



GRANDPA'S FIRST TRACTOR WAS AN RC

BY TOM FOSS

Horses were the mainstay and his brother just across the field had a WC they used sometimes, so it wasn't until 1939 or 40 that my grandpa bought his first tractor; an Allis-Chalmers RC, purchased at Christianson's Inc. in Wendell, MN; the firm later moved to Elbow Lake, MN.

At first glance the RC looks like a WC, and when I looked at the old black and white pictures in photo albums from my dad's place I thought any pictures with an old Allis in them were the WC; which I had used many times in my teen years of the late 60's and early 70's. But when I brought the WC home in 2004 and started to restore it I found out it was a 1944 and couldn't be the tractor in the photos with 1940 written on them. So I scanned, enlarged, and inspected several of the old pictures and could see there were many differences. I was not yet an Allis collector, this was my first one, although I had spent many hours on Allis-Chalmers tractors since my dad had three, and most of my farming relatives had some, along with other colors. I didn't know there had been an RC model produced, and I didn't remember hearing an RC mentioned at home.

Allis-Chalmers only produced the RC in 1939, 1940



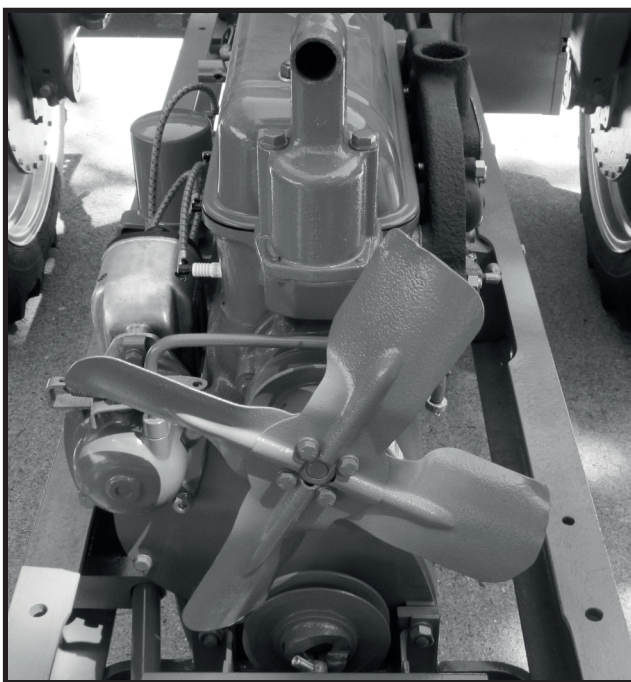
My 1939 RC almost complete.

and 1941, unless you count the three prototypes that were built in 1938. The numbers produced per year is quite telling on how sales were going; 4,388 in 1939, then only 1,025 in 1940, and then a scant 88

tractors in 1941. Dividing the number built in 1939 by 52 for the number of weeks in a year they averaged 84 tractors a week, so on a good week they could have easily finished production in 1941 by Tues. the 7th of January. But who knows maybe they only did two a week

and didn't finish until October. The earliest dated picture of my Grandpa's RC is 1940, but the tractor could easily have been a 1939, I can only rule out 1941 as the model year. I called my dad's sister in San Diego and asked her about the pictures and before I had mentioned any model designation she said; "That RC was such a cute tractor, that was the first brand new thing we ever had on the farm". She had taken most of the pictures and used the word cute several times describing it, and also mentioned her older brother was not impressed and was quite displeased with their father for buying it. You have no bragging rights with an RC when your cousins right across the field have a WC even if it was a few years older. This could be one of the reasons it was traded off on the 1944 WC I have now.

