

B E T W E E N the BRANCHES

Land Clearing Equipment: A Natural Progression

Tigercat makes inroads in land clearing industry with the high-horsepower M760 mulcher.

In the past couple of years, Tigercat has begun the arduous process of building and marketing equipment outside the forest industry. The land clearing industry has a similar requirement for robust machines with the structural integrity, horsepower and cooling capacity necessary for demanding off-road applications.

Currently there are two M760 mulchers working in the Virginia-North Carolina area and a third operating in east Texas. The M760 can drive various horizontal drum mulching attachments, requiring up to 400 hp (298 kW.)

The 425 hp (317 kW) M760 mulcher is powered by a CAT C-12 electronic engine

and is equipped with Tigercat's cross-flow cooling system. This covers two of the major requirements that land clearing contractors have for their equipment: loads of horsepower and ample cooling capacity.

Land-clearing applications are numerous: right-of-way and pipeline corridor maintenance, oil and gas exploration, brush clearing for commercial development and manicuring forests or subdividing wooded areas for housing development sites.

The machine is also used in site preparation and various silviculture applications. M760 engineer Ron Kornelson explains, "The M760 can operate between pine plantation rows to eliminate competing species and in long leaf pine forests to prepare the stands for pine straw production so that extra revenue can be generated."

Land clearing contractor, Billy Pepper of Cartersville, Virginia figures that about 70% of his work is for commercial development and the remaining 30% is site preparation applications.

Trying to nail down hard production figures is nearly impossible because every contract is different. Some developers want everything

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The operator shreds the material to the size and consistency that is required by the land owner.



The M760 effectively mulches standing trees.

mulched and some wish to leave select trees. Another ever-changing variable is the size of the mulched material. To get a finer product, the machine must make multiple passes over the same terrain.

For rough mulching, consensus seems to be approximately two acres (0.81 ha) per hour. Finer mulching for residential developments is usually in range of 6 - 8 acres (2.4 - 3.2 ha) per eight-hour shift.

Regardless, housing developers are realizing that cleaning up and opening up a wooded area where people will walk about looking for the site of their dream home is a great way to increase the price tag of the lots.

Contracting to residential housing developers is challenging work. Often the distance between the brush that is to be mulched and the trees that are to be left standing is very tight. The operator is required to creep very close to the standing

trees and also to dexterously maneuver among the trees. Although the M760 is a large machine, it is well suited to the job.

Visibility to the rear is excellent and the machine's steering and drive controls are fine and responsive. The M760 design team also emphasized comfort. The operator's station is insulated, isolation mounted and climate controlled. Machine controls are ergonomically positioned to minimize fatigue.

Pepper is one of very few in the land clearing business using such a high capacity machine. "This machine has a future," comments Pepper. To minimize the impact of high fixed costs, he must wring every bit of productivity out of the machine, always striving for more acres per hour. To do that says Pepper, "you need lots of horsepower. It doesn't matter if you are mulching eighteen inch trees or cutting through small brush, horsepower is the key."

Of course horsepower comes at a price premium and to address the needs of contractors requiring a more versatile, lower cost machine, Tigercat is also building a smaller mulcher based on the 724D feller buncher chassis.

The 240 hp (179 kW) M724D drives horizontal mulching attachments requiring up to 200 hp (149 kW.) The machine can also run a felling head, operating as a feller buncher or mulcher to suit contractors requiring more versatility and lower cost than the high-production M760 affords. As of press time, the first two M724D mulchers are already working. Stay tuned for a progress report... ■

FECON BULL HOG

Although Tigercat mulching machines can accommodate various attachment makes and models, the M724D and M760 mulchers currently in operation are equipped with Bull Hogs.

The Bull Hog reduces brush and wood quickly and at low cost. Heavy-duty construction and endless applications make the Bull Hog a practical wood shredder.

The Bull Hog quickly and easily cuts brush, standing trees and stumps down to ground level. It is most commonly used for

clearing seismic lines, right-of-way, fire breaks, fuel reduction, commercial development, slash reduction and flood control channels. There are no limits to the size or quantity of material that can be processed and the material can be shred into a variety of textures from course to fine.

The Bull Hog can double the productivity of hand cutters and processes more efficiently than traditional push and pile methods and with less environmental impact. ■

Harvesting High Priority

Excerpt from Logging and Sawmilling Journal, October 2002

Quality control is a high-priority task for Al-Pac loggers working in an Alberta aspen fire kill zone.

