

# Alberta Contractor a Leader in Land Clearing

## Bear Slashing a Big Believer in Benefits of Using Forestry Mulchers to Clear Vegetation

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BONNYVILLE, Alberta — “Mulchers are the way of the future,” said Andre Dion, shop manager of Bear Slashing Ltd. in Bonnyville, Alberta. “They are the best way to preserve the environment.”

Bear Slashing was founded in 1988 by Andre’s older brother, Dany. The company moved to Bonnyville in 1997 to better serve clients and has since opened additional offices in Fort McMurray and Calgary. Now in its 20<sup>th</sup> year, the company operates in virtually every province in Canada.

The business began by supplying land-clearing services to the oil industry. It has expanded and diversified, and its services now include pipeline construction, subdivision development, land-clearing and logging.

Dany pioneered the use of forestry mulching equipment as the most environmentally beneficial way to clear land for rights-of-way, oil exploration and other projects, according to Andre.

“Our philosophy is to get the job done with the least impact on the environment,” said Andre. “This means saving trees where possible, logging the salvageable trees, and eliminating the need for expensive reclamation efforts.”

In the past, contractors cut the vegetation and-or burned it, Andre noted, but no longer. “We do not believe in burning our future,” said Andre.

Forestry mulchers grind trees and brushy vegetation into chips that decompose quickly and enrich the soil. There is less damage to the top layer of soil, which reduces erosion. There are no stumps, root balls, holes or brush piles to impede wildlife or create tinder as future fire hazards. When a forestry mulcher makes one swath through the forest, it creates a passable trail that is usable for vehicles, equipment and

people. This is for short-term, and then re-growth takes over.

One of the challenges facing operations with forestry mulchers, Andre noted, is that they function in dusty work conditions. The grinding operations produce considerable dust. At one time the machines were stopped on a daily basis, sometimes two or three times a day, in order to blow dust out of the engine compartment, particularly the cooling system. The cleaning was labor intensive, and it reduced operating time.

Dany found a solution to this problem through Novatrax International Inc., which is based in Ontario. Novatrax manufactures a reversible radiator fan under the Cleanfix brand name.

As a result of equipping forestry mulchers with Cleanfix reversible fans, the machines now only require cleaning every three or four days. In addition, the process is much simpler and less time-consuming. The Cleanfix reversible fans have greatly increased productivity and also reduced fuel costs. The fans also help reduce over-cooling during winter months by reducing the blade angle to produce less air flow and use less horsepower.

Operators of forestry equipment had even greater problems prior to adding Cleanfix fans, said Michael Ische, engineering manager for Novatrax. “Some operators would have to clean their radiators at least once an hour, and in some cases I have been told it can be as many as two or three times an hour in hot weather.”

Hot weather compounds the challenge of operating heavy equipment in dusty conditions. The dust, dirt and debris accumulates in and around radiator cooling fins, reducing the effectiveness of the engine cooling system and causing the engine to run hotter. When an engine runs hotter, it increases

wear and tear and consumes more fuel.

Also, the shift toward more efficient engine design and the increased use of air-to-air charge coolers make engines susceptible to clogged radiators when equipment operates in dusty conditions.

The Cleanfix reversible fan, introduced with the company’s founding in 1999, has proven to be a significant benefit to equipment manufacturers and the businesses that buy and run their machines.

The standard Cleanfix fan features blades set to either the maximum cooling position or in the clean-out position. When required to perform a clean-out cycle, the blades will automatically flip 180-degrees (regardless of engine rpm); this places the cupped side of the fan blades in the correct direction to clean out the radiators. The fan generates the same air flow force in the opposite direction as it does in the cooling direction, blowing dirt and debris out of the radiator core, charge air cooler, hydraulic cooler, and air intakes screens. The cleaning cycle can be automated by installing the adjustable Cleanfix timer control.

“This is very important and unique to the Cleanfix reversible fan systems because flipping the blades in this way provides the extreme cleaning capabilities to not only clean the air intake screens but also to purge the debris that accumulates in the radiator cores,” said Michael.

Novatrax also manufactures the Cleanfix VP-Series (Variable Pitch) reversible fans. The VP-Series fans incorporate the benefits of the standard fan (automatic reversing) plus adjust air flow automatically with temperature.