The RC is many times described as just a WC with a B motor in it, but there are many other differences both seen and



With the engine mounted we can see the frame rail cut-outs and the taller thermostat housing, and the special front engine mount.



unseen. The RC's most noticeable differences are the short hood and long ledge in front of the grill, in one picture the big family dog is sitting on that ledge with room to spare. My aunt said they put the dog there just for the picture, and it never rode there while driving. Walking around an RC you start to see several things that differ from the WC. The belt pulley is the smaller diameter stamped pulley like a B, the governor control lever is vertical and is pulled to the rear to



Final drive hub inner bearing cones. The RC used the smaller bearing on the left held out by a spacer. The WC used the larger bearing on the right.

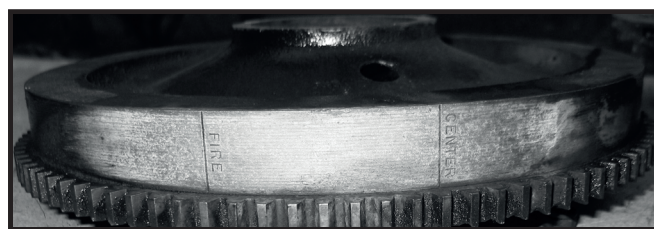
speed up. The front rims are 15 inch compared to the 16 inch on the WC. The frame rails are notched for the radiator and the left rail is also notched for the air cleaner. Since the rear tires were smaller the fenders are mounted directly to the drop boxes without spacers, this means

The final drive hub was a lighter casting with a narrower gear that ran down the center of the pinion shaft gear. The WC gear was the same width as the pinion.

rear wheels have only one notch, which lines up with the valve stem when the rim and tire are mounted; the WC wheel has a notch on the

a B radiator making it unique too. To connect to this taller radiator, a taller thermostat housing was needed. The steering wheel used on the RC was a bit smaller in diameter and had rubber coating on the spokes and center hub. These are things that can be seen just looking it over from the outside.

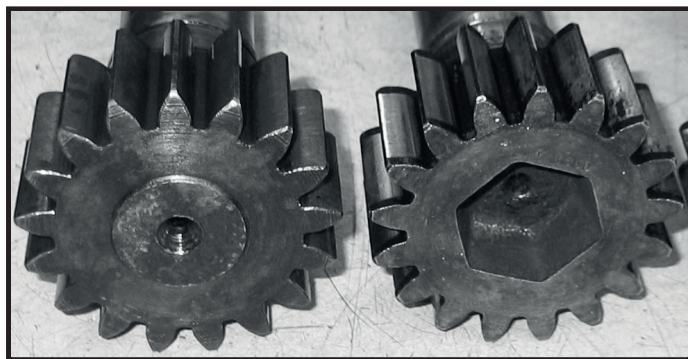
Many differences can't be seen. The RC has a lower gear ratio in the rearend making it desirable to install in a WC when making a puller; 6.6:1 RC vs. 4.57:1 WC. Though it



The RC needed a unique flywheel, though they didn't plan far enough ahead; the CENTER and FIRE markings cannot be seen when the engine is mounted.

opposite side too for some reason. The RC rim is mounted to the cast wheel with large square headed bolts that have the wedge on the bolt head, WC rims are mounted with regular bolts through separate wedges. The radiator shell is unique

would be recommended to use only the ring and pinion from the RC, swapping them into a WC rearend, since the RC has lighter smaller components throughout its rearend.



The RC pinion shaft on the right had the end hollowed out with a big hex hole, the WC shaft on the left is solid.

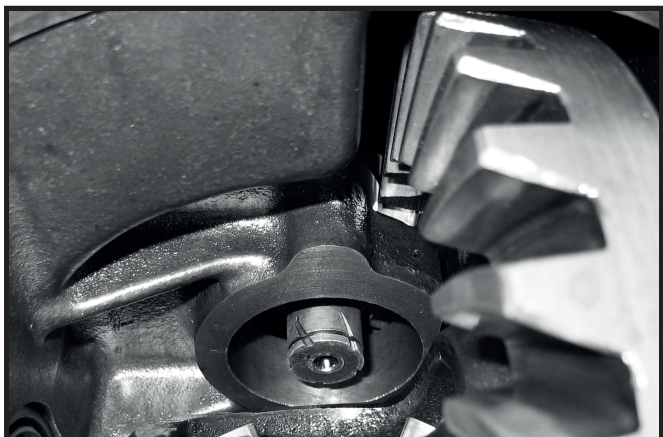
the brake housing covers are different castings too to bolt the fenders out that extra distance. The clutch housing has a notch in it to allow for the externally mounted oil pump on the B engine, although all WC models after the RC came out had this notch which for them served no purpose, but made one less part number to keep track of. The cast

