



Steiger power- more than metal and fluids...

Four wheel drive agricultural tractors are our only business. That's why we at Steiger have to do a better job.

But that better job doesn't stop once our product is completed.

It's carried on, long after the product is delivered.

You see, we don't ever want to reach the point — or size — where our Steiger owners become mere numbers in a computer file.

Nor our employees mere pawns on a chess board, to be manipulated at management's beck and call.

Our strength is in our people. Without them, we do not have a company, and

without them, the new, modern factory we have recently completed — the only one — built specifically for producing 4-wheel drive tractors — would become nothing more than a monument to our architect.

Our dealers have a positive attitude, willing to go that extra mile to provide the kind of service of which you are deserving.

They know that when it's planting time, or harvesting time, there's only so much time to get the job done. And that time is short.

They know you can't afford to be down in the middle of the planting season. You've got to keep going. And they want to help.

We at Steiger — all of us — are dedicated to the task of offering dealer assistance where and when it's needed.

Our dedication to offering quality, starts of course, in our modern new plant. We feel that the best way to solve a problem is to prevent it from coming up at all. That's why we build the best 4-wheel drive tractors you can buy.

But no one's perfect, and sometimes we miss a point or two. We just keep trying to improve, and we're doing it. Our goal is to stay a step or two ahead of the other fellow.



Steigers are designed to meet the needs of the agricultural industry



Whenever Steiger launches a new product, or series, a lot of planning and research first has taken place.

We strive to leave nothing to chance. For instance, we will have consulted our dealer council, the farmer, and of



course, our marketing specialists. We will have put down on paper all of the things we will have determined the new product must do. At that time, we have an idea, but don't know exactly what it will look like.

We then give all of that information to our engineers and design people. Soon, the new product begins to take form. First, in an artists rendering, then in blueprint form from which Experimental will hand-build the first prototypes.

New Steigers developed one at a time... by hand!



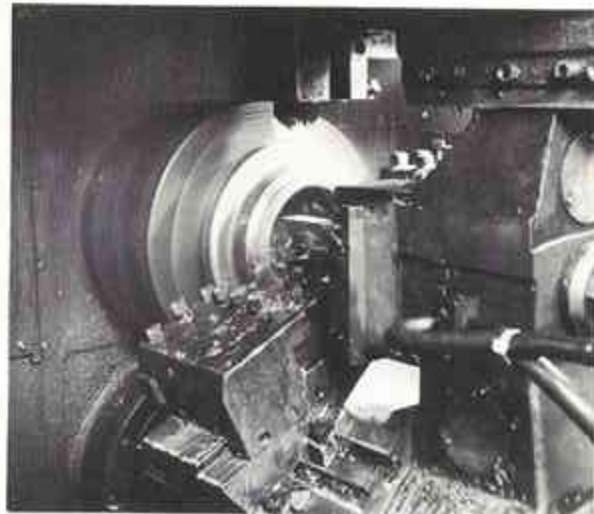
Experimental prototype tractors are the heart of Steiger development. These units will tell us if our engineering and design structure are feasible — if the durability, reliability, economy and performance sought in the decision to develop the product, can be met.

Here, new processes are tried, new structural features tested, new manufacturing techniques evaluated, and new vendor items such as hydraulic pumps and cylinders severely scrutinized.

And when we've put the new product through its demanding testing process, we know what it will do. We know that the axles will bear tremendous loads, that engines and transmissions will meet our performance requirements and that the machine is what we want to enter into the marketplace.

If it's not, we revise, re-engineer, redesign, re-evaluate and rebuild, until it is.

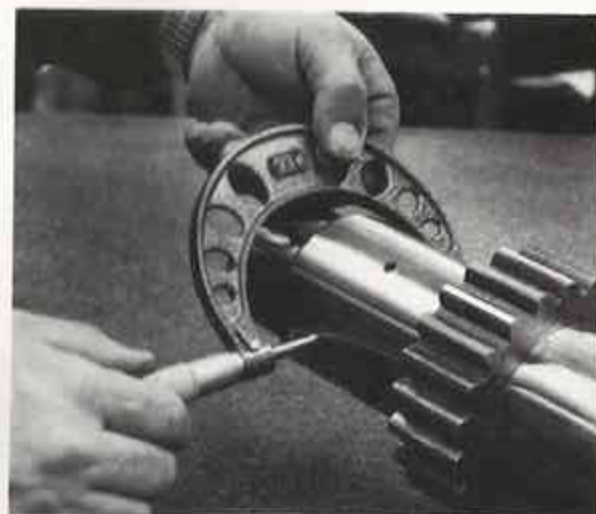
Tooling up... a critical element of the end product.



