

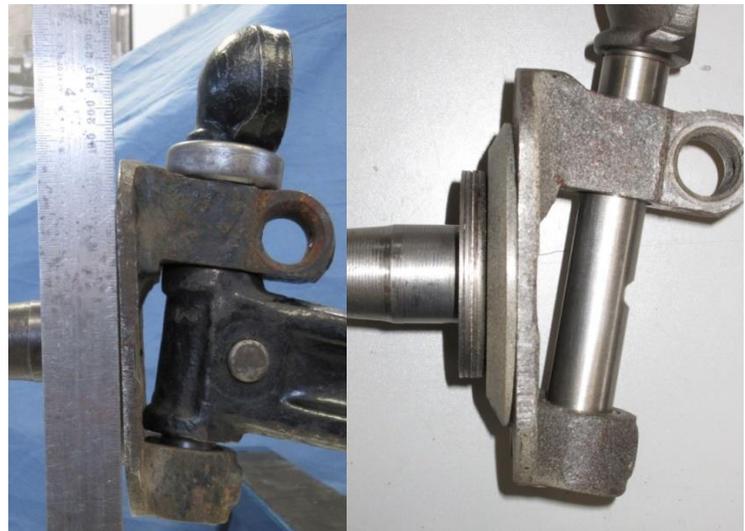
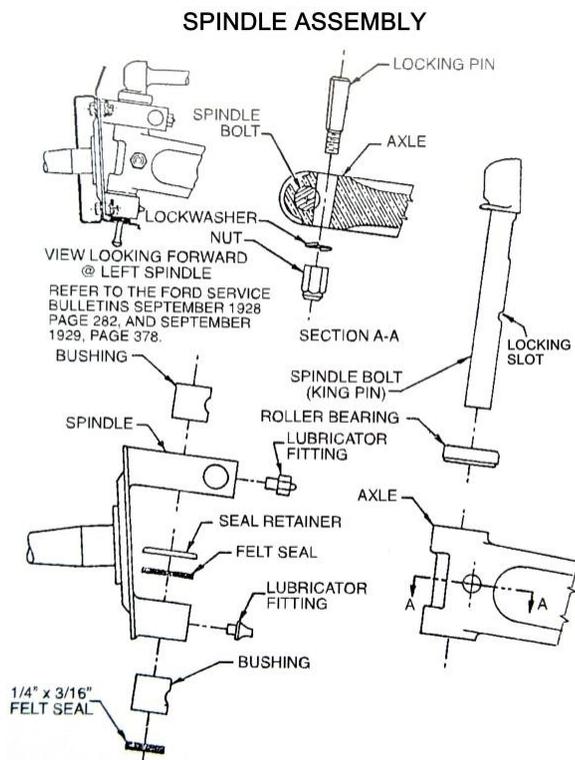
Steering the Model A

by Colin Lawson

The steering geometry is controlled by the inclination of the king pin in the axle and the slight downward angle of the spindle. With the wheels on the ground, pointing straight ahead, the wheels should appear slanted outward at the top about two degrees. When the wheels are turned this geometry causes the inner wheel to follow a smaller arc than the outer wheel resulting on a smooth turn. It also causes the steering to correct itself back to straight ahead when driving out of a turn.

The spindle assembly drawing shows how the various parts are installed. The lock pin goes in from the front, the lock washer and long nut serve as the turn limit stop. The roller bearing takes the vertical load of the king pin down onto the top surface of the spindle with the wheels on the ground. There should be no interference contact between the spindle casting and the axle. The felt seal and retainer are for grease control. The lower felt seal shown goes in the bottom of the pin and the brake actuating rod goes through it.

When the bushings are worn they are pressed out of the spindle and new ones pressed in. Ensure the side hole in the bushing aligns with the grease hole in the spindle. If the kingpins show limited wear they can be reused but often the bearing surfaces are badly worn and scored so new ones will be required. The new pins should measure .812" diameter and the bushings are to be carefully reamed to fit the pin for a close, almost light press fit into the bushing. It must turn freely. The reamer has adjustable cutting blades on one end and a tapered guide on the other to ensure it is centred on the lower hole. The blades are incrementally adjusted to remove small amounts of material on each pass until the fit is achieved.



View from front of car

Fitting the king pin to the Bushings



Adjustable Reamer

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