to the RC more like a miniature WC shell than what the B uses, and the gas tank can also not be like a B or WC to make things line up. The tank support had to be made shorter, just tall enough so when using first or third gear the shift lever wouldn't hit the gas tank. Then to make all the hood lines come together the radiator has to be a couple inches taller than

The final drive hub gear is narrower and rides on smaller lighter bearings than the WC. The pinion gears that drive the final drive hubs are hollowed out with a big hex hole; on a WC they are solid. When the drop box is enclosed it cannot be distinguished from the WC, but is lighter and could withstand less power. There is also no pilot bearing



There are just 5 teeth on the RC drive pinion shaft vs. 7 on the WC. The end of the shaft is machined for a bearing but gets none.



The differential carrier is machined for a bearing but to save cost the RC doesn't get one. The WC has a bearing here.

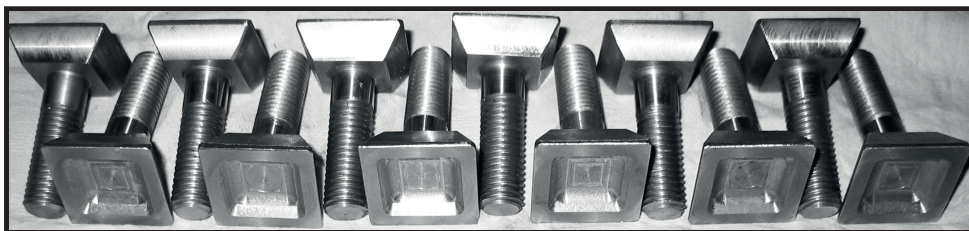
on the end of the drive pinion inside the differential carrier, the WC has a

mention it and he may never have developed an opinion of it. His older

My dad was working in the redwoods in California when his dad bought the RC and didn't return to Minnesota until after WWII, other than being home on leave once. By this time the RC was gone, replaced by the WC. He must have seen the RC, and probably even drove it while at home that one time, but I never heard him




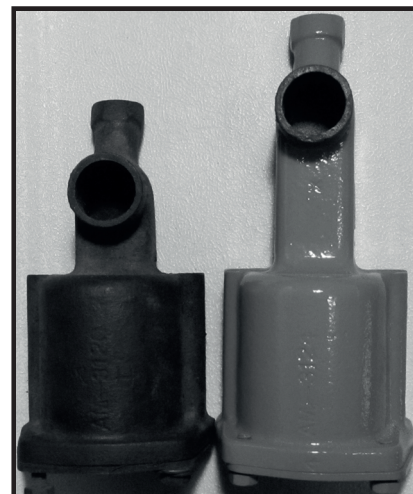
The RC wheel center had just one cut-out vs. two on the WC. We also see the special mounting bolts here.



The WC used regular bolts with a cast wedge to fasten the rear rims; the RC had these special bolts where the head of the bolt was the wedge.

bearing there. The R engine used in the RC was upped from the 116ci BE engine to 125ci by increasing the bore from 3.25" to 3.375". This later became the CE engine and the BE was discontinued.

brother was at home though and if his strong disapproval of the RC was echoed by other farmers it's no wonder Allis-Chalmers sold so few and discontinued the RC after such a short run. 



The RC thermostat housing on the right needed to be taller than the B housing on the left.



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