If the engine begins to heat up, the fan blades will automatically adjust, pushing the blades to a steeper blade angle; this increases air flow to the radiator, keeping the cooling system and engine running at peak efficiency. During cooler temperature periods, when the engine and hydraulics do not



Another leading supplier of heavy equipment to Bear Slashing is Gyro-Trac, shown above. Bear Slashing purchased the first machine built by Gyro-Trac and currently has 13 of the machines. Gyro-Trac manufactures mulchers with a patented captive track system and mulching cutter-heads.

## Gyro-Trac Vehicles Offer Patented Captive Track System

Gyro-Trac manufactures low ground pressure hydrostatic tracked vehicles from 140 hp to 600 hp and hydraulic cutter-head attachments. Recently, Gyro-Trac has been working with Novatrax to equip the GT-13XP with the Cleanfix fan to reduce the build-up of debris in the cooling system. Applications include land-clearing, brush cutting and removal, forestry harvesting and management, right-of-way construction and maintenance, fence lines, and more. The company’s equipment is in operation from the Florida Keys to Hawaii and from Texas to the Yukon. Gyro-Trac machines also are operating in Europe, South Africa, Australia and – soon – Russia.

Gyro-Trac’s patented captive track system is composed of six nylon- polyester-reinforced tracks assembled with heat-treated steel cross-links. They are enclosed by the machine’s steel tub on one side

(keeping water out and hydraulic fluid in) and the capture cage on the other, which makes throwing a track nearly impossible. The tracks ‘mold’ to the terrain as the machine moves, distributing overall ground contact and producing low ground pressure. With the captive track system, Gyro-Trac machines can traverse swampy wetlands and steep rocky inclines easily.

Gyro-Trac manufactures mulchers and mulching cutter-heads. The company offers both swing-tooth and fixed-planar tooth cutter-heads and now interchangeable carbide-tipped hammer tooth cutter-heads.

Gyro-Trac has been in business for 20 years and has offices and operations in the U.S. and Canada as well as a network of dealers. Companies like Bear Slashing now have access to dependable, aggressively responsive service, parts, warranty and sales support. Earlier this year, Gyro-Trac and

Vermeer Mfg. signed a world-wide distribution agreement. Vermeer will now exclusively offer Gyro-Trac products to its dealer network in most of its global markets. (Novatrax also distributes the Cleanfix fan through many of the Vermeer dealers throughout the U.S. and Canada.)


The Gyro-Trac GT-60 is a super-duty machine powered by a Cummins 600 hp tier III turbo diesel engine. It features two-speed hydrostatic drive (travel and work), tilt-up cab, dual Rexroth hydraulic motors and more. The cutter-head features the planar fixed-tooth design. This powerful machine is well suited for site preparation applications where roots and stumps need to be raked and mulched.

Gyro-Trac also offers a heavy-duty mulcher, the model GT-25XP, which is powered by a Cummins 260 hp tier III diesel engine. Its unique design, low ground pressure

and efficient cutting technology make the Gyro-Trac GT-25XP as productive as many machines with twice as much horsepower.

The Gyro-Trac GT-13XP is a medium-duty mulcher. It is powered by a Cummins 140-hp tier III turbo-diesel engine and is coupled with Gyro-Trac’s new planar-head technology.

Features include halogen lights, auxiliary hydraulics, Lexan windshield, winch, pressurized cabin, and hydrostatic drive-steer system with single joystick control. The machine is available with optional rubber tracks.

The GT-13XP is equipped with the Toma-Ax 500HF cutter-head, which has a patented spiral-tooth mounting design. Individually-mounted teeth can be replaced in minutes. The mulcher has a cutting width of 64 inches. An interchangeable carbide-tipped hammer tooth or optional swing-tooth flail drum is available for rockier terrain. 

require high air flow, the reduced blade angle can save up to 60 percent of the horsepower used to run the radiator fan.

The engine performs better, and wear and tear and fuel consumption are reduced, said Michael. In addition, productivity increases because the machine operator does not have to shut down overheating equipment to allow it to cool.

When the ambient temperature is 45 degrees or less, the fuel savings with the Cleanfix VP-Series typically can be from ¾-gallon to three gallons per hour, Michael estimated, depending on engine size and work load.

Bear Slashing has over 80 machines for mulching and logging. About 50 of them are forestry mulchers, including eight Lamtrac machines. "We use the Model 8273, their biggest," said Andre. "It's definitely a workhorse for us, and all eight of our Lamtracs were equipped with the Cleanfix fans directly from the Lamtrac factory."

