



A hydraulic-powered transfer auger pulls grain off the top of the hopper on Gidel's combine and moves it to the tow-behind grain cart.

"LETS ME MAKE A FULL ROUND WITHOUT HAVING TO STOP TO UNLOAD"

"Tag-Along" Grain Cart

Richard Gidel, Williams, Iowa, needed some extra carrying capacity on his Gleaner R40 rotary combine so he could make a full round in the field without stopping to unload.

He solved the problem by assembling his own 200-bu. "tag-along" grain cart that's filled by a hydraulically-driven transfer auger he mounted on the combine. Grain is loaded out to the "tag-along" cart on-the-go. Once the cart is filled, it's unloaded by its own hydraulic-driven auger that's controlled from the combine cab. Both the transfer auger and "tag-along" grain cart auger are operated by orbit motors that are plumbed into the combine's electro-hydraulic valves.

"It allows me to harvest without hiring additional help and reduces soil compaction by eliminating trips through the field," says Gidel, who farms by himself. "Another advantage is that I farm on ridges and don't want a tractor and wagons on them any more than necessary. It also eliminates considerable wear and tear on wagons since they don't have to be driven into the field to meet the combine.

"The cart and combine tank can be unloaded simultaneously, or independently. I added an extension onto the grain tank to keep it almost full so there's as much weight as possible up front. When the grain tank is full, a monitor beeps and I push a switch to activate the transfer auger. It moves grain from the tank to the tag-along cart as fast as it's harvested.

"I built the tag-along cart in 1985 and pulled it behind a Gleaner F2 conventional

combine. Then I traded the F2 in for the rotary combine and used the same transfer auger although I had to lengthen it.

"A hydraulic-powered tag-along cart works better than running a pto back from the combine because it's simpler, doesn't take as much power, and costs less. I don't have any trouble turning at the end of the field because I put a long hitch on the cart that allows the combine to clear on sharp turns. There's no permanent modification to the combine."

Gidel made a support brace for the 6-in. dia., 20-ft. long transfer auger by bolting a frame made of steel tubing on the back of the combine. The orbit motor that drives the transfer auger is bolted underneath a steel plate that he mounted inside the tank. "A section of stove pipe mounted on the end of the auger serves as a down spout so we didn't have to make the auger any bigger than necessary," says Gidel.

He mounted an orbit motor flow control valve on the combine so that he can vary speed of the transfer auger.

To make the tag-along cart itself, Gidel paid \$100 for an old Hawkbuilt side-slinger manure spreader and mounted a 200-bu. gravity wagon box on the frame. The wheels were on 60-in. centers so he widened them to 120-in. centers to follow the combine wheels. "I didn't use a commercial grain cart because they're too big and have too much weight on the hitch," says Gidel.

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Uhnken designed a front-mount hitch which not only raises and lowers the 10 1/2-ft. wide mower but also allows it to oscillate from side to side on uneven ground.

SELF-PROPELLED, ARTICULATED Front-Mount Mower Built From Old Deere Combine

By C.F. Marley

B.L. Uhnken, Jacksonville, Ill., has 10 1/2 miles of road banks and 37 acres of waterways to mow and he wanted a mower that would make the entire job easier. That's what prompted him to build a self-propelled, articulated front-mount mower using parts that, for the most part, came from old combines.

Uhnken started with a stripped-down Deere 7700 combine, building an almost totally new machine around various salvaged components. He built his own chassis, designing it to carry an in-line 276 T John Deere engine. He says the engine is ideal for the mower because it's short yet has plenty of power.

A key component of the concept is articulated "bend in the middle" steering. He positioned a large 2-in. dia., 20 in. long king pin between the two halves of the machine, equipping it with bronze bushings top and bottom. John Deere header cylinders (from a Deere 4400 combine) mount on either side of the pivot joint to provide the steering. Uhnken froze the original steering knuckles in place on the rear axle. He left the center pivot point in place on the axle so the

machine would oscillate on rough ground. The gearbox that belt-drives the hydrostatic drive came from an old John Deere 10A combine. It has three drive belts.

Five belts drive the pto which powers the new 10 1/2-ft. Woods mower mounted on front. Uhnken uses an air cylinder to engage and disengage the pto. He notes that in some cases, air pressure is easier to work with than hydraulics. To provide air pressure, he mounted an air compressor from an automotive air conditioner on the side of the engine. It pumps air into a tank mounted just ahead of the mower's pivot point.

Uhnken designed his own front-mount hitch for the mower. It not only raises up and down but also allows the mower to oscillate back and forth to stay on the ground regardless of the terrain.

Uhnken also built the diesel fuel tank, which mounts on the rear half of the mower.

The original Deere 7700 cab is mounted on the mower for air conditioned operator comfort.

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A 2-in. dia. king pin between the two halves of the machine allows it to steer by articulation. A home-built fuel tank mounts above the rear axle.

Drag Made From Old Tires, Cattle Panels

"It's inexpensive and it works," says Sandy Townsend, Chillicothe, Mo., about the soil conditioning drag he built out of wire cattle panels and old truck tires to pull behind a field cultivator.

"The idea came to me and my father-in-law as a whim one day. We used a 16-ft. cattle panel - available from any farm supply store - and 7 old tires which lay on top of the cattle panel. The horizontal wires on the panel lay towards the ground, which helps break up clods better. Seven 3-ft. pieces of chain attach the panel to the back

row of shanks on the cultivator and 7 small pieces of chain hold the tires on the panel. Tires should be positioned towards the rear of the panel.

"The drag takes little power to pull. We use a 730 John Deere to pull the 16-ft. cultivator and the drag. You can make the drag as wide - or as narrow - as you want. Can also be used behind a disk or other tillage equipment," says Townsend.

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