

B E T W E E N the BRANCHES

Vertically Inclined

By Anthony Goad

Young Louisiana logger vertically integrates his business to control costs and capture profits.

In speaking with Sawyer Cason, it is hard to believe the man is only in his early twenties. His management skills and knowledge of forestry, equipment and harvesting operations normally reside with individuals twice his age. Wayne Ammonds, salesman at Patrick-Miller Tractor Company jokes that "Sawyer is a forty-five year old in a twenty-five year old man's body."

Cason learned a lot from his father, Edgar Cason, a well respected Louisiana logger with decades of experience. Despite his lineage and his father's guidance, the junior Cason has forged ahead on his own merit and initiative. Cason is not only a successful logger, but has developed Cason Timber Co. Inc., a thriving timber buying business.

Cason states that being a wood dealer is very different from being a logger. "Some days I wish I was just a logger," he admits. Cason bids on timber tracts and contracts the harvesting and log hauling to his logging company, Fairview Trucking Inc. The wood is sold through Cason Timber Co. Inc. to various mills based on pricing and trucking distances. Cason has integrated trucking into his business to capture the associated profits, improve reliability related to transportation and to eliminate the cost uncertainty of contract hauling.

Although the risks are greater, Cason is

quick to point out that by buying and selling his own timber he controls his destiny. The trick is to avoid overpaying for a tract and timing the harvests for maximum profitability. Weather is an important factor in determining when it is most profitable to harvest a particular tract. "If it has rained a lot you may not be able to work some land effectively and profitably – so I have to scramble to find a place for us to go," Cason explains. Fuel cost is another important variable. "I don't get a fuel adjustment from the mill like other loggers, so I have to work very efficiently."

The current price of fuel is one of the reasons Cason is so satisfied with the Tigercat purchases he has made –

INSIDE

- LH830 in New Zealand pg. 3
- Lauhon Logging pg. 6
- Elmia 2005 pg. 8
- 860C Feller Buncher pg. 10
- Logging in Minnesota pg. 13
- Tigercat News pg. 16

cont. on pg. 2.



"The 244 cab is well suited for a big guy like me and the machine is much sturdier and quicker than the competition," says Cason.



cont. from pg. 1.

particularly his latest acquisition, the 244 loader. "We had another manufacturer out on our job for several days last week and he was the one that informed me that the 244 was only burning four gallons of fuel an hour."

Aside from the low fuel consumption, Cason likes the way the 244 is built. "It's just more solid than the competition."

Cason spends most of his days in the office or evaluating potential timber tracts but often he will fill in for his operators if they are sick or on holidays. "The 244 cab is well suited for a big guy like me and the machine is much sturdier and quicker than the competition."

Although the Casons have operated Tigercat wheel feller bunchers since the first few 726s were sold in the state by Louisiana Machinery, Sawyer didn't buy a Tigercat skidder until he was working a particularly wet tract a couple of years back. The skidders he owned at the time were running 35.5 tires and Ammonds brought him a Tigercat 630B with 30.5 rubber to demonstrate.

Sawyer recounts, "I told Wayne that there was no way that the 630B could out pull my machines with 35.5s. When it did it the second time I was sold and have been a Tigercat skidder customer since."

Due to flotation requirements, Cason's skidders are equipped with factory installed SWEDA axles. 630B operator Danny Hudson loves the machine and uses its inherent advantages – hydrostatic drive, excellent weight distribution and the twin cylinder 18.5 sq.ft. (1.72 m^2) grapple to enhance productivity. "If Danny can't get the wood with the 630B then it can't be got." Cason also really likes Tigercat's new twin cylinder grapple design because it "holds the wood so much better."

While his earlier Tigercat feller bunchers were 726s, Cason now prefers the 720D with

the 5500 bunching saw. Cason looks out over the large timber and rolling terrain of the clear cut tract he is working and says, "This would be best felled by the 726, but you can't beat the versatility of the 720D." Due to the uncertainty of whether he will be working thinning or clear felling tracts, he needs the ability to adapt and feels the 720D is best suited to his range of applications.

