

CASE 1021F Carries Heavy Load at Granite Pit for Largest Chip Seal Contractor in Wisconsin

By Andrew Dargatz, brand marketing manager, CASE Construction Equipment

[Scott Construction](#) Inc., Lake Delton, Wis., is one of Wisconsin's leading asphalt surfacing companies, and the largest chip seal contractor in the state. To support the amount of chip seal work the company performs throughout Wisconsin and Minnesota (regional suppliers couldn't keep up with the demand), the company began mining granite out of the new Pine Valley Quarry (Neillsville, Wis.) in 2015.

With the new quarry, Scott Construction can control quality and access to its chip seal products. The company shoots raw granite and crushes it down to 5/8-inch minus, and then screens it and crushes it down again to 1/2-inch minus. The company then washes that and crushes it down to 3/8-inch and 1/4-inch minus product. The remaining byproduct is then used for hot mix and concrete.

The company can also load upwards of 150 trucks/day, depending on the output/demand.

By early June 2016, the company had tripled its production out of the quarry compared to all of 2015. Much of that workload is performed on the shoulders of its [wheel loader](#) fleet. The company uses both a [CASE 721F](#) wheel loader and a CASE 821E wheel loader in the crushing stages of production.

From there, a [CASE 1021F](#) wheel loader takes over and handles the bulk of truck loading and material handling activities. Over time, the 1021F wheel loader has become the most important machine in the pit.

"The 1021F is the key piece in everything that's going here," says Steve White, operator, Scott Construction. "It's irreplaceable. The 1021F has been the heart of our operation here."

Of note: Thanks to fuel-efficient engine emissions technology, selectable operating modes and fast cycle times/transitions, the 296-horsepower 1021F has been able to save the company approximately 230 gallons of diesel fuel each week when put head-to-head with a comparable 300-horsepower wheel loader.

The Power of Speed and Fuel Efficiency

Scott Construction handles 350 tons of granite each hour over the course of a 14-hour day. Daily tonnage often exceeds 4,000. With such a heavy workload – Scott Construction worked with Wisconsin dealer [Miller-Bradford & Risberg](#) to equip the site with a high-capacity wheel loader that would combine speed, power and fuel efficiency.

The 1021F is powered by a 296 horsepower FPT engine and is driven by a four-speed Powershift transmission with heavy-duty axles with a locking front differential. One of the first things White first noticed with the machine was its climbing ability. After dealing with significant overflow, the company recently built ramps to improve on-site stockpiling.

“The 1021F is unbelievably able to climb grades that you wouldn’t assume it would,” White says. “We berm it up good and we’re stacking it up... that’s been a big improvement. Its traction is phenomenal compared to [other wheel loaders].”

In such an active environment, fuel efficiency was also important. The 1021F wheel loader features Selective Catalytic Reduction (SCR) technology, which, rather than compromise power to conduct regeneration, lets the engine run at peak performance.

“Compared to [a competitive machine], we’re using almost 230 gallons less a week of diesel fuel doing the same job. Actually, it’s not really a good comparison because we’re doing more now than we did [with that machine],” White says. “When we first had them here side-by-side, we were deciding which loader to use. The CASE not only was more fuel efficient, but it seemed to have more power using less fuel. It was a no-brainer.”

The SCR technology gives operators a faster throttle response, while also maintaining low exhaust temperatures and improving fuel economy by as much as 10 percent (compared to previous generations). There are also no diesel particulate filters to replace and no downtime associated with regeneration.

Contributing to its fuel savings, the 1021F also features four programmable power modes: ECO for maximum fuel efficiency, STANDARD for quick loading, MAX for aggressive digging and AUTO for engine output that responds on the fly. A standard engine shutdown feature is also available to further save fuel by limiting engine idle time.

“[With the four programmable modes], we’ve increased the amount of production and decreased the amount of fuel used to get there, so it just works,” White says.

Each operator also focuses on cycle time and efficiency. Charles Hudzinski, loader operator, Scott Construction, noted that the loader helps him easily transition from dumping to loading functions with the return-to-dig and return-to-travel features. Each allows the operator to hit a button, which automatically returns the loader arms and bucket to a pre-selected spot, freeing the operator up to focus on the transition and/or other required tasks.

“When I’m backing away from the truck, I push the lever all the way ahead to lock it in and it’ll come down to a certain height from the ground and stop on its own, so

that I can talk to the truck driver or whatever I have to do without my hands on the control at the time.”

Hudzinski also noted the ease of transition from forward to reverse, which is critical in shortening cycle times in loading applications.

“It’s about the smoothest one I’ve run,” says Hudzinski. “You don’t really notice it when you’re shifting forward to reverse.”

The Importance of Ride Control

Scott Construction loads out 25,000 – 30,000 tons of material each week, plus the 4,000+ tons they run through the plant and stockpile each day. The 1021F boasts CASE Ride Control, which provides a cushioned ride that can handle a large volume of material at increased speeds. Ride Control automatically dampens loader arm bounce at elevated speeds – reducing spillage and giving operators full control of their load retention and comfort.

“The 1021F is a lot faster and smoother with Ride Control on it,” White says. “It rides smoother than the [other machine we had], so we were able to increase speed and volume.”

“I do a lot of hauling of material back and forth in the pit, which in turn... it’s not quite such a rough ride,” says Hudzinski.

“In some spots, we have ruts that are washed into the pit floor that are a foot deep,” White says. “With Ride Control, you can take a loaded bucket full of material and the operator can drive across it and not even notice it. It won’t spill a drop, so that Ride Control is a must.”

Comfort and Visibility for Long Days at the Controls

A typical day for Scott Construction starts at 6 a.m. and goes until 8 p.m. or later. Working those long hours can wear on operators if they’re not comfortable. The 1021F wheel loader features one of the largest cabs in the industry, and an iso-mount cab design that reduces external noise and vibration to create a clean, quiet operating environment.

“We compared this machine to our other models that we used to run, and the CASE is the best ride we’ve ever had in any wheel loader we’ve ever owned or leased,” White says.

“The seat is phenomenal, the air ride is great, and the controls are laid out really well and are in arm’s reach,” he continues. “You don’t get fatigued from turning the steering wheel or running your bucket or your boom up or your bucket leveler.

“When they designed this machine, they designed it for the comfort of the operator.”

Another hallmark of the 1021F is its visibility. The wheel loader features floor-to-ceiling glass windows and excellent visibility to the rear of the machine.

“You can get so much closer when cleaning around conveyors,” says White. “We’re in granite rock, so you don’t want to run on rocks and cut your tires – you can physically see how close you are to anything. It’s been an improvement that we like.”

Simplified Serviceability

Another benefit of the 1021F is its easy maintenance. The wheel loader features easy-to-read site gauges, a standard power-tilt hood, and grouped, ground level access to most service points.

“We just did an oil change on the 1021F, and it took the operator less than an hour and a half to do complete service on the machine,” White says. “You roll the hood up, and everything is in direct eyesight; you can see everything you need to service. The filters are easy to get to. Overall, the serviceability is phenomenal.”

Much of the service and support is provided by Miller-Bradford, who services the company throughout Wisconsin from a number of locations. It’s the confidence in Miller-Bradford that sealed the deal with the 1021F.

“Miller-Bradford is a four-star operation,” says White. “I’ve worked with them for the last thirty-two years. I know Charley [Rule, service manager] in Madison quite well. He’s a phone call away 24 hours a day. He’s come to my rescue so many times I can’t tell you. If the 1021F is our heart, they’re our blood... and without both, it wouldn’t work. Miller-Bradford, at least for me in my division, is our best vendor.”

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