. Many shredded rubber tires seen along highways are the result of either tires that are under-inflated, running too long and too hot, or from severe misalignment.

Center Tread Wear: Usually an indication of over-inflation. Over-inflation results when a vehicle owner tries to compensate for a slow leak by over-inflating the tire to make it stay inflated longer.

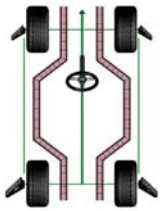
Cupping: Can be caused by unbalanced tire conditions, faulty wheel bearings, loose parts, fatigued springs or weak shock absorbers. Check the condition of the shock by forcefully bouncing the front end of the car several times and releasing it on the down stroke. Failure of the vehicle to settle after two strokes suggests worn shocks or struts.

Camber or Toe Wear: Indicates misalignment due to loose, worn or bent steering linkage components. Many camber & toe wear problems can be traced to spring fatigue, which causes the vehicle's frame to ride closer to the road. Once the vehicle is below the manufacturer's height specs, it is not possible to achieve the correct camber change designed into the suspension without replacing the springs. The vehicle also experiences excessive toe changes as the suspension travels through bounce & rebound, again causing abnormal tire wear.

Diagonal Scuffing and Cupping Across the Face on Rear Tires: Signals problems with toe. Diagonal tread wear or cupping on rear tires is caused when the direction the vehicle's wheels are heading is not in line with the geometric center line of the vehicle. When this condition occurs, front-wheel steering can be affected and lead to tire slip or loss of traction or control. (Note: The wear pattern that develops on rear tires from improper toe will vary depending on tread design.) Wear patterns from rear wheel misalignment may resemble cupping on tires with highway tread design & diagonal scuffing on tires with an all-season tread pattern.

"The cause of uneven tire wear can be as simple as under-inflation or over-inflation"

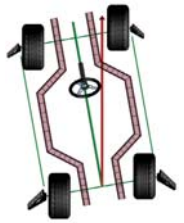
Types of Wheel Alignment Services



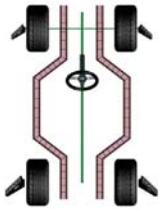
Deluxe 4-Wheel Alignment

Aligns all four wheels parallel to each other. The rear wheels are adjusted first to the geometric center line of the vehicle. The deluxe 4-wheel alignment service is not available on some vehicles whose rear toe is not adjustable.

4-Wheel Compensated Alignment



Also known as Thrust Angle Alignment. Without adjusting the rear wheels, the front wheels are aligned parallel to rear wheels or thrust angle. Thrust angle is the average of the rear toe difference. This method is used when rear toe cannot be adjusted.



Front-Wheel Alignment

Adjusts only front wheels to the vehicle specification and ignores the rear wheels. Without referencing to the rear wheels, the steering wheel may not be straight.

When Do You Need Wheel Alignment Service?

- After 6,000 miles (approximately 10,000km) or 6 months driving
- Vehicle pulls to left or right when driving straight
- Need to hold on to steering wheel to drive straight
- Need to keep steering wheel turned to drive straight
- Single front or rear tire wear found
- After changing a set of tires
- After a collision accident
- After changing suspension and steering components
- Transaxle repair on front-wheel-drive cars