Last year's massive Chisholm forest fire in north-central Alberta destroyed thousands of hectares of timber and seven homes. Three years earlier, a forest fire destroyed the entire decked log inventory of Tolko Forest Industries in High Prairie and damaged the company's nearby OSB plant.

The size and ferocity of these two forest fires offers compelling evidence to further validate predictions (by such organizations as the Canadian Forest Service) that due to climate change, the prairie provinces can expect elevated forest fire activity in the foreseeable future. Logging contractors working in this area of the mixed boreal forest are being forced to become experts in salvage logging.

Al-Pac, which operates the world's largest single-line pulp mill 200 km (120 mi.)

northeast of Edmonton, is the largest forest company in northern Alberta and one of the affected companies. One of its contractors is Tchir Forest Products.

Owner Felix Tchir has been logging for over 30 years. He can't remember a year like 2001, when all of Al-Pac's contractors spent at least part of their logging season salvaging timber from the aftermath of area forest fires, from blow down and even from the

remnants of a mini-tornado. "It was a year of disasters," says Tchir.

His company operates 12 pieces of equipment including two Tigercat 860 feller bunchers, two Tigercat 630 series skidders and a Tigercat D860 equipped with a 2300 Risley stroke delimeter.

The salvaged burn wood is a problem for Al-Pac because Kodak and Fuji are two of its largest customers. They demand high quality pulp for the manufacture of photographic paper. Since blackened aspen does not lend itself to quality pulp production, Al-Pac devised a new game plan to salvage undamaged aspen from the Chisholm fire area.

This plan puts quality control pressures on contractors like Tchir Forest Products. A visit to Tchir's salvage site reveals a true logging oddity. The harvested area consists of partially burnt aspen tree trunks standing three metres (9 ft. - 9 in.) high. It's all part of a clever plan to salvage as much clear aspen as possible.

The reason Tchir Forest Products is harvesting trees so high off the ground is because they are required to cut above the burn. "Al-Pac gave us a guideline of two meters," says Tchir Forest Products production foreman Cyril Ulliach. "If we had followed that standard, we would have had to leave half the trees. So, we've been cutting three to four meters (9 ft. - 9 in. to 13 ft.) above the ground."

Tchir says that if they used the two meter (6 ft. - 6 in.) standard, they would be sorting a lot more trees, because they could tell that there was still significant fire damage on a number of trees in the two to three meter range. Yet, if they adjusted the standard to three to four meters, they could harvest more trees and save a lot of time sorting later, as more trees exhibited less fire damage above the three meter level.

"We decided very early on that our feller buncher operators had to take care of most

Tchir Forest products owner Felix Tchir.



of the quality control,” says Ulliac. Both 860 feller bunchers are ER-equipped.

Operator, Harvey Schaub can vouch for the ER boom’s ease of operation. “I noticed the advantage right away in that I didn’t have to do much with my right joystick,” says Schaub who has 15 years experience. “You pretty much push away from yourself with the joystick and the two booms move together. One function does two things automatically. I only have to use the right joystick to manipulate the head as far as the angle of my saw when I’m harvesting a tree.”

Because it is so difficult to find experienced feller buncher operators, Tchir says the ease of operating the ER boom makes hiring a rookie operator less stressful. “With the ER boom, the operator doesn’t have to learn as many functions.”

Although Tchir’s current practice of leaving three-meter trunks has meant that designating skid trails requires more care and attention, “in fact, it has increased our productivity a bit because we are not having to double-cut the stump.”

The company’s second line of quality control defence is the skidder operator, who again is expected to sort burned stems from quality stems. According to Tchir, this is where the Tigercat 630 with hydrostatic drive has really paid off. The operator doesn’t have to concentrate on changing gears, as with other skidder brands. Forward and reverse drive are controlled by two floor pedals. Also, the skidder comes to a stop when the operator takes his foot off the drive pedal. Therefore, he can pay more attention to the logs, especially in this unique environment.

“We’ve also noticed that there is considerably less wear and tear on the skidder because there are fewer jerking motions with the hydrostatic drive,” says Tchir. “That gives us a lot more uptime. Also, the skidder is more operator-friendly, especially for

newer operators. They will do a lot less damage to that machine when you are training them as compared to other brands.”

He adds that the skidder’s sturdy steel construction provides him with a good return on his investment and the purchase price was comparable to competing skidders. His oldest Tigercat skidder now has 4,200 hours on it, without having experienced any significant downtime.

This type of salvage operation is time consuming and tedious. However, Tchir Forest Products is learning a new harvesting method that may prove invaluable if the current forest fire trend continues. ■

The company’s equipment line-up includes two Tigercat 630 skidders with hydrostatic drive, which gives operators the opportunity to focus on skidding logs instead of changing gears.