Impressed with Tigercat's product line up and approach to building premium logging equipment, Cason sees a bright future with his Tigercat dealer, Patrick-Miller Tractor Co. of Many, LA. Although he often works in the Shreveport area approximately two hours from the Many store, Cason gets the best service and support from Patrick-Miller.

When one of his loaders was down recently, the dealer who had sold it to him said it would be two or three days until they could fix it. Cason called Patrick-Miller service technician Gene Stockton and by 9:00 that evening, the loader was up and running. According to Cason, "That kind of service is unmatched in this area. The fact that Patrick-Miller concentrates solely on forestry is important. I don't have to wait for them to fix road grading equipment in Shreveport before they can get to my stuff."

Ammonds says he often brings prospective customers to see Cason's job. Dedication, clear thinking, and effective management skills have made Cason a model logging professional in Louisiana. ■

As this issue of BTB was going to press, we learned that Sawyer Cason just purchased two additional Tigercat 620C skidders. Both machines are working beyond his expectations.

Cason runs Tigercat 620C and 630B skidders.



The versatile 720D in tall timber.



Henderson Logging

The First Tigercat LH830 harvester hits New Zealand's steep terrain

By Matt Roberts, international sales manager

Henderson Logging, based at Kaitaia in the Northland region of New Zealand's North Island, recently purchased a Tigercat LH830 harvester from Titan Plant Services, Otahuhu branch.

Established in 1991, Henderson Logging started off in silviculture and thinning. Fourteen years later the company operates five logging crews in the Kaitaia region and employs 35.

Director/managers, Dan and Les Henderson both operate machines on their respective crews. Les' wife Viv performs all administrative duties. Viv, and Dan's wife Sherril, are also company directors.

Henderson Logging's operations consist of a road construction crew, a pre-harvest road-lining crew, two ground-based crews and one cable crew. The road-lining crew precedes the ground-based crew, manually felling a couple of rows of road or break trees. The break trees are typically large and limby and not a good match for single grip harvesters.

The new LH830 is felling and delimiting full-length radiata pine on the swing yarder cable job. Average diameter is 45 cm and the trees reach a height of 35-40 m. Each stem weighs approximately 1.5 tonnes. According to Titan sales manager John Quayle, the

The Henderson Logging cable yarding crew. Dan Henderson (far right)



machine started work January 25, 2005 in the Northern Cape area of Spirits Bay, working on slopes ranging from 10 to 32 degrees.

It's fitted with the standard ER feller buncher boom with a specially modified tip to carry the Waratah HTH624 harvesting head. The modification was fitted and set-up at the Titan Plant Services Otahuhu facility by Glen Marley, Tigercat district manager for Australasia and southeast Asia.

Glen Marley reports, "This boom option has been exceptionally successful and productive in Australia using these heavier harvesting heads. With these booms and the larger option main lift cylinder, we can achieve a bare pin lift well over six tonnes. The lift combined with the stability provided by the huge undercarriage that pivots so low down in the track frame puts this machine way ahead of anything I've seen in the industry."

The LH830 base machine weighs in at 32,660 kg (72,000 lb.) The patented leveling system pivots only 685 mm (27 in.) from the ground, providing incomparable stability. According to Andy Hoshel, product manager for track machines, the low pivot point "basically shifts the whole upper assembly forward when leveling on a steep incline,



The LH830 harvester felling radiata pine on a steep grade in New Zealand's Spirits Bay.

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improving overall machine stability."

Prior to the purchase decision, the Hendersons traveled to Australia three times to look at L830 carriers. "We knew that because our harvesting operation is so remote we wanted to have the most reliable machine we could get our hands on," comments Les. "After speaking to the owners of Tigercats in Aussie, we knew that we were onto a good thing."

Contracting to the Juken New Zealand Ltd. mill (JNL) in Kaitaia, Henderson Logging harvests approximately 160,000 tonnes of pulp and saw logs. Japanese-owned JNL exports much of the product from the Kaitaia operation to Japan.

JNL has been able to maintain high production and export levels. Conversely, the forestry industry in general in New Zealand is experiencing an extremely worrying and lengthy downturn.

The LH830 bunches the processed stems for the swing yarder.



