



WORK SMART **NOT HARD**

New control system makes motor grader work safer and easier

Wendell Luko, an operator with the Henry County, Iowa, Secondary Roads Department, knows what it takes to build and maintain unpaved roadways that will stand up to heavy traffic and torrential downpours.

The Secondary Roads Department's goal is 26-foot-wide road tops with 4 to 6 percent crowns. "That will keep the water off the road. If it's any flatter, water stands and you get into trouble," Luko said. "A good crown takes care of a lot of problems."

The department is responsible for maintaining a 500-mile system of gravel roads, and another 125 miles of paved roadways in the largely rural county.

The use of AccuGrade™ Cross Slope, a grade control system designed to control surface cross slope, helps operators build and maintain proper crowns, as does the use of the Advanced Control Joystick system on a new Cat® 12M3 Motor Grader.

With Cross Slope, machine-mounted sensors

calculate necessary blade slope positioning to achieve desired cross slope of the surface. The system makes automatic adjustments to the left or right lift cylinder. "Operators have a lot easier time keeping the crown with Cross Slope," Luko said.

Cross Slope is especially useful for road reconstruction. "If we can get the road built correct originally and have the right slope, that allows us to maintain that better in the future," said Jake Hotchkiss, PE, Henry County Engineer.

Advanced Control Joystick, an added feature that was factory-installed in the 12M3, enables the operator to keep his hand on the control at all times. This improves safety and provides a quick response to changing work conditions.

"Everything is where you need it," Luko said. "For the self leveling feature, you just have to move a thumb or a finger. It makes everything a whole lot quicker and a whole lot easier."



Flip A Switch

With the system, settings can be preset so that the operator can simply flip a switch to change blade location. “It makes it a lot easier to make adjustments on the fly, like when the operator is coming up to a driveway or crossroads,” Hotchkiss said. “He can easily make that adjustment, and then get back to the normal crown.”

The 12M3 Motor Grader was delivered in late August of last year. “It’s a wonderful machine,” Luko said. “It does everything that I want it to do, and there’s no stress on my arms or my neck.”

The Henry County Secondary Roads Department runs seven Cat motor graders (12M3, 12M2, four 140Ms, and a 140H) in seven territories. Two spare machines complement the territory motor graders. Typically, machines work in the territories for 11 years, or 11,000 hours, before they are recast as spare machines.

In each territory, a motor grader is responsible for maintaining approximately 70 miles of roadway. “We have flat ground, rolling hills, a river basin—there’s quite a bit of variety,” Hotchkiss said.

Luko lives in the territory where he works. “I think it’s good for an operator to blade the territory where he lives. He takes pride in showing the neighbors what he can do. When the neighbors are happy with it, it makes for a good day.”

In spring, summer, and fall, operators are out daily to keep a crown on roads. Machines clear snow as needed in winter. The motor graders also rebuild roads and cross sections to help keep pace with increased traffic volumes. “Our primary focus is to keep roads in good condition,” Hotchkiss said.

Early spring, motor grader operators repair ruts and washboards. “You can’t rip roads open too early. You don’t want to expose them to possible frost and rain,” Luko said.

A little moisture can be helpful in maintaining roads. That way, material can be easily moved to fill holes, without becoming too sloppy. “You can finish it right, get it packed down without all the dust,” Luko said.

(Continued on Page 6)

Knowledge Is Power

VisionLink® provides GPS location and operating condition information for all motor graders. "It maps the roads that they've been working on, and provides information on how the machines are operating," Hotchkiss said.

With motor graders working daily, high uptime is a priority. Durability and easy service of machines are two primary reasons that the county runs Cat motor graders.

"It's critical for us to keep the machines running. When a motor grader goes down, we need it back in service as quick as we can," Hotchkiss said.

An Altorfer Cat drop location at the county garage enables replacement parts to generally be delivered within 24 hours. "If we are in need of something, Altorfer Cat has done a great job responding," Hotchkiss said.

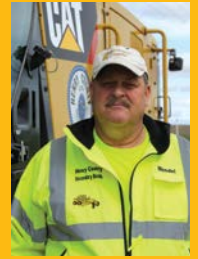
County staff works in tandem with the Cat dealer on service. Altorfer technicians complete warranty work, with county employees responsible for other service and repairs.

A fleet comprised solely of Cat motor graders simplifies maintenance. "That reduces the amount of parts we need to keep on hand, and the knowledge required to work on the motor graders," Hotchkiss said. "We're better able to service our fleet."

With improved controls on the 12M3, high fleet uptime, and excellent operators, Henry County roads have never been in better condition. 📍

LEARNING IS EASY

Wendell Luko is not only a machine operator for Henry County, Iowa, Secondary Roads Department, he teaches a motor grader operating class.



His first step in teaching the operation of Advanced Control Joystick for Cat® M Series motor graders is to find a spot to practice away from other employees.

"Get away from everybody. People can be intimidated real easy. Play with it, and figure out how it works," Luko said. "The instructor will tell you, but until you get the actual feel of it, you're not going to know what the different buttons do."

Several hours should be spent learning the feel of the Advanced Control Joystick system. "It's very easy to learn how to run," Luko said. "As long as you follow the safety rules, you're going to be fine."

It is important to adjust the seat and armrest properly, as if sitting in an easy chair at home. "You can't be leaning forward, and getting yourself all tensed up. Make yourself comfortable," Luko said.

Luko's standard for road maintenance? "When operators finish the road, if they have a 16-year-old child learning how to drive and they felt comfortable having them drive on that road, they've done a nice job," he said.

ADVANCED CONTROL JOYSTICK FOR M SERIES MOTOR GRADERS:

- Replaces pod style controls
- Patented technology
- The system can be used for Cat Grade Control functions or auxiliary attachments
- Switch via Message Display
- Retro kits available