Trevor Chiasson, a representative for Lamtrac International in New Brunswick, Canada, said some of the key quality points of the LTR 8275Q vehicle are its ingenious four tracks, double-articulated, oscillating chassis design. It enhances maneuverability while maximizing traction and control at all times in the most challenging types of environments. The four track mulchers ensure Bear Slashing has a versatile tool that will work in sensitive areas with minimal soil disturbance.

Lamtrac also produces other size mulchers, such as the LTR 6125T. This smaller twin track chassis and hydrostatic design provides exceptional maneuverability combined with top quality components, such as Cleanfix VP-Series reversible fans, Bosch Rexroth hydraulics and a Cummins turbo diesel engine. As with all LTR carriers, this concept assures the operator optimal control and weight distribution at all times. The ergonomically designed ROPS/FOPS/OPS certified cab provides utmost safety and comfort with an excellent all-around view. The LTR is an excellent choice for seismic line clearing, pipeline clearing, power line clearing and commercial land clearing.

Lamtrac International products are all equipped with Cleanfix reversible fans. They are available from quality dealerships throughout North America, such as Tidewater Equipment, Hammer Equipment, Texas Timberjack, Redhead Equipment and many others. (For more information, see the Lamtrac International Web



**This Lamtrac LTR4500 is one of eight Lamtrac machines owned by Bear Slashing, which has over 80 machines, including about 50 forestry mulchers. Lamtrac International products are all equipped with Cleanfix reversible fans.**

site at [www.lamtrac.com](http://www.lamtrac.com).)

Another leading supplier of heavy equipment to Bear Slashing is Gyro-Trac. In fact, Dany purchased the very first machine manufactured by Gyro-Trac. These were some of the first mulching machines that Bear Slashing owned, and they were used in wet areas. With the purchase of additional Gyro-Trac machines, he built and expanded Bear Slashing to become a leader in forestry and vegetation mulching. Today the company operates 13 Gyro-Trac mulchers, including models GT-13XP, GT-25XP and GT-60.

Bear Slashing also has a number of other mulchers, including Tigercat, CMI and Fendt, about half of which are equipped with Cleanfix fans. The company's busiest season is winter; when the ground is frozen, the mulchers and other equipment can get to and operate in areas that normally would not be accessible. In the winter, the mulching operations do not generate as much dirt and dust compared to warm weather, but there is greater potential to save fuel and reduce the effects of over-cooling by using the Cleanfix VP-Series fans.

Andre was asked why he has such a variety of different brands of mulchers. "They all do the same work," he acknowledged, "but some have smaller or bigger tracks or tires. Some work better on hilly ground, and others work better on the grass, where you want to minimize ground disturbance. We have different pieces of equipment for all the different conditions that we are required to work in for this business."

Bear Slashing is now the largest company of its type in Canada, according to Andre; it does more work and has more equipment.

"We are continually looking out for new machines," said Andre. "We prototype many new machines that come out. We basically try them out, then provide feedback to the manufacturer as to what works and what might need to be improved."

Andre added, "Because we've been doing this work longer than anyone else, we've had our machines custom built to fit the applications we need." Bear Slashing fits all its field equipment with rollover protection, emergency escape systems, safety guards and Global Positioning Systems (GPS).

"Using a mulcher that is unsuited to the terrain or ground conditions or is under-powered will end up costing you money due

to breakdowns," Andre said. "But just having the machines isn't enough. We have service trucks fully equipped with inventory, spare parts and tools to keep the equipment operating at their peak."

Having the right team of qualified, competent operators and mechanics is also an important dynamic. The company employs over 120 people in the winter, requiring a substantial investment in human resources. It supplies in-house training programs to develop personnel and maintains compliance with a petroleum industry safety program.

"We believe in listening to our employees to keep Bear Slashing in the number one position," said Andre. "We want our employees to stay with us indefinitely."

The catalyst for a strong environmental approach came from Europe, Andre said, although environmental concerns are rapidly catching up in North America. "Burning used to take place all of the time, but now it's becoming more and more rare," said Andre.