Innovative and successful contractors like Henderson Logging help keep the cost of resource production to a minimum. The Hendersons have traveled to many forestry operations and exhibitions – all in an effort to

ensure that they are fully aware of any new efficiency-gaining developments and techniques within the industry. Henderson Logging is also a leader in New Zealand with respect to work safety procedures and worker's conditions.

"We saw the L830 leveler working at the Austimber Forestry Expo back in April 2004, but that machine had Tigercat's shear head fitted to it and was working as a feller buncher. Although those machines were very impressive, we decided to wait until we could see an LH830 working with a harvesting head in normal working conditions," says Dan.

"We went back over to Oberon NSW to have a look at Mike Mangan's LH830 / HTH624 working in ground-based radiata pine and took our operator Tom Covich to have a look and speak to the operator for himself. Tom told me that this is exactly the machine we need for our job."

Sherril, Viv, Dan, and Les attended Demo 2004 in Quebec City, Canada and afterward spent two days touring the Tigercat manufacturing and assembly facilities. Upon returning to New Zealand, Henderson Logging immediately ordered an LH830 from John Quayle, Titan's sales specialist for the area.

It took operator Tom Covich a few days to get used to the ER boom and the different feeling of the hydraulic system. He comments, "The machine is just awesome. The boom and slew power is much better than anything I've operated and the stability and track power is just brilliant. The vision out of the cab is great and the cab's layout and comfort is so much better than any of the other machines I tested. The smoothness of the controls and cab's comfort makes you think that you're not working that hard, but then you turn around and look at the increased production at the end of the day, and think yeah that was pretty easy."

"The hydraulics give the head so much grunt and smooth power to the drive wheels. You don't even see the hoses between the outer boom and Waratah swivel joint kick at all when you're going

from forward to reverse with your feed rollers. I've never seen that before on any harvester."

At the time of writing this article, the machine has run 800 hours with no downtime on the base carrier – not so much as an oil leak. "It just runs so cool. The hydraulic temperature sits around 60 to 65 degrees Celsius (140 - 150°F) on a 30 degree day, which is something we've never seen before on any of our other harvesters," says Les. "The thing is that Tigercat doesn't have to change a thing or add extra oil coolers, valving or pumps to make these things so efficient. Glen [Marley] reckons he can modify the hoses from a harvester to a feller buncher in about half a day. That gives us excellent flexibility if our application ever changes."

"To date, we've been very impressed with

our service back-up from our local service guy and Titan Plant in general. Of course Glen Marley from Tigercat keeps in touch with us regularly to see how everything is going. It's the first company I've been

involved with where I actually have the president's direct phone number. That shows how much confidence they have in their product." ■



(L-R) Glen Marley, Kevin Sauer (Henderson Logging service mechanic), Tom Covich (LH830 operator), and John Quayle (Titan salesman).

RADIATA PINE

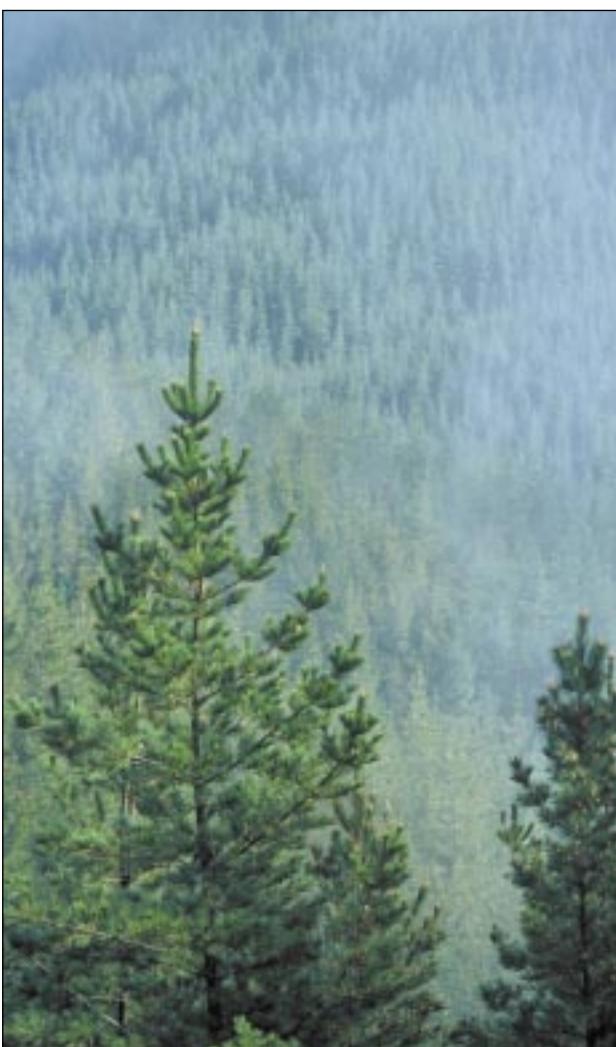
In 2003, New Zealand achieved an annual harvest of 23 million cubic metres. Some sources expect the annual cut to increase to 40 million cubic metres by 2025. Wood is the country's third largest export, generating \$2.58 billion US annually. Less than one percent of the harvest comes from natural forests. The industry is driven by plantation harvesting and the species of choice is radiata pine.

