

Here is a brief history on the parts that broke and how I tried to fix the problem. After finally getting the engine to make horsepower, I break the transmission for the first time at 1995 Missouri State Fair. We have a 30 tooth gear (top shaft) driving a 22 tooth gear (counter shaft) in the transmission which makes high gear 15.07 to 1. The problem, the 22 tooth gear is not thick enough in diameter and explodes.

I then go back to 29-23 gears to get a thicker gear on the counter shaft. High gear is now slower at 16.3 to 1. At Ft. Recovery II I break the transmission again. It takes the teeth off both gears, breaks the top shaft and explodes the transmission case. I can't get repaired in time for Essex Junction, VT. At Inwood, Ontario, Canada the following weekend, we twist the sun pinion into the 9500 SS pull off. We then go to Georgetown, OH and break the bearing carrier off the side of the differential. This is the last pull of the year and the ring and pinion and transmission gears are turning blue and showing excessive wear.

During the off-season I have Engler Machine make steel billet sun pinions. I install 4 pinion differential which has a lot bigger bearing carrier on ring gear side and have to bore out the transmission case for a bigger bearing quill. I switch to 140w synthetic oil to take care of the ring and pinion and transmission gears excessive wear problem. I go to the first pull at Amarillo, TX in January 1996 and get disqualified for running out of bounds. With the new synthetic oil being so slick and John Deere having internal wet brakes, I have no brakes. I then go to external brakes (Engler caliper & disc). Next stop is Louisville, KY in February, 1996 where I explode the 23 tooth gear on counter shaft. I then machine 4020 ring & pinion to fit 4010 transmission case. It is 18% faster than 4010 ring and pinion so now I put 28 tooth (top shaft) driving 24 tooth (counter shaft) gears in that are 12% slower, but makes the gear a lot thicker on the counter shaft. High gear is now 14.7 to 1.

Going into our last winter circuit pull at Miami, OK we are leading the points race and again break the transmission, which causes us to miss the Davenport, IA pull the next day. We lose 2 points races in one day. The tractor then breaks into at the clutch housing July 4 in Massena, IA. It also breaks input shaft, top shaft, 2 gears and bends safety bars. We are not able to make the Arcola, IN pull the next day. The following weekend, the tractor breaks in half again at clutch housing in 9500 SS pull-off at Ft. Recovery, OH. It also breaks the top shaft, 2 gears, reverse gears and cracks the transmission case. Three days later I break the axle housing at Cassopolis, MI.

I then make both top and counter shafts bigger in diameter and make the range gears wider and add bearing support between shafts. Now I'm down to a 2 speed transmission because of wider gears and bearing support. I then go about 3 weeks without breaking which is a welcome relief. I win 5 out of the next 6 grand national pulls plus Chapel Hill, TN and Ohio State Fair. I break the transmission again on the first day of Ft. Recovery, OH II. It takes the teeth off the gears and explodes the transmission case.

I am then unable to repair in time for Essex Junction, VT. I go to Lincoln, NE and on the third hook explode the transmission case again. At first I thought that the teeth were coming off the