

PRINOTH AND CATERPILLAR

COMBINE TO ELEVATE SNOW GROOMING



Prinoth

CUSTOMER:

Prinoth

PRODUCT:

Snow Groomer:
Bison Stage V/T4 Final

LOCATIONS:

Calgary, AB, Canada
Concord, NH, United States
Granby, QC, Canada
North American Headquarters
Grand Junction, CO, United States
Reno, NV, United States
Salt Lake City, UT, United States
Vipiteno, Italy Headquarters

SCOPE OF ENGINE USE:

Cat® C9.3B Stage V
Industrial Engine

CAT® DEALER:

Toromont

FEATURED TOPICS:

Cat® C9.3B Stage V
Industrial Engine

POWER AND AGILITY MAKE FOR SUPREME SNOW GROOMING

Smooth surfaces are needed for skiing, so snow must be groomed. Prinoth specializes in producing heavy equipment for challenging conditions, with machines designed for grooming snow, moving earth or managing vegetation. The Prinoth Bison series of snow groomers is sold globally, used primarily for alpine grooming for downhill skiing and building terrain parks, trail grooming for snowmobiling and Nordic grooming for cross-country skiing.

“Our machines are used for snow grooming, personnel and equipment transport and emergency evacuation,” says Prinoth VPGM Snow Grooming North America, Scott Jones. “Basically, anywhere that’s extreme, the machine is designed to travel and do multiple tasks.” Prinoth’s development of snow grooming equipment began in the Italian Alps in 1962 and evolved along with winter recreation.

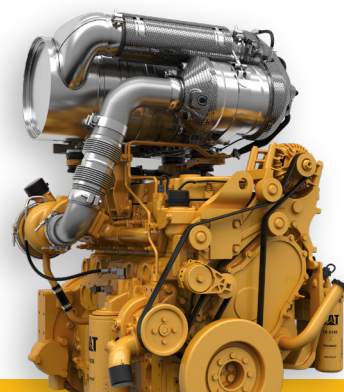
THE BISON IS AHEAD OF THE GAME IN SNOW GROOMING

Snow groomers must climb extreme slopes and operate over long periods of time. The Bison Stage V snow groomer is engineered to have optimal center of balance and multiple tilling and track options. In its class, it is the most powerful, productive and efficient machine. The Bison Stage V is also designed to be more comfortable and run quieter.

Prinoth had its customers in mind when improving on previous Bison models. A snow groomer will typically run 16 hours a day. A ski resort using 20 snow grooming machines working in shifts is going to burn a lot of fuel, making fuel efficiency a major factor. Equipped with a Cat® C9.3B Stage V engine, the Bison Stage V can meet power needs while using less fuel to meet sustainability goals.

TEAMING UP WITH CATERPILLAR FOR POWER

In 2004, Prinoth began using Cat® engines to expand the power capabilities of its machines. At high altitudes and extremely low temperatures, Prinoth snow groomer engines are pushed to the limit and must go through cycles of heating and cooling. These conditions led to a collaboration between engineers from Prinoth and Caterpillar, who focused on making improvements to the Bison Stage V to meet the customers’ needs.



POWER PROFILE: POWER AND AGILITY MAKE FOR SUPREME SNOW GROOMING

Prinoth worked directly with the Caterpillar engineers and Toromont, its North American Cat Dealer, in developing the Bison Stage V. This collaboration allowed the Prinoth team to check all the boxes for performance: sustaining a good power-to-weight ratio, achieving higher torque at low RPMs and maintaining fuel efficiency. Over time, excessive heat from running a large machine at high elevations will cause power loss and component damage. Prinoth and Cat engineers worked to solve those problems.

“Together, we knocked it out of the park,” says Prinoth Engineering Manager, Alexander Wood. “We can utilize 100% of the horsepower

of our engine and maintain it above 12,000 feet. We have minimal power loss due to elevation or exhaust temperatures in these Stage V engines, which is amazing.”

Starting the machine can also be an issue when engines sit at cold temperatures for extended periods of time. There’s no way to plug in engines to warm them up in remote mountain locations. Prinoth and Toromont worked together to optimize fuel and starting strategies to solve any cold-start issues.

DOWNTIME IS DETRIMENTAL TO SNOW GROOMING

Snow grooming is a winter industry. In most cases, Prinoth customers have about four months to meet their profit goals. Businesses can’t afford to turn skiers away because a snow groomer isn’t working. The Cat Dealer Network provides quick solutions for equipment issues. “Downtime is not an option,” says Prinoth Regional Manager, Mark

Palmateer. “If we do have an issue with a machine, we can get it rectified immediately and get the customer back up and running. Our ability to support our machines with the help of the Cat network is one of our biggest strengths.”

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CATERPILLAR AND PRINOTH PUSH THE LIMITS

The collaboration between Caterpillar and Prinoth is much more than an exchange of emails. The two companies work together in the field to improve equipment and perfect snow grooming. Finding solutions to the environmental and industrial challenges faced by Prinoth customers makes both teams stronger. “We’ve had over twenty years

of collaboration,” says Prinoth Marketing Manager, Rachel Templar. “We don’t just use the engines. There’s a lot of back and forth, and that’s something we’re really proud of.” Prinoth and Caterpillar will continue to join forces to push the limits of snow grooming.