Once we're satisfied that the experimental machines meet all of the predetermined requirements, we begin tooling up for production. Nearly all tooling is done in our ultra-modern factory in Fargo. Tools are built to exacting, precision specifications. For instance, once we know that precision parts meet exacting tolerances, we computer program this automatic turret lathe to machine components to the desired tolerances.



Weld jigs allow frames to be turned, so welders never have to work overhead. Everything is done in the most convenient, efficient manner, which lets Steiger produce a superior product. These jigs also perfectly position sub-assemblies, so interfacing during later assembly is easily accomplished.



Unless tooling is extremely accurate, the end product will be less than desired. That's why we take every precaution to make sure tooling is exact. Quality control at this point is rigidly guarded. From fixtures to jigs, to templates for our multiple parts torch cutters, everything is checked, and double-checked.

Everything done under one roof at Steiger, for a superior end product.



The Steiger factory is designed specifically for building four-wheel drive tractors. It allows all manufacturing processes, except wheel fabrication, to be accomplished under one roof. That's important. First, it provides better traffic and accessibility to materials. Second, it permits a tremendously more efficient fabrication/weld/paint/assembly flow. Third, parts and materials need not be transported from building to building. Everything is right at hand. Fourth, receiving stations are strategically located to accept vendor items and materials near to where they are built up, fabricated, or installed in the end product.

One of the most interesting machines at Steiger is the Linatrol oxygraph. It is capable of precision-cutting up to 12 parts at a time. A special photo-electric light, on the pattern table, follows the lines on the template, and transmits the instructions to the torch bank, which, in turn, produces the desired parts, in quantity.

Exacting fabrication... computer controlled.



Raw castings, such as axle housings and power divider castings, are automatically machined, drilled and tapped by computer-controlled equipment. This machine, programmed and operated by computer tape, automatically selects the right cutter, drills and taps to the proper depth, and turns the castings to the proper angles for precision milling. It is typical of the Steiger manufacturing process — just one of the advanced techniques employed to produce quality products at an equitable price.



Raw materials such as cold rolled steel, steel plate and bars are stored inside at room temperature. This prevents corrosion and allows the materials to be worked quickly, without a warm-up period, particularly in cold weather. Precision parts must be machined, stamped and sheared at room temperature to assure that proper tolerances are not affected because of expansion and contraction, and that mating parts fit properly during assembly.

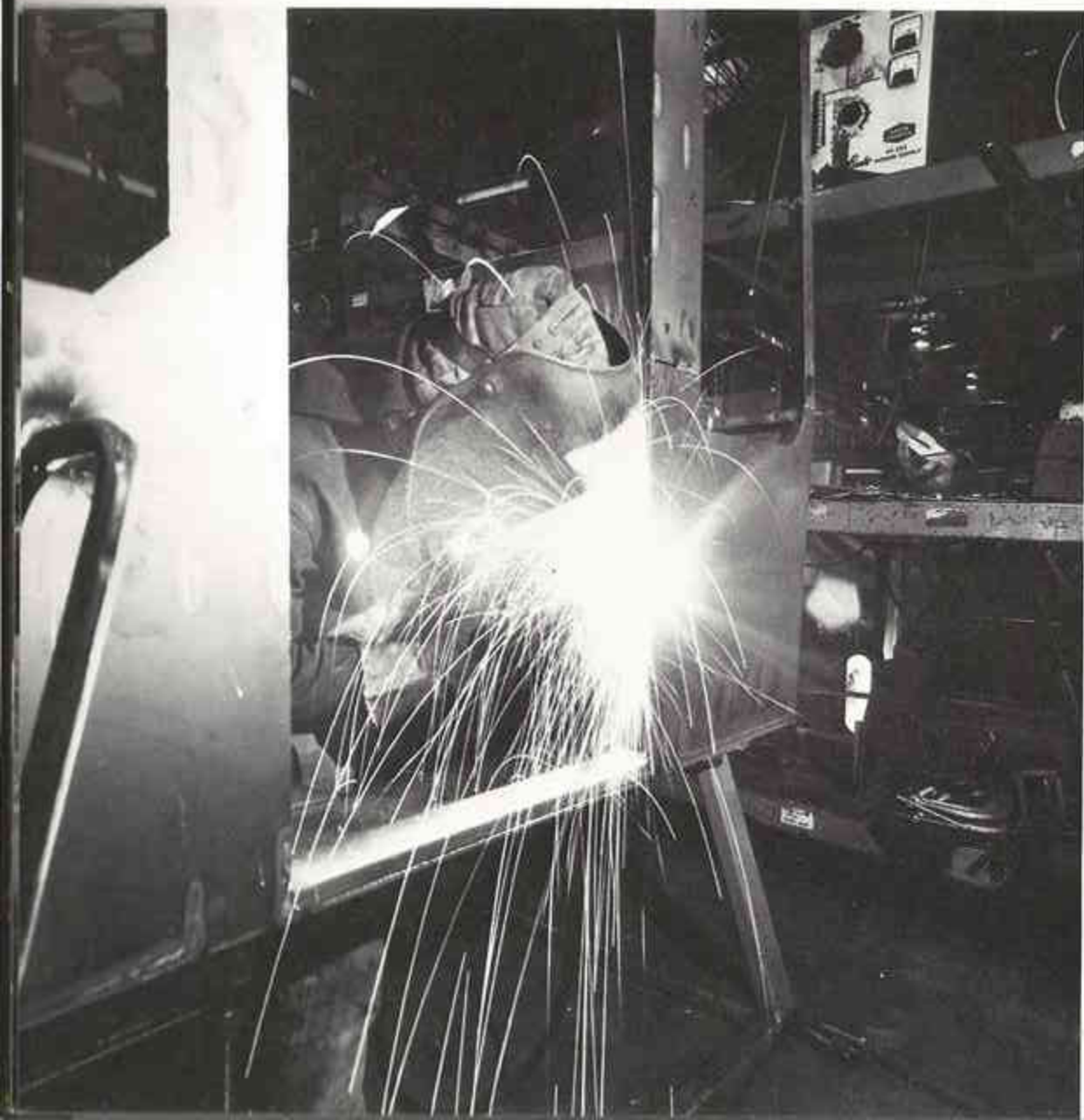


Once properly set up for a specific model Steiger tractor, this machine forms parts to close tolerances to interface with other parts, being produced at other stations in the factory.

Obviously, this cuts down on traffic congestion, and allows an orderly flow of parts and materials from station to station. It also makes it easier to maintain a clean, attractive and healthful working environment, and consequently, a better product for the farmer to buy.



Welding - always done conveniently



Steiger goes to great lengths to make sure the welder's job is as easy and convenient as possible.

There's a reason. Welding overhead for long periods of time can become tiring, taxing a man's efficiency.

That's why we build jigs that permit the welder always to work in his most natural position — the easiest way. Welding can be the most critical phase of construction in a tractor.

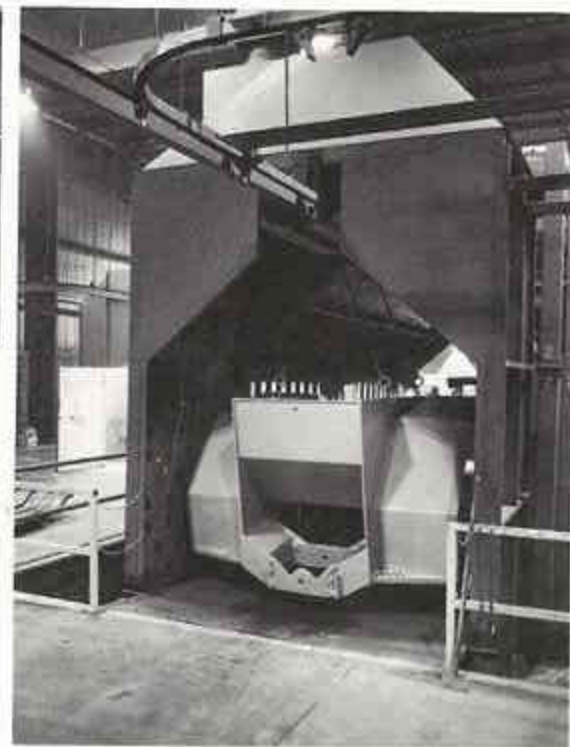
Steiger frame jigs let the structure turn — upright, on the side, inverted — always keeping the sub-assembly right where it needs to be for exacting build-up.

And, the welder never has to work overhead, never in a position to be showered with sparks.

All structures prepared and painted before assembly



Preparing a frame or part with a sheet of sandpaper leaves too much to chance. That's why Steiger insists on steel shotblasting all parts before painting. Shotblasting more evenly covers and cleans a surface, leaving it smooth — free



of oils and soil which could impede paint adherence, and cause under-the-paint corrosion. Parts also are washed in a phosphoric acid solution, rinsed and dried, which etches the steel's surface, creating improved paint adhesion.

Shotblasted and cleaned surfaces immediately are primed and hand spray painted so you get a smooth, even coat over the entire surface. Parts are painted prior to assembly to prevent corrosion between mating surfaces — places that could not be painted after final assembly.

Immediately after painting, curing is done in a constant temperature-controlled bake oven at 325° Fahrenheit. This process assures that painted parts will not easily chip, scratch or peel during or after the final assembly process. Painted parts then are transported by overhead conveyor to the final assembly area, where they begin the build-up and assembly process. Overhead transport leaves the floors free of obstructions for easier, more complete clean-up, and less chance for dust to collect on freshly painted parts.

**Steiger people are
proud of their work...enough to**



put their names on it!



Steiger folks are a proud lot. They don't want their names on anything that's inferior.

They have an incentive to do quality work because they do put their names on their work. And, those records are kept by Steiger. If a problem arises, they know records can be checked to find out who did the work. They also know that inferior workmanship reflects on the integrity of the company.

But wouldn't you know it? Our Steiger work force turn-over is as low as you'll find in the tractor industry. What that tells us is that our people are proud of their jobs, and the products they build.

And we hope it tells you, our customers, why the Steiger tractor has so few major problems when it's in the field, working.

Moving line lets assemblers work at most efficient pace for high-level quality

Where many manufacturing plants set up separate assembly lines to handle different product models, we don't have to. With our moving line, we have the flexibility to produce any and all models at the same time, on the same line. Our assemblers work at an efficient pace.



And, we don't have to shut down the line to switch from model-to-model. We call it advanced production planning. It lets us meet the needs and demands of the marketplace, to give the customer exactly what he wants, when he needs it.

Heavy-duty outboard planetary axles slip right into place. Steiger tractors move toward final steps of assembly at a pace that lets workers do a thorough, quality job. Shortly, the unique two-speed power divider will be installed, and drive lines to front and rear axles installed.



Easy going... every step of the way!



Whether it calls for lifting a powerful diesel engine, or the entire tractor, Steiger insists on heft for quick, simple and easy assembly. There has been no skimping, either in the construction process, or in the product that ultimately goes out the door, and into the marketplace.

Everything is controlled from the floor, for better operation. Cranes can be moved at minute increments so there is less jostling and "horsing" heavy, massive components into place. The fewer the problems encountered in the final assembly stages, the less shake-down and clean-up that will have to be done when the tractor is ready to drive away.

The design of Steiger tractors purposely puts things in the open, where it's easy to work on, both in assembly, and after you've got it on the farm. Simply beautiful.

Rugged tools to handle a rugged Steiger



When a Steiger tractor reaches the end of the line, it still can't go anywhere on its own, because it has no wheels. So, we gently pick it up and move it to a hydraulic lift, a lot like the one in your neighborhood service station, but a lot bigger. Here, we put on the wheels, snug up bolts and assemblies in the undercarriage, and get the tractor ready to drive out the door. Easy as pie!



Steiger Safari cabs must be properly constructed. They become the business office of the end user — the farmer. They're built with the same simple, exacting practices that are found in the rest of the tractor. Notice the bulk of the rails on which they are assembled. Gives you just a clue as to the strength of the cab.



It must be a hefty bolt to require a five-foot-long torque wrench. It is. It's the bolt that holds the Steiger drawbar to the tractor. Nearly twice as large as drawbars used in some competitive tractors.

Stringent Testing.

We prove Steigers will take it...so

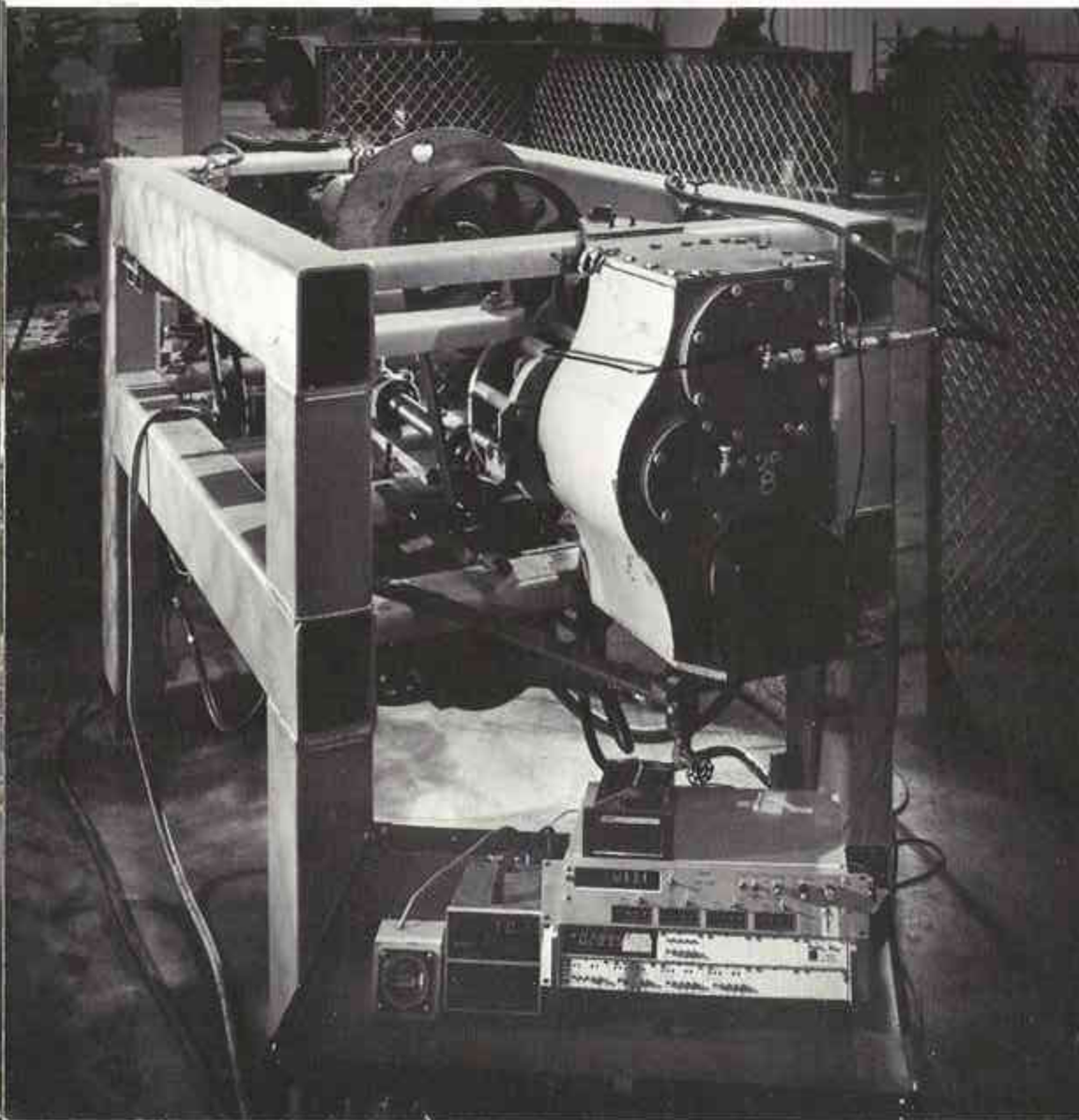
Steiger goes to great strides to prove out a tractor model before it enters the marketplace.

Components for test are selected both from experimental units, and tractors already in production, making sure specifications are being met.

Purchased and Steiger-built axles are subjected to a "four square" durability test. As the machine hums 'round the clock, a monitor records oil temperature, torque, RPM, hours of running time and other temperatures as detected by six thermocouples. When the axles eventually are worn down, diagnosis is made from the compiled information.

Steiger power dividers are tested in much the same way, to prove torque capability. Torque is attained by binding the load.

But how about the frame? Frames repeatedly are subjected to high stress until failure occurs. Stress tests on frames, wheel hubs and other components are monitored electronically, providing accurate full-load structural analysis.



you don't have to



Factory shake-down to make sure you get what you pay for



During final assembly stages, paint is going to become a little soiled, maybe scratched in a place or two. Quality control won't let it go out the door in that condition. All exposed surfaces are carefully inspected, and all blemishes painstakingly corrected. Then it undergoes another inspection, to make sure nothing is accidentally missed.

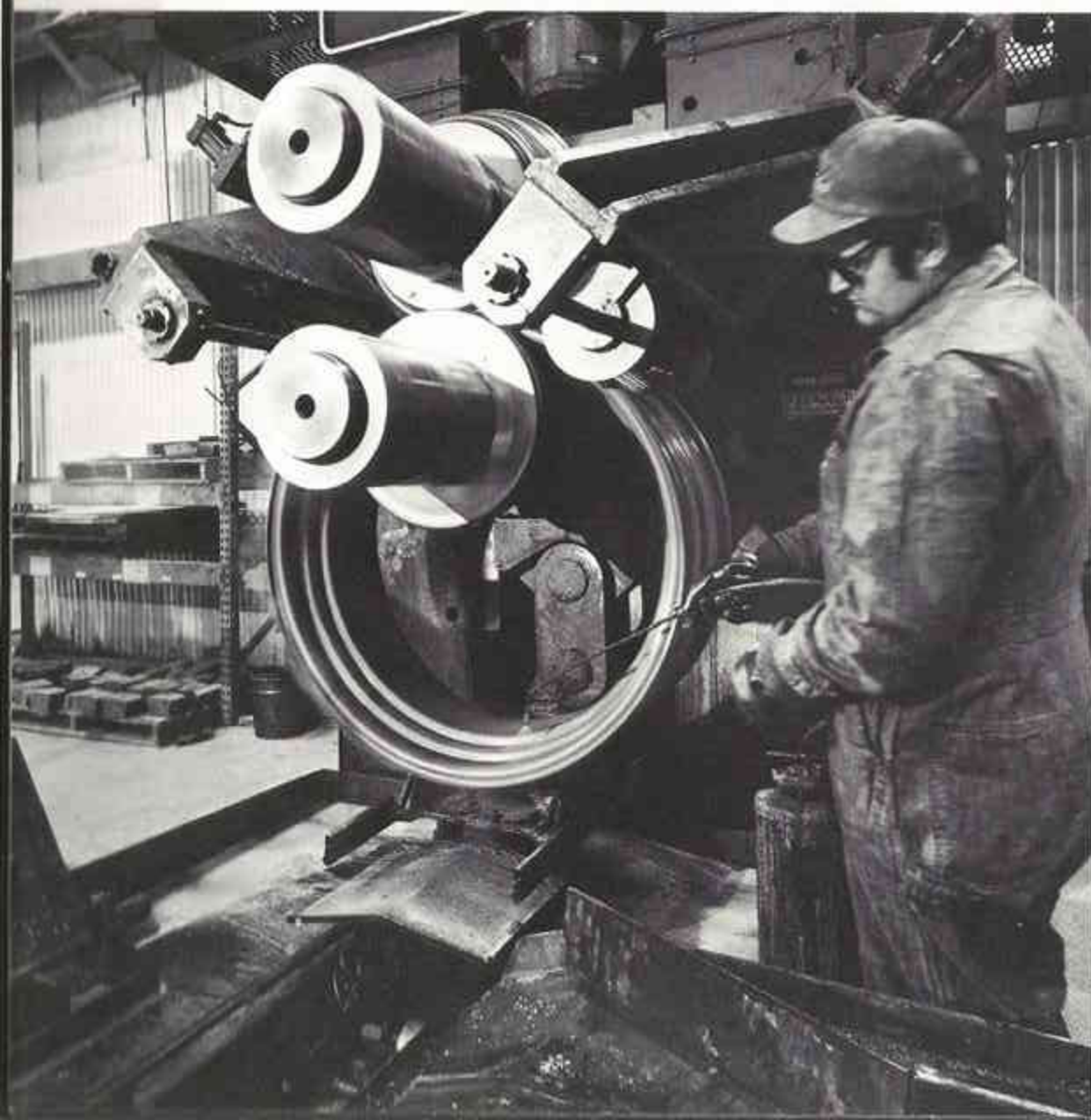


Once a tractor is completed, it must be checked to make sure all systems function properly. No leaks, inoperable gauges, levers, clutches, etc. Engines and transmissions are run for over half an hour to check for smooth operation, easy starting, and proper shifting. Steering is checked for ease, and smoothness. In short, we give it an additional detailed inspection to make sure it runs properly.



Finally, when everything else is completed, our name goes on. But not before we know the tractor meets our rigid standards of manufacture.

Steiger builds its own wheels to keep you on solid footing



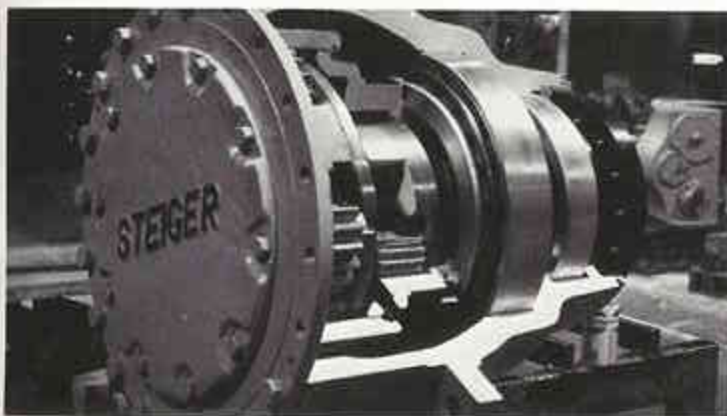
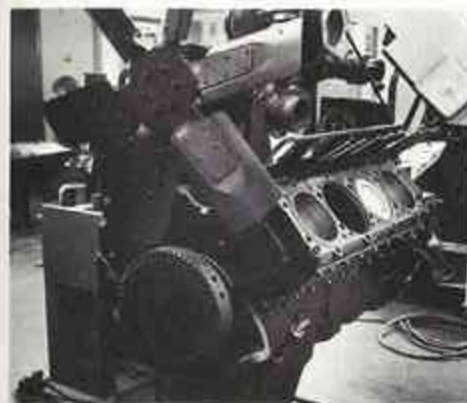
To eliminate the problems of inflated costs, and lack of availability, Steiger manufactures its own high quality wheel rims. Today, we produce rims not only for ourselves, but for several other large vehicle manufacturers.

This is one certain way we can assure you that you'll get wheels that will handle the weight and performance of Steiger tractors. They have to be tough. And they are.

Our wheel rims undergo three stages of development, after the basic cylinder is produced. Wheels first are flared at both ends of the cylinder, then roll-formed and contoured, and finally sized to exact dimensions.

To be sure, you get Steiger quality — from the ground up.

Training for dealer service personnel... part of the package you get when you own a Steiger



At the factory school, technicians get expert instruction in both Cummins and Caterpillar engine repair and servicing. They must prove to the Steiger faculty that they know how to perform before they receive their diplomas.

Students receive expert instruction both in theory and practical experience — a careful balance of each.

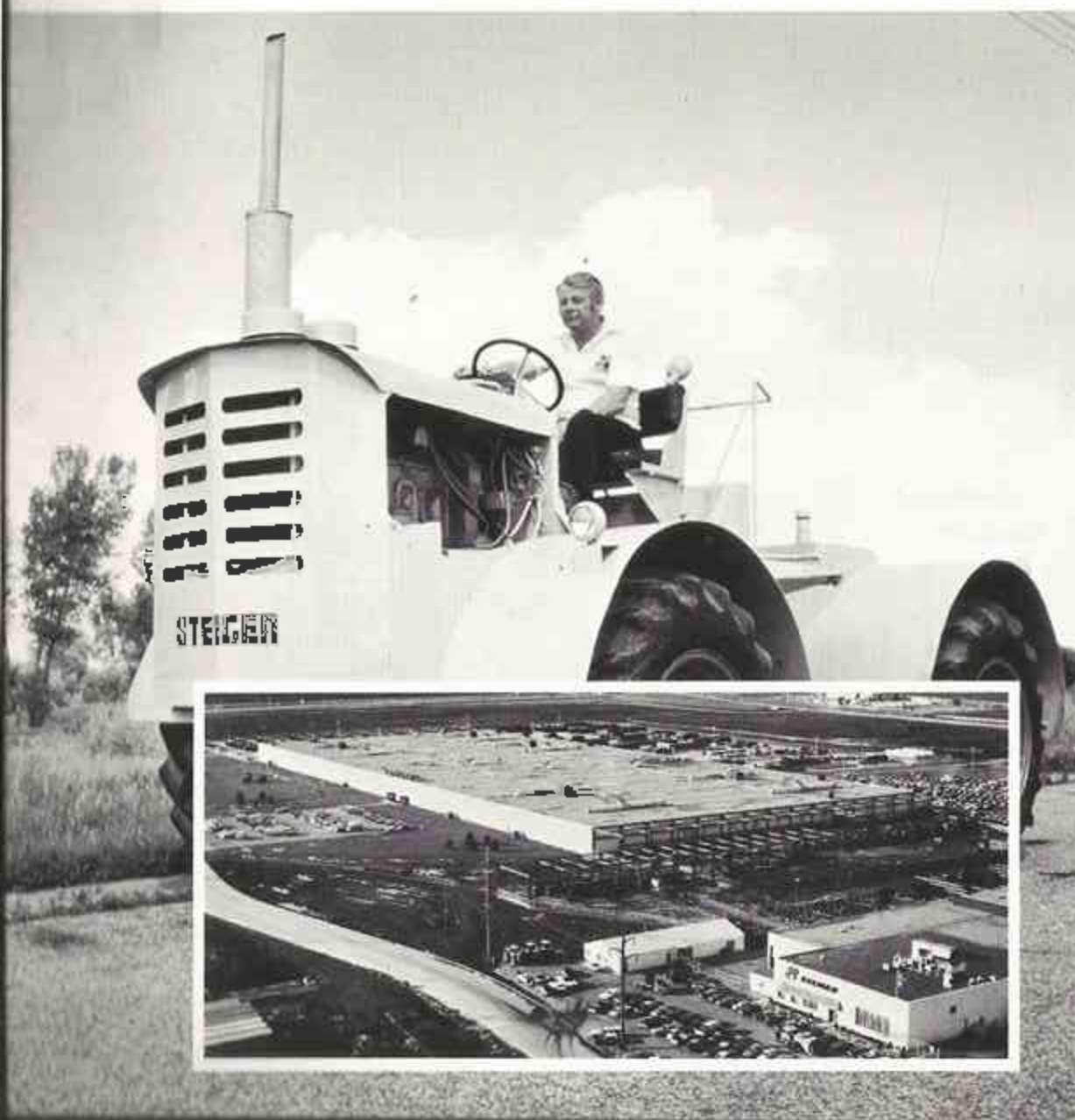
Easiest way to teach technicians about Steiger axles is to let them see internal workings. This cut-away lets Steiger instructors show dealer technicians how the axles work, how to maintain and repair them.

Steiger Safari cabs rarely need any servicing, but just in case —. Dealer technicians do learn about all the cab features — in-dash air-conditioning, telescoping/tilting steering column, control panel layout and electrical systems, so repair can be fast and easy if necessary.

Technicians also get the lowdown on the other Steiger features, such as the decelerator, brake and clutch control, and the hydraulic flow system.

The Safari cab is built with the same toughness and quality as the rest of a Steiger tractor.

Where it all began...



In the mid '50s, doing a lot of tillage — fast, was near impossible. There weren't any tractors big enough.

For farm operators Douglas and Maurice Steiger, this was a problem. But being inventive, they assembled a bundle of Uclid truck parts and a 238 ph Detroit diesel, and by the spring of 1958, their stack of parts wheeled out as a new, monster tractor. It immediately caught the attention of farmer neighbors, and soon they were in the tractor business. Farmers helping other farmers.

Today, the company occupies this ultra-modern 10-acre factory in Fargo, North Dakota where a four-wheel drive tractor emerges every 28 minutes! Its 900 workers live in nearby communities, and know what it takes to get the job done on a farm.

Steiger changes products, and technology when necessary. But its philosophy will never change. Steiger tractors are built by farmers for farmers. Of that, you can be sure.

MORE TRA



ORE TRACTOR.



**Steiger
engineering, design
and quality construction.
It all adds up to...**



STEIGER TRACTOR INC.

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