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LHS student gains real-world skills as Custom Products apprentice

Dougherty, an **apprentice** at **Custom Products**, builds backboard that attaches to Litchfield Fire and Rescue Squad's ATV

Jenny Berg STAFF WRITER

An engineering apprenticeship allows Litchfield High School junior Steven Dougherty the opportunity to **gain** experience in the field he wants to work in. It also gives him peace of mind, knowing he helped his community by designing a backboard attachment that the Litchfield Rescue Squad can connect to their new Polaris Ranger all-terrain vehicle.

"There's a lot that I've learned, with the program and working with other people," Dougherty said.

Custom Products of Litchfield Inc., which donated the time, labor and materials for the Rescue Squad ATV attachment, recently unveiled the modified vehicle. Dougherty, 16, watched contentedly **as** squad volunteer members checked out the addition he designed.

"Historically, if there was a hunting accident, we would have to page the Sheriff's Office to get their four-wheeler, but there was no way to put a backboard on it," Rescue Squad Chief Gary Shaffer said. "This will allow us to put a backboard on and be able to stabilize the victim so they're not getting jarred around, and have a person buckled in right next to them to be able to do patient care **as** they drive to the street." The Litchfield Rescue Squad is an auxiliary organization of 30 members serving the area with storm watch, search and rescue, water rescue and ambulance

service. They own several vehicles, but the four-passenger Polaris Ranger is the first ATV acquired by the squad.

Shaffer said they purchased the ATV locally from Towmaster at a reduced price, through funds raised from sweepstakes calendar sales and a beef feed at Watercade.

The Rescue Squad will use the ATV to get to injured people in off-road settings, such as a field, near a lake or swamp, or out on a lake when it is frozen over, Shaffer said. The four-wheeler can efficiently drive to a victim and then move the person to a roadway for further transport.

The process of building a backboard attachment for the ATV began with a conversation between Jess Jensrud, Rescue Squad volunteer member, and Keno Bridge, welder at **Custom Products**. Jensrud mentioned the possibility of an attachment for the rear of the ATV, and Bridge arranged a meeting, where **Custom Products** got on board with the idea. They handed the project over to Dougherty, who began work on the Polaris attachment in February. Dougherty started his apprenticeship with **Custom Products** in December 2010, after hearing good things from a previous **apprentice**. His school counselor made the initial contact to **Custom Products**.

Dougherty is enrolled in post-secondary classes at Ridgewater College in Hutchinson, which allows time in his schedule to be an **apprentice**. He works more than 10 hours a week during the school year, and full time in the summer.

During the first few months, Dougherty completed tutorials to learn the engineering program, which he describes as "pretty complicated." He said his apprenticeship entails mostly design change requests where he makes adjustments on model drawings. "Like if a door doesn't latch, I change the prints and the model of it," Dougherty explained.

Dougherty hopes his career includes similar work, and is currently looking at schools for mechanical engineering.

"I like it a lot, and time goes by fast when I'm here," Dougherty said.

Matthew Blaha, design engineer at **Custom Products**, acts as a mentor to Dougherty.

Blaha began as an **apprentice** at **Custom Products** in 2004, and after graduating from Minnesota State University, Mankato in 2009, returned to work for the company.

"It's a good program," Blaha said of the engineering apprenticeship.

Dougherty said he appreciates the real world experience this project allowed him. With the Rescue Squad, Dougherty was working with a customer, trying to incorporate their needs with his vision and **skill**. The initial plan was to take the bed off the ATV, but the Rescue Squad decided to stick with the original plastic bed, so Dougherty had to rework the design.

"It took a while to model it and find out what they wanted," Dougherty said.

He also has designed a few tables, a file cabinet, and is learning to weld.

He said his favorite part of the Rescue Squad project was seeing the final **product**.

"I would come after school, and see a bit more completed every day," Dougherty said.

Jim Schmitt, director of engineering and regulatory compliance at **Custom Products**, said the company started the apprenticeship program in 1995. **Custom Products** chooses local high school **students** at the top of their class with aspirations of achieving a four-year engineering degree to participate in the apprenticeship program. Since 1995, **Custom Products** has had between 12 and 15 engineering **apprentices**.

"The program helps prospective engineering candidates discover pre-college if engineering is really the type of work they will enjoy," Schmitt said. "We had the opportunity to provide a good to the community and a realworld experience for Steve." Dougherty plans to return to **Custom Products** as an **apprentice** for his senior year. In addition to knowing his Rescue Squad vehicle attachment will help people in the community, Dougherty is happy to be designing and creating pieces for the real world. "It will be cool to see it out and about," Dougherty said. "And to know that I designed it."

STAFF PHOTOS BY JENNY BERG Litchfield Rescue Squad volunteer members Butch Madden, Jess Jensrud, Sandy Minton and Scott Christensen stand by the squad's new ATV, modified by **Custom Products apprentice** Steven Dougherty, standing between Madden and Jensrud. Litchfield High School junior Steven Dougherty designed an attachment for the Litchfield Rescue Squad's Polaris Ranger, allowing a backboard to be connected to the vehicle to safely transport victims in off-road terrain.

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