FROM THE BENCH BY CHRIS WICKERSHAM

Are Your Wheels Pointing in the Right Direction?

Why do some Model A's go straight down the road while others seem to wander all over the place? Often the owner does not know how to make the car drive better and just accepts the condition as just the characteristic of an old car. When new, our Model A's steered well and drove straight down the road and today, there is no reason that the same should not be true.

If there is no excessive play in the steering components, the king pins are not worn, the front wheel bearings are adjusted correctly and there is no other loose or an excessively worn condition of any of the front suspension and steering components, theoretically the car should go straight down the road and not wonder from one side to the other. How about front wheel alignment? If the front wheels are not properly aligned, a Model A may not want to drive in a straight line. Caster, Camber and Tow are the three basic components that make up front wheel alignment.

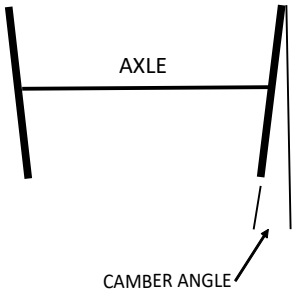
Caster is the inclination angle of the kingpins. The kingpins should not be 90 degrees to the ground but inclined so the kingpin is tipped forward at the bottom and to the rear at the top. The specified caster angle for a Model A Ford is 5 Degrees but caster angle of 6-7 degrees is not too much and will give the car better satiability. Too much caster can cause the car to steer a little hard. Too little caster can cause the car to wander all over the place and constant steering correction is necessary to keep the car in its lane.

The front wheels of a Model A are not exactly vertical with the road but tipped out at the top and in at the bottom. This is easily seen when standing in front of the car and looking at the front wheels. This deviation from vertical is called the camber angle. Positive camber is when the wheels tip out at the top and in at the bottom. Negative camber is when the wheels tip in at the top and out at the bottom. The Model A Ford should have 1 degree positive camber. Incorrect camber can affect how your Model A will steer and an increase in tire wear may be experienced.

The third element in front wheel alignment is toe. When viewed from above, if a Model A was going straight down the road, the front wheels should not be pointing exactly straight ahead but should be pointing very slightly toward the center line of the car. In other words, the tires should be a little closer together at the front of the wheel and a little further apart at the rear of the wheel. This condition is referred to as "Toe In". The Model A should have 1/16 to 1/8 inch tow in. It is important to have a little toe in to help keep the Model A going in a straight line but excessive toe can cause accelerated tire wear.

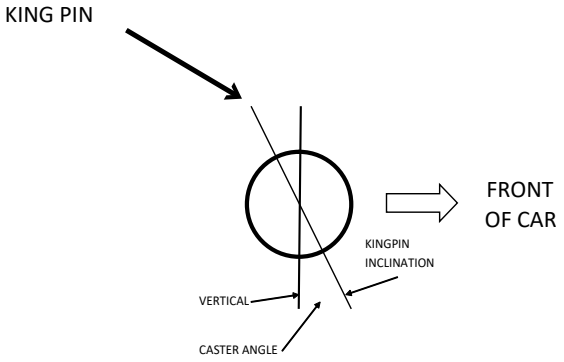
Measuring and correcting toe is relative easy and can be accomplished without specialized equipment. The better repair manuals have easy to follow procedures to measure and adjust the toe of the front wheels.

Accurately measuring Caster and Camber is more involved and requires specialized equipment not normally found in the Model A hobbyist's shop. Correcting an out of specification Caster or Camber condition often requires bending the front axle which is usually left up to a professional shop. While some may not feel it is necessary to go to the trouble of having the front wheel alignment of your Model A measured and adjusted at a professional shop, you may be pleasantly surprised at how much better your car will drive after this service is preformed.

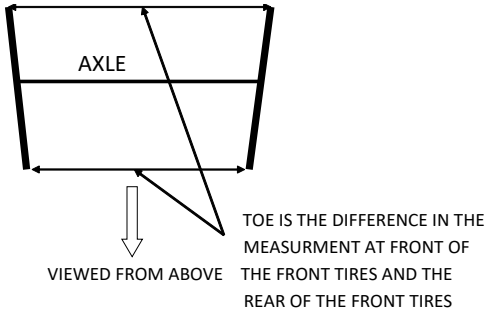


CAMBER

VIEWED FROM FRONT OF CAR



CASTER



TOE