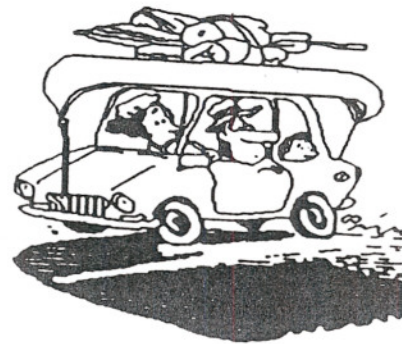


ON THE ROAD...



Ed Gaul

Head of Tractor Engineering, Hinsdale

In February 1999 on my way to Louisville, Kentucky my brother (Don) and I stopped by Mr. Ed Gaul's home to do an interview. He is a most interesting man to talk to and I don't even remember if I used the list of questions I had made up to ask him. One thing just went into another and before I knew it my 2 hours was up because Mr. Gaul and his wife had another appointment. I had met Ed a year or so before when my wife (Kevin) had contacted him to talk about refrigeration. At that time I had no idea that Ed had ended up as Head of Engineering and after I found out it didn't do much good because my wife had the floor. Rather than make a question and answer format, I will just make it into a bunch of short stories.

After college Ed went to work at Evansville, Indiana in the refrigeration plant. He worked there from 1947 until 1956. Evansville was the refrigeration capital of the world with IH, Servil, and Serger. Ed went from refrigeration to implements, and then to tractors.

From 1956 to 1959 (waiting for Hinsdale to open) Ed worked at East Moline. One of his first jobs as Advanced Engineer was to travel around to Agricultural Departments at different universities. One such time at Iowa State University found him looking at another brand combine with a grainhead set up to shell corn (running the entire stalk through the machine). He said it didn't take long to wear out the inside of the combine

with all the trash that went through it. He worked on a proto type elevator with hydraulic lift and welded all in one piece. It was never built but he thought it would move grain better than an auger. It was also run by hydraulic motor. Ed helped develop the first corn head and worked on the first air-conditioned cab. He worked on 2 and 4 row corn heads for the 101 and 151 combine. The first corn head I believe was on a 141. When they were shipping a prototype corn head with combine out on the railroad to be tested the track went right by John Deere engineering. When the train stopped John Deere engineers were all over the corn head. He had to call the head engineer at Deere to tell them to get off.

Ed worked on the beet harvester in Michigan. While going to Michigan he stopped to talk to a farmer picking corn with a one-row picker. This was in the 1950's. He asked him why he wasn't using a 2 row mounted picker. He said that no one made a picker for 16-inch rows. He was using the same rows that he planted edible beans on. Asked of how many bushels it was making he said about 140 bushel. This was unheard of in this time period. Right then he knew that this was the future of farming.

International Harvester worked on a sugar cane harvester around 1954. It was tested in Louisiana as well as Cuba. IH owned some land in Cuba where they raised hemp for twine. At the time hand picking was what was being used and the cane farmers were not quite ready for the harvester. This was a one-row harvester that was tested around Jeaneretta, La. Ed did not work on this project but was told by another engineer who did. Seems like IH was always ahead of their time.

The testing of the rotor combine started in a little garage outside the plant in the 1950's. This was a top-secret project and they didn't want anyone to know. He didn't know if the complete idea come from IH but they sure made it work. At one time IH was thinking of building a 2 rotor and a 1 rotor for different crops but the higher ups said to decide on 1 model only. Around 1959 he designed air conditioning for combine cabs. They were going to Idaho to test on some crop that had a lot of black dust. They had problems with the coils by the radiator plugging up so that is when he designed the round rotating air intake by the radiator and that solved the problem. There was John Deere a spy out there trying to see what they were doing in their tests.

Steel used in cabs come from Scotland. This was the best steel tested on roll over in cold weather.

The first 2 or 3 years Ed worked on implements and started on the 1st Cub Cadet. While working on the Cadet he came up with the idea to build a bigger engine with the same base that Kohler said couldn't be done. After awhile Kohler let him know that it could and would be done.

Ed helped with the testing of the 560 rear end problem. One of the problems was that the 560 were one of the first tractors from IH with the hydraulic fluid coming from the rear end. He found out using a single action cylinder the rear end was 2 gal low. So especially going down the road the bearings weren't getting enough oil.

When Ed got the (Product Engineer) head job of designing the first true IH 4 wheel drive (4100) he got 4 engineers to help him. The 4300 were built at the Hough Plant and were more for construction than farming. The 4100 would be built at Farmall.

Before starting on the 4100 project he was flown to California to watch a 4300 with plow in the field. While talking to another engineer the ground started to shake. He looked at the 4300 with plow and it was bouncing off the ground. It was a pretty scary experience for him but the other guy was from California and it didn't seem to bother him too much.

The 4100 project was started because they needed a smaller and cheaper 4 wheel drive model. They started with a 1206 clutch housing and new differential from Clark and Rockwell Standard. It took a year and a half and \$357,000 for engineering.

When a tractor was designed and ready to be produced they would have the different companies build 12 to 15 parts from the mold that would be used in production. These were sent to Farmall or Louisville and Ed with other engineers would help set these tractors up on the regular assembly line. These tractors were used for testing. Ed spent a lot of time at the factory during these times. Ed also helped set up the assembly line for final production.

After Ed had worked on the 4100 they were having trouble on an island in the Bahamas with one of the tractors. After arriving on the island standing up in a DC3 not knowing whether they had enough runway to land, they went to look for the problem. The 4100 was working down coral behind a D8 Cat with a ripper and it was so rough that the operator was riding the clutch to keep from being thrown off the tractor. Problem solved and with a partial load of chickens he was on his way home.

2+2 idea came after the 4100 and its predecessors were not selling well. The 4100 were too high priced and didn't have a 3-point hitch. But farmers still needed a 4-wheel drive. The estimate department said that IH wouldn't sell but about 1400 a year. What a surprise they got.

Ed was in charge of the design of the 2+2's with several engineers under him. As he said it was his baby. It used 90% standard parts from the 2-wheel drive model of its time. Front axle was from Hough loaders (Kobota made). He said he made all his engineers install any part they designed so they would know the time and how tough it was to install if it had to be worked on. The day they were going to introduce the 2+2 in Phoenix it was in the winter and it rained overnight. All the dealers were there to watch as they hooked up a 2 wheel drive 86 series tractor and a John Deere comparable size to a piece of equipment and neither of those would move it. When they hooked up the 2+2 it walked it right across the field. The picture of this is in a past Highlights on the Phoenix proving grounds. As previously noted the estimate department said that they couldn't sell but about 1400 a year. After the show in Phoenix the dealers were so impressed that they took 9000 orders at Phoenix alone.

Bob Skyer (industrial designer) designed the 06 series of tractors. He designed the skin and Ed designed what was underneath. Started with wood models about this time. Ed started as Chief Engineer with the 56 series.

While at a meeting with Brooks McCormick (head of company) around 1967 a funny thing happened. Most everyone at the meeting had been talking about taking the McCormick off the product and calling it just International but nobody wanted to tell Brooks. After a lot of hem-hawing around finally Brooks said "You guys want to take the family name off the product" Go ahead that is fine with me". There was a big sigh of relief.

During the production of the 66 series tractors he helped with a study of how many tractors being produced were alike and found out that out of 20,000 tractors only 40 were alike. So IH changed to a more standard tractor to get better quality and cheaper for the company to make which would lead to a lower price for the consumer.

Some diesel engines were converted from gas engines. Ed worked on a project with IH to convert a diesel back to gas with a lot of success. In the 1970's the EPA decided to make IH change the noise level and the pollution of the gas engine. At the time they were only making 1500 units a year. It would cost 1 ½ million to do, so IH decided to stop building gas engines in tractors and power units. The EPA was even talking about air bags in tractors in the late 1970's. Ed told him to show him a farmer that wore their seat belt and he would think about it.

Ed was not against progress because he helped get the first computer systems in Hinsdale. This was the old IBM model that used the cards.

For all you IH tractor pullers Ed might bring back some bad memories. He is the engineer that put the stop to the company backed tractors. Ed said one of the bigger bosses called and wanted to know why he stopped helping tractor pullers? Ed said you send me a letter saying you are responsible if an accident happens. The letter never came.

At one time Ed and Hinsdale had 1200 employees.

While having an argument with the Farmall Plant manager Ed said, "My check doesn't say Hinsdale and your check doesn't say Farmall. We are all IH people." Today Ed is still a proud IH person. Ed retired after the last production run tractor (88 series) was on the line in 1982. I want to thank Ed and his wonderful wife for this interview.

Darrell Darst