JUNE 2022

I928 to 1934

Disconnect drag link from pitman arm.
Turn steering wheel lock to lock. Count the turns.
Then turn back ½ way to center worm with sector, that puts the steering wheel key at the 12:00 o clock position. To check that the horn/light rod will have to be lifted.
DO NOT LET THE STEERING WHEEL MOVE, have someone hold the wheel steady or tie a rope on the left side of the steering wheel and pass through the drivers window over a towel and around the windshield then another towel on the passenger side and secure to the right side of the steering wheel.

Disconnect the drag link from the pitman arm. Check back lash on the pitman arm for .000 to .003 max.
If necessary, adjust the steering box. See Service Bulletins for proper adjustments. Or call Greg.
Disconnect the tie rod from the right front wheel.

Raise left front wheel ½" off the ground and set toe in to 1/16" with steering wheel centered and not moved, using a string, following these instructions.
Wrap a string on the inside of the left rear wheel around a spoke and secure with a clothes pin. Bring the string around the back of the left rear and under the running board to the front end of the car. There are a few ways to anchor the string at the front.

Method #1. Using a yard stick, clamped to the front bumper wrap string "counter clockwise" around the yard stick and secure. Adjust the string and the left front wheel until you achieve the string touching the "front and rear of each tire on the drivers side. This will put the left wheel in a straight line. From this point you can set the left front wheel to a achieve 1/16-inch toe in.

Method # 2. Use and old paint can or cut the top off a plastic jug and fill with dirt or pea gravel and insert a ½" dowel to attach string (counter C/W). I use a 1 gal. jug filled with pea gravel and a 15/32 or 31/64" drilled hole in the cap for a ½" dowel and tight fit.

When 1/16" is achieved lower the left front tire and re-peat on the passenger side.

With right front set at 1/16 "toe in, lower the wheel to the ground and adjust the right front toe in end to fit the steering arm. Lower right front wheel to the ground.

With that accomplished check to see if you can connect the drag link to the pitman arm, without moving the steering wheel or the front tires.

If this cannot be accomplished you have either a bent or twisted axle, bent left side steering arm or unlikely bent pitman arm. If you move to wheel to be able to hook up the drag link you are going to end up with excessive wheel play.

The old Ford straight axle cars like 2 to 2-1/2 degrees plus or minus ½ degree camber and up to 7 degrees positive caster. Camber you can check using a magnet protractor on the inside of the front axle unless you want to remove the splash apron.

I have been rebuilding steering gears from 1972 to current on 1928 to 1960 Fords some Chevrolet and early Hudson's and have seen all kinds of related problems. Including:

1. Steering box totally out of adjustment.
2. Worm bearings too loose (creates excessive wheel play).
3. Steering balls are not round (creates hard turning)
4. Bent or twisted front axle
5. Bent steering arms
6. Bad shackles or loose spring clamps
7. Broken spring or spring center bolt.
8. Badly worn wish bone ball
9. Bent frame.
10. Loose or worn front wheel bearings
11. Badly worn kingpins or bushings
12. Loose kingpin wedge bolt
13. Loose spring perches.
14. The addition of a dropped front axle, yes it changes the steering geometry. You would expect to find the drag too long.

I have seen all of these problems over the years including so much grease pumped into a gear box until it came out the steering wheel, (no joke). Steering boxes use **heavy oil only,** 600W, 90 wt.,120/140 wt. not grease. When driving and grease in the steering box it is forced into the voids and the gears can run dry, also grease will not flow into the bushings at .001 clearance unless you install a zerk fitting. Don't do that.

When rebuilding steering gears, I always bore and hone the sectors housing to 1.375 and install needle bearings and two, lip seals in the sector housing. This is on two tooth sectors boxes. I don't want to do 7 tooth gear boxes anymore because of the labor involved and customers don't like the additional cost.

I am happy to answer any and all questions and have solved many problems over the phone.
A MAFCA & Beaver Chapter member over 50 years.

Greg Edwards
PO Box 370
Gaston, OR. 97119
503-357-3980

For front end alignment of straight axle cars:

Dabney's Alignment (they have the tools to bend an axle)
12309 NE 4th. Plain
Vancouver, WA
1-360-694-5222