

County snowplows are built one piece at a time

by Gayle Rydstrom, Dodge County Pionier

If you're familiar with Johnny Cash's song One Piece at a Time, you might be surprised to find out that the Dodge County Highway Commission has been using that same tactic the past four years. One piece at a time is the only part of that song that applies to the assembling of snowplows though.

Parts are not being sneaked out of the shop in lunch boxes or mobile homes, and the assembly of the vehicles is taking place in less than one year rather than a few decades.

Dodge County Highway Commissioner Brian Field said the decision to build snowplows on the premises was looked at very carefully.

"We didn't go into the decision lightly or without listing all the pros and cons," said Field. "There were a few shops that made their own plows. The City of Watertown did it that way and it did work, so it wasn't like we were going into this without any idea of what we were getting into."

Field began his employment with the County in 2005. For years, he was just as frustrated as the snowplow drivers and mechanics when snowplows needed to be serviced and the problem couldn't be repaired in-house. John Haase, shop supervisor, said not only was it frustrating having to send out the truck for service, the waiting period was even worse.

"It was horrible," said Haase. "Depending on the problem and where the truck had to go to be serviced, it could be gone for weeks."

Where the vehicle went for the needed repairs wasn't the same from year to year. Field said each year companies submitted bids and the lowest bid won the contract. The vehicles could be repaired in Milwaukee one year and Green Bay the next.

Obviously, other plows had to cover more area during the time a vehicle was out of commission. There are 540 miles of county roads, 240 miles of state roads, and 100 to 120 miles of town roads plowed by County workers. Times those numbers by at least two as each roadway has at least two lanes.

Each of the 55 plow/driver combinations is assigned a specific area of the County. For instance, there are two snowplows that continuously work at keeping Highway 151 clear of snow and another takes care of the portion of Highway 41 that is in Dodge County.

When the decision was made to try building its own snowplows, the County still didn't go full speed ahead.

"We bought four trucks that year, and had two set up by our shop and two by the vendor," said Field. "When they were finished, we did a comparison in cost and quality."

Field said the cost of outfitting their two trucks did cost more money, but that lone negative was outweighed by the positive, which was the quality of work.

"Our work was consistent," he said. "Nothing had to go back for modifications or alterations because everything was done correctly in the first place."

The decision was made to continue to do assembly in-house and purchase only one make. When the Mack trucks arrive in March, they consist of only the necessary parts, such as the frame, engine, transmission, and driveshaft.

"By using only one brand, we're eliminating having to carry so many different parts for the repairs we can do in-house," said Field. "We can afford to purchase only three, maybe four,

each year so it will take us a while before we're completely running with Macks, but we'll get there eventually."

Field said the parts inventory is definitely simplified when only one brand is needed.

"You have one brand and the hydraulics, tools, and brackets are made here so replacement is about as easy as it gets," he said.

Turning the chassis into a full-blown snowplow falls mostly on the shoulders of Jon Tietz, the shop foreman. It's a job he relishes.

"Even though it's very time consuming and sometimes frustrating, I have a lot of fun working on the vehicles," said Tietz. "I'm a perfectionist so I know every inch of each of them before they hit the roads."

Tietz said it's important that he be that familiar with each vehicle so when a driver calls him about a problem, the shop foreman can visualize what the driver is telling him.

"It's great to be able to tell someone to try something to see if the problem can be fixed without having to stop plowing and bring it into the shop," said Tietz. "That not only saves travel and repair time, it keeps the plow on the roads doing its job."

When the problem isn't easily fixed by a driver, Tietz still usually has an idea of the problem, which again cuts down on the time the snowplow is off the roads. These are more reasons why the County found it more economical in the long run to build its own snowplows.

Field and Tietz said a key to long-lasting vehicles is the materials used.

"We use as much stainless steel as possible and seal everything as much as possible to cut down on rust occurring," said Field. "When things start to rust, it's much more difficult to keep them in good working condition."

Field said the ideal rotation for vehicles is 12 years, but right now the County is on an 18-year rotation.

There are several factors for the amount of time it takes Tietz and his staff to turn the chassis Macks into the snowplows you see on the roadways. Work is done on the vehicles whenever time allows, but the biggest factor is the arrival of parts. There was a long waiting period during the summer months.

"We were on back order for some things," said Tietz. "It was a bit frustrating not to be able to do anything for several weeks. John [Haase] was constantly checking on the status, but there was absolutely nothing we could do about the delay. It was just one of those things you can't control."

Each part Tietz uses in the assembly of the snowplows is numbered with the same number as the snowplow.

"Each vehicle and part is supposed to be the same as every other one, but there are always little variances," said Tietz. "The numbers make sure everything fits properly. I'm working on Truck 71 and Truck 73 at the same time; there's no guessing which part goes on which truck because the numbers are right there. Cuts down on guess work and makes repairs more efficient."

The numbers also aid in the assembly of each vehicle. When the box for Truck 73 was ready and it was Truck 72 that was pulled into the bay for fitting, Tietz knew without having to go through with the attempt to make everything fit, that it wouldn't so he sent Truck 72 out of the bay and waited for Truck 73.

Yards of electrical wire are used in each vehicle in order to hook up everything throughout the body to inside the cab where all the switches are found. Of course, each has a job

to do and Tietz has to make sure everything is connected properly. The wires are protected from the elements by tubing.

Safety is obviously important, for both the drivers of the snowplows and those in other vehicles.

“Mirrors and lights on the plows are incredibly important parts of keeping everyone safe,” said Tietz. “The mirrors show the plow drivers what the blades are doing. The lights not only help the driver, but those coming up behind him or meeting him.”

Tietz said it’s sometimes difficult with blowing snow for any driver to see a snowplow. He cautions everyone to be aware that when there is a snowfall, the plows are on the roadways.

“We use all lights available to make sure we give people the best opportunity to see us when we’re out there,” said Tietz. “To help, we also use reflectors.”

When Tietz is assembling a snowplow, he has to take into consideration the height of overpasses. That means antennas, lights, and signs have to be installed so they will not be dislodged when the snowplow passes under the overpass. The drivers have to lower the boxes if they have them tipped up for spreading salt.

“The boxes do end pretty high if they are tipped completely,” said Tietz. “It’s always something to keep in mind when your territory includes an overpass.”

Field said the snowplows are usually ready for service by late October or early November. Two of this year’s trio hit the roads just before Christmas, the other the first part of January. The delay occurred because of having to wait so long for some of the parts to arrive.

The two that went into service first replaced snowplows keeping Highway 151 clear. Tietz said he knows which vehicles will be replaced before he begins working on them.

“I can do some customizing for the drivers because each is assigned a specific truck,” said Tietz. “Comfort is important when you’re sitting there in the same spot for so many consecutive hours a day. Some guys like the steering wheel a little higher or lower than someone else, or the seat a little closer to the wheel, or maybe I can lessen the reach for something a little. The little things can mean a lot.”

Once the snow season has concluded, the blades will be removed from the vehicles so they can be used for work done during the other seasons.

The Mack trucks for 2014 have been ordered. This year’s vehicles are tri-axle trucks. Tietz said this will be his first time working on a tri-axle. They will be longer than any of the other vehicles the County owns.