The 860 feller buncher with ER boom system. Tchir recently bought a second 860.



A D860 delimeter processes wood at the deck - the final component of the quality control chain.



CONTRACTOR PROFILE: Tapscott Brothers Logging

Scottsville, VA - In the picturesque rolling hills south of Charlottesville, Virginia and near historic Monticello, home of Thomas Jefferson, we find Binky Tapscott on a 100 acre (40 ha) tract of twenty year old pine. It's Friday and since his son Dexter is on a four-day school week schedule that happily ends on Thursday, he is operating the Tigercat 635 skidder for the day.

Tapscott Brothers Logging is a partnership between Binky, his brother Guke and their father Harvey. Small wonder that Dexter breathes, eats and sleeps logging - it seems to be in his blood.

Tapscott Brothers normally run two crews characterized by impressive and efficient operation. There are two loaders at the deck. The first runs the FDT 6000 combination flail-delimber (more on this later.) The wood is sorted into tree length saw logs or shortwood pulp. The second loader is dedicated to loading two trailers at a time, one bound for a local sawmill, the other for a Westvaco pulpmill 200 miles (320 km) away. Binky and Guke have a fifteen-year relationship with Westvaco and have been in the business for a total of twenty years.

The six-wheel 635 skidder is transporting monstrous drags of pine. Even though it has been raining heavily in the area for the last couple of months, it is not a messy site. The rear bogie axle on the 635 cuts down on ground pressure and the machine is running over an orderly mat of limbs and tops. Binky stresses that an important role of the skidder operator is to establish a road for himself, "because you never know when it's going to start raining."

Binky and Guke are relatively new Tigercat customers. They first caught site of the prototype 635 at the Richmond show in the spring of 2000. Binky recalls, "You remember big events, like when you saw the first 635. I looked at Guke and said that would be the ticket."

The second encounter occurred a few months later at Demo 2000 in Kelowna, British Columbia where the 635, piloted by a hotshot BC operator was hauling big loads on steep hills.

Tapscott Brothers Logging is not involved in lowland or sensitive site logging and the terrain is not very steep. So I ask Binky why they felt such a strong requirement for the 635. Wouldn't any four-wheel skidder do the job? Binky doesn't hesitate for a moment. "The advantage is the load size." Then, only half joking, "If you want to improve the machine, make the tongs even bigger." At 25 sq. ft. (2.32 m²), the 635 grapple has the highest load capacity of any skidder commonly used in the American southeast.

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Binky Tapscott with son,
Dexter.



The Tapscott's new 724D.
Kenneth Goff, is using the
5600 head to its full
potential.

cont.. from pg. 3.

Reliability hasn't been an issue — structural or mechanical. With nearly 3300 hours on the meter, the Tapscotts have experienced no significant problems with the machine.

We walk back to the woods to get a look at the final component of the system, a new Tigercat 724D feller buncher with a 5600

bunching saw. "It's a very solid feeling machine" says Binky, "and the [5600] head is one of the most important features."

Binky places a great deal of importance on the need to fill the head as full as possible to get good production

out of a feller buncher. Looking out over the clear-cut one can see nothing but perfect, parallel and butt-aligned bunch after bunch. It is highly apparent that the operator Kenneth Goff, is using the machine to its full potential.

Later, we head over to Tapscott Brothers headquarters, a 9600 sq. ft (890 m²) combined office and shop facility with a separate wash bay. Here, the Tapscotts employ four full-time people in the shop and two office staff. The entire fleet of Tapscott equipment gets serviced here. The brothers also run an excavating business and do cattle farming on the side, so all the excavating and farm equipment is serviced

here as well. When the mechanics aren't too busy, they build log trailers.

In the yard, Binky shows me the first chain flail delimeter that he built. That project has morphed into the FDT 6000 combo. It's a combination chain flail-pull through delimeter. The pull-through component limbs stems up to 24 in. (60 cm) and the twin drum flail effectively removes the small limbs. CSI is manufacturing and marketing the new unit and the prototype FDT 6000 is in action at the Tapscott job. Binky has been doing a bit of traveling as of late, promoting the units to fellow loggers throughout the southeast.

The Tapscott Brothers plan to add more Tigercats to their equipment fleet because they feel that the machines are well built and the factory is responsive. As part time inventors themselves, Binky and Guke definitely have an admiration for engineering and appreciate the speedy innovation that is ongoing at Tigercat.