Radiata pine (*Pinus radiata*) was originally named *Pinus insignis* or 'remarkable pine' - an apt name for a tree which has had such a dramatic impact on the world timber scene. Radiata pine is the world's most popular softwood plantation species. Native to southern California and a couple of islands off the Pacific coast of Mexico, radiata is grown in Australia, Chile, southern Europe and the UK, parts of South Africa and New Zealand. Ironically, although radiata pine covers 4 million hectares (9.9 million acres) globally, it is endangered in its native region.

On average, radiata pine reaches a height of 15-35 m (50 - 115 ft.) and a diameter of 30-90 cm (12 - 36 in.). A very fast growing species, radiata is unlike most other non-tropical trees. It grows throughout the year, whenever conditions are favourable.

The unique ability to grow year-round doesn't come without a price though. Radiata is incapable of a dormant stage and thus is intolerant of severe winter frost.

Radiata pine is widely used for pulp and paper production, dimensional lumber for residential and commercial construction, furniture making and landscaping as well as engineered wood products such as fibre-board, particle board and plywood. It is also peeled for veneer. ■



Innovation Breeds Success for Lauhon Logging

By Anthony Goad



Lauhon's system in action. The 630C delivers full trees to the H845B harvester. The H845B merchandises the wood and swings it around in range of the T245 track loader, which travels roadside loading trucks.

According to Jackie Lauhon, owner of J. Lauhon Logging Inc. in Hamburg, Arkansas, logging is not all that different from any other business in today's economy. All companies must adapt in order to survive and grow. He sees competition from other contractors, not only in his own state but throughout the United States and even globally. Unlike many other contractors, Lauhon has risen to these challenges by continually analyzing the business environment, determining the changes required and mitigating the risk associated with the changes.

Lauhon has been modifying and adapting his operations ever since he began logging with an Iron Mule back in 1987. In his latest modification, Lauhon has transformed his conventional pine felling crew into a large quasi-shovel logging operation in an effort to balance production levels between the dry and rainy seasons. "With the wet winters that we have had the past few years, I am shoveling in the winter to help through those hard times."

On the felling side, Lauhon uses a combination of wheels and tracks. Two Tigercat 845 feller bunchers handle the wetter areas and 720C and 724D wheel feller bunchers cut on the higher ground.

A Tigercat T245 track loader acts as the shovel machine. It maintains the skidder

roads, bridging the gaps between the dry patches by building log mats. This prevents rutting and significantly reduces soil disturbance, which is regularly measured by representatives from Plum Creek, the company that manages the forests Lauhon harvests.

Lauhon recently purchased three Tigercat 630C skidders to replace four older skidders. "Tigercat really got it right with the C-models. Those three units can do way more than the four skidders that I used to have." Lauhon is seeing very low fuel consumption. The 630C's are burning 4.7 gallons (18 L) per hour. The skidders feed trees to two track-based processors, a Tigercat H845B equipped with a Waratah HTH624 processor along with a Kobelco excavator.

The plywood and pulp logs are sent to the Georgia-Pacific mill in Crossett, Arkansas. Butt logs are sent to Georgia-Pacific in El Dorado, Arkansas.

The processors work fairly close to the road, taking the tree length wood from the inside and processing trees to the opposite side where the loaders can reach the merchandised wood to load the trucks.

A Tigercat T240 track loader travels up and down along the road picking piles to load trucks. Lauhon sees the track loaders as integral to his operation; they are mobile and versatile. "You no longer have to build large decks for the loader, which saves you a lot of time. As well, you can move the loader so easily and you don't need to interrupt the skidder operator to move the loaders."

With the addition of the processors and track loaders, Lauhon saw increased productivity on that side of the operation. It put more pressure on the feller buncher and

skidder operators to keep up. Lauhon explains, "With this equipment, you have to keep the skidders bringing wood to the processors to keep the operation moving."

The new 630Cs have taken pressure off of the skidder operators but intensified the demands placed on the buncher operators. Lauhon says this has caused some of the buncher operators to get upset with him but he will do whatever it takes to keep the operation going. Lauhon regularly runs the wheel and track bunchers when the regular operators are sick or on vacation.

Lauhon buys equipment from JNS Equipment in Monticello, Arkansas. JNS salesman Mark Woods has helped Lauhon through many of his purchase decisions. Lauhon has been very satisfied with the sales, support and service received from JNS. ■



(L-R) JNS salesman, Mark Woods with Jackie Lauhon and Chris Yaney.

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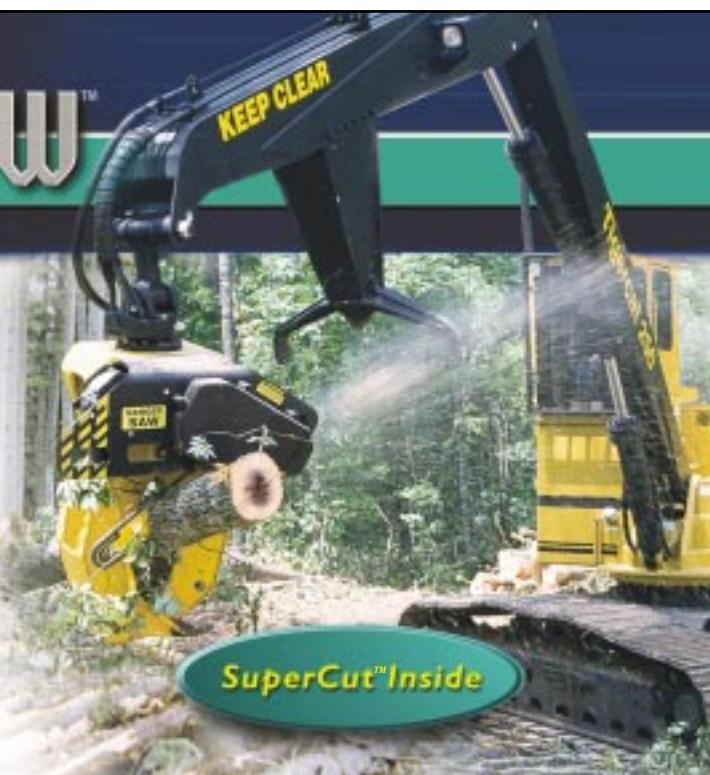
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Elmia 2005

Tigercat brings an extensive range of machines to the world's largest forestry equipment show.

2005 marked Tigercat's third showing at Elmia Wood, widely touted as the world's largest and most important forestry industry tradeshow.



Tigercat debuted the 14-tonne capacity 1055 forwarder

from such diverse countries as Canada, United States, Chile, Brazil, Germany, France, Australia, South Africa, Scotland, Ireland and Russia.

Göran Persson, managing director of Tigercat AB in Hede, Sweden says, "Elmia Wood 2005 was the best Elmia show I ever have attended. Tigercat had a magnificent stand with a full range of both forwarders and harvesters. Our new forwarder line attracted a lot of interest and it is apparent that not only North American contractors appreciate more solidly and robustly designed forestry machines."

The 1065 forwarder was demonstrated by owner/operator Anders Eriksson



The H16 is a high capacity harvester for final fell applications in Sweden and Germany. This machine is equipped with the