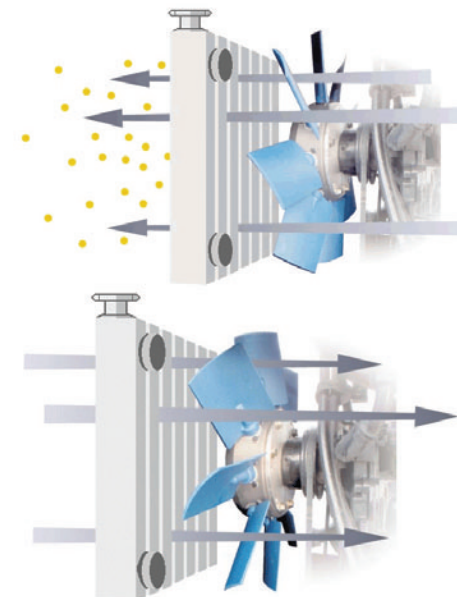
Being a pioneer isn't easy. It was a hard sell at first. "There was definitely resistance at first, and price was an issue," Andre said. "We had to prove it was more cost-effective to just get in and out and being done with it, as opposed to burning and then coming back later and going through all of the expense to reclaim the land."

A key to winning acceptance of the new approach was convincing government forest protection officials that mulching was good for the environment. In a letter dated March 17, 2005, Barry Coleman, a wildfire ranger from the Forest Protection Division in Hinton, Alberta, wrote Bear Slashing of efforts along these lines. The previous four years the agency had been trying various strategies to reduce wildfire hazards, he wrote. "We have found that mulching machines provide a cost-effective, environmentally-friendly strategy for: breaking up the continuity of fuel, reducing ground and ladder fuels, and admixing woody debris with mineral soil. In the event of a wildfire we hope these disturbances on the landscape will provide FPD with opportunities to: reduce crown fire runs by providing a series of containment lines that fire operations can tie into, opening the canopy so that air tanker retardant drops can better penetrate to ground level, provide access for small water tenders and/or sprinkler systems, and provide a safer working environment for ground crews."

Barry commended Bear Slashing for four mulching contracts the company had recently completed. "As with anything of this nature FPD is on a steep learning curve, but with patience, understanding, and valuable suggestions of your equipment operators, slashers, and supervisor, we managed to achieve the results we were looking for in the timelines given."

The learning curve for most people introduced to this new concept has been largely completed. "Reaction from government, forestry, and environmentalists alike has been very positive," said Andre. "Mulching is now recognized as an important technique to reduce industry's footprint while allowing operations to continue."

Bear Slashing supports trade associa-



**Cleanfix reversible fans can be set either to the maximum cooling position or the clean-out position; the fan generates the same air flow force in the opposite direction as it does in the cooling direction, blowing dirt and debris out of the radiator core, charge air cooler, hydraulic cooler, and air intakes screens.**


tions and communities where the company works. "We always step up to the plate to help sponsor association functions, seminars, and events," Andre said.

Bear Slashing also supports the goals of the Canadian Association of Geophysical Contractors and the Canadian Society of Exploration Geophysicists. One way this has been accomplished is through the incorporation of GPS systems on its mulchers. For seismic surveying, good trees do not have to be felled; they can be left standing when the surveyors first go into an area.

The company is continually searching for new ways to improve applications of its machinery. For instance, a recent development has been a new mulcher head with titanium-tipped teeth and a special drum used to grind rocks and trees.

Here is a roundup of the basic services provided by Bear Slashing:

- Mulching LIS (low impact seismic) lines for 2D and 3D geophysical surveys
  - Hand felling trees for seismic lines, slashing & clean-up
  - Well lease construction
  - Core hole and drilling site preparation
  - Facility and plant site construction
  - Pipeline right-of-way construction, maintenance
  - Timber salvage, logging and hauling
  - Clean-up, reclamation
  - Golf course construction and clean-up of deadfall
  - Clearing brush and trees for ski hills
  - Mulching to remove stumps and debris
  - Construction of cross-country ski trails
  - Construction of recreational snowmobile and ATV trails
- "All this is done with no burning, no debris, no barriers, and no erosion," said Andre, in summing up. "Mulching is economical and beneficial to the environment."

(Editor's Note: For more information  about Cleanfix reversible fans, contact Novatrax International at (519) 349-2200, e-mail [info@cleanfix.ca](mailto:info@cleanfix.ca) or visit [www.cleanfix.ca](http://www.cleanfix.ca).)