Binky relates a story when he and Guke were touring one of the Tigercat facilities. Guke mentioned that he would like to have a feller buncher with a tandem front axle. Fifteen minutes later, the tour group arrived at the wheel feller buncher plant where an engineering drawing of a front bogie feller buncher was waiting for them. You've got to be careful what you ask a Tigercat engineer for - you just might get it. ■



When the mechanics aren't busy, they build log trailers. Binky's three year old daughter Sloan, picks the colors.

"The advantage is the load size." Binky and Guke wanted the highest capacity skidder they could get their hands on.



Tigercat leveling feller buncher line-up

Tigercat's four-way leveling system is the best in the industry. The extreme duty FH400 leveling undercarriage has long, nine roller track frames, providing excellent stability in uneven and challenging terrain.

The leveling system is constructed with massive pins and cylinders and thick steel plate. Roller bearings eliminate the sloppy feel common to competitive machines that use plain bushings.

The FH400 leveling bottom is available on two models with two configurations each. The result is a machine that can be completely customized to specific applications and preferences.

Here is the rundown of the new leveling feller buncher model designations.



L830 and LX830

- The 830 series zero tail-swing feller bunchers are 240 or 280 hp machines, depending on engine options.
- The operator's station is large with unmatched visibility to the right side when compared with all competing zero tail-swing feller bunchers. The front windshield is floor to ceiling and also serves as the primary entry and exit door.
- The cooling fan is hydrostatically driven and reversible to quickly clear debris and the cooling system is isolated from the engine compartment.
- The 830 series machines are available with either a 100 US gal. (378 L) fuel tank or a high capacity 130 US gal. (490 L) fuel tank, which eliminates the rear cab window.
- The L830 has a load sensing hydraulic system with open loop track drives. The LX830 also has a load sensing hydraulic system but with the added feature of closed-loop track drives.
- Degrees of tilt for leveling system: 25° forward, +/-20° to each side and 7° to the rear



L870 and LX870

- The 260 hp 870 series machine is Tigercat's full-size high production feller buncher.
- Like the 830 series machines, the leveling version comes in two configurations: The L870 uses open loop track drives and the LX870 uses closed loop track drives.
- The 870 series feller bunchers are standard equipped with the Tigercat 5700 felling saw.
- The 870 engine enclosure retracts to form a large work platform and provides easy access to the cooling system, engine, valves and daily maintenance points. The oversized cooling system has a tilt-out oil cooler for easy cleaning.
- Degrees of tilt for leveling system: 20° forward, +/-15° to each side and 7° to the rear



Redhead Equipment in Saskatchewan

Redhead Equipment to take over Tigercat distribution in Saskatchewan.

Tigercat is pleased to announce that Redhead Equipment Ltd. will serve as Tigercat's full-line forestry equipment dealer in the province of Saskatchewan.

Redhead currently operates six facilities in the province, accompanied by a fleet of twenty fully equipped service trucks and product support representatives. Redhead maintains a deep focus on customer service and satisfaction.

Progressive in its used equipment sales operations, Redhead's used equipment sales force has developed an expertise in managing effortless cross border sales into the United States.

Celebrating their 55th year in business in 2003, Redhead Equipment Ltd. has built a reputation as Saskatchewan's premiere supplier of new and used motor graders, construction and agricultural equipment and heavy trucks. Redhead has outpaced its competitors by offering superior product lines, state of the art facilities and unrivaled customer service.

Redhead Equipment was recently named one of Saskatchewan's Top 100 Companies by Saskatchewan Business Magazine. In the August 2002 issue, Redhead Equipment was awarded the ranking of 10th in the list of Saskatchewan's top private companies, and 31st overall. More info? Visit www.redheadequipment.ca ■

2003 SHOW SCHEDULE

Tigercat or a Tigercat dealer will be exhibiting at these shows in 2003. For an up to the minute listing, go to www.tigercat.com and click on 'upcoming events'

SHOW	LOCATION	DATE
Canadian Forestry Exhibition	Fredericton, NB	Mar 14-15
NFP Equipment 2003 Expo	Bangor, ME	May 16-17
Northern Alberta Forestry Show	Grande Prairie, AB	May 9-11
All American Loggin' Demo	Tuscaloosa, AL	May 30-31
SkogsElmia	Jönköping, Sweden	Jun 11-14
Logfor Logging & Forestry Show	Quebec City, PQ	Sept 4-6
Lake States Logging Congress	EsCANabe, MI	Sept 4-6
Carolina Loggin Demo	Vass, NC	Sept. 19-20
Expocorma	Concepcion, Chile	Nov 12-15

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