ASRF Australian Street Rod Federation - Technical Advisory Committee

Advice sheet 3/16 Warning -- Steering arm failures on 37/48 Ford stub axles

In April this year a Victorian Street Rod driver lost all steering control just as his car went over the bridge join with the road, the car turned hard right and into the concrete bridge stanchions.
As a result, the driver was quite badly hurt but luckily did survive.

After examination of the wrecked car it was evident that failure and separation of the steering arm on the RH stub axle had caused the loss of steering, having broken off at the stub axle flange.

The stub axle in question appears to be an original 37/48 Ford part where the arm is part of the spindle and not a bolt on item like aftermarket styles.

At first we thought this must a very rare occurrence. Then this week we heard of another 37/48 Ford Stub axle steering arm failure, this time in a driveway and luckily no major damage to car or owner.

To top this, the other day I was watching one of those USA Hot Rod Shows and they decided to crack test the stub axle they intended to use on a car they were building and it was found to have a cracked steering arm join, just like the cars here. So this problem is more common than we first thought.

Recommendations.

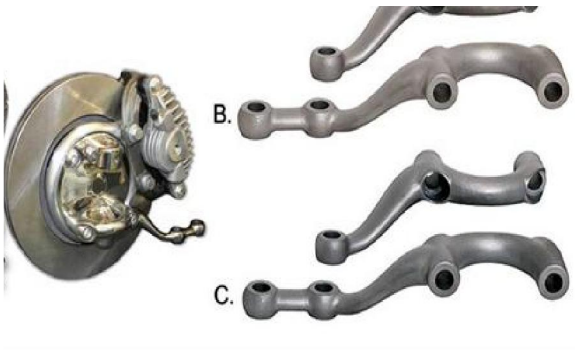
1/ The part in question is an original 1930's/40's Ford part, made from forged steel. The steering arm section is part of the stub axle attached at the kingpin base as part of the one-piece forging process. Ford made millions of these and they were quite satisfactory for the job at the time but are all now 75 + years old.

Therefore, it is highly recommended that if constructing a new street rod or restoring a Ford car that uses this part, a thorough profession crack test be made of this section as well as the king pin and wheel bearing areas. It is also advisable if a vehicle has been involved in an incident where any steering or suspension parts might be subjected to extreme loads they be examined and crack tested.

2/ It should be noted that the majority of Street Rods that use the Ford transverse beam axle type suspension (using new aftermarket parts) now use a separate steering arm that bolts at two points to the backing plate flange, not the original "forged on" single point. These are much safer in this respect.

Regards -- Australian Street Rod Federation National Technical Advisory Committee

1930’s / 40’s type Ford Kingpin with forged in steering arm.



Bolt on Aftermarket type

Above - Stub axle showing fatigue crack LH side, which has been present for many years, then recent impact broke it 3/4 through leaving only small section intact which later totally separated. Steering arm , lower section is old partial crack,centre part recent damage, top part held until failing on the day and causing loss of steering.