



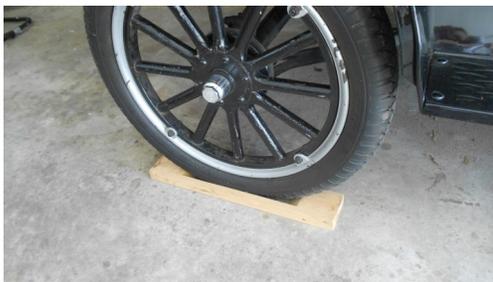
Ford T Tips



By Douglas Dachenbach

How to Measure the Toe-in of Your Model T

A good friend, Lloyd Young, who is a very knowledgeable antique car mechanic, gave me this tip to accurately measure the toe-in of any car, but for us, specifically, our Model T Fords. Toe-in, or positive toe, refers to the front axle and is defined as the front of the tires being closer together than the rear of the tires. Toe-out, or negative toe, is when the rear of the tires are closer together than the front of the tires. Zero toe is when the tires are parallel to each other. The “toe” on our Model T's should be from one sixteenth (1/16”) to three sixteenths (3/16”) of an inch, positive. That is pretty tight and most tape measures pressed against the tire or rim aren't that accurate. If the clinch rim isn't drawn fully in the slot or the rim is bent from hitting a chuck hole or a curb (God knows I have never done anything like that) then you will not get an accurate measurement..



Chuck the wheels!!



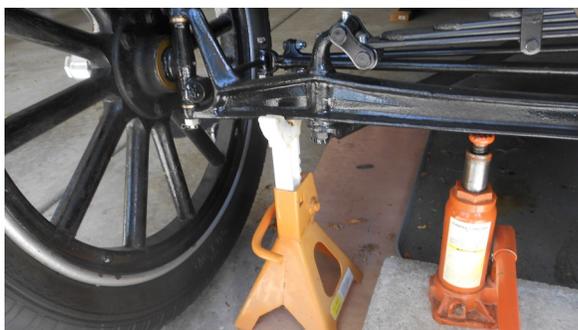
Prepare to jack up both sides.

What you need to know is what the “toe” is on that set of tires, mounted on that rim and mounted on that wheel. Change the tires and things will be different. Change the rims on that wheel and things are different again.

Here is a method to check your car in real-time and under the

present conditions. Having your front steering set with the wrong toe-in can cause that cursed “wobble” that seems impossible to fix and a zero to negative toe-in can cause wandering. Too much positive toe-in can wear the tires faster.

Start by jacking the front end up so you can spin both tires freely. The next step is to take a roll of masking



Raise both front tires so they turn freely

tape (an inch or wider) and wrap it around the circumference of the tire. Get yourself a brace that is lower but very near axle height. Take a sharpie pen (medium point), hold your marker steady on the brace and spin the wheel making a fine line completely around the tire on the surface that would normally be in contact with the road. The idea is to get a line around the circumference of the wheel on the tread. When you get done, if you stand in front of the car and spin the wheel, the tire may wander, the wheel may wander,

but the line should remain absolutely true. Use your brace and mark a horizontal line on the front and back of each tire. This line should be as near as possible to the axle height. Don't turn the tires from this position.



Clean the tread.



Ford T Tips



Apply tape completely around the tire.



Get a brace about axle height.



With a marker apply a mark completely around the tire on each wheel.

Once this is done on each front wheel, you can measure from the center of the line (at your horizontal marking) to the center of the line on the front of each tire. Repeat this on the rear of each tire. Take your measurement at the same level as the axle. The two measurements should be within (1/16" to 3/16") of each other. You want the narrow measurement in front (positive toe, toe-in). If this is off, then you must make the correction in the tie rod assembly.



Set the end of the tape in the center of the mark.



At the axle height measure from center to center.

There is a yoke assembly on at least one end of the tie rod that can be screwed in to shorten

the tie rod or screwed out to length the tie rod. Shortening will decrease toe-in (less positive or more negative toe) and lengthening will increase toe-in (less negative or more positive toe). There is a friction clamp on the yoke that keeps the yoke from turning on the tie rod. You must loosen this clamp before you try to adjust the yoke -tie rod assembly. Often, because of old paint and/or rust, you will need to disassemble the tie rod and clean the threads to

make the adjustments. If you must remove your tie-rod, you will have to take the it out by removing the tie rod pins. So measure it carefully before you unscrew anything, so when you reassemble it, you can get to the original setting and make small adjustments from there. Once the threads are clean, you only need to take one tie rod pin out and turn the yoke (with a pipe wrench just behind the yoke arms) to make further adjustments. To check your adjustments you have to put everything back together (you don't need to tighten the tie-rod pin or the thread clamp) and re-measure the lines on the tire, front and rear.



Now repeat at the same height on the rear of the wheel.

There will be a little trial and error before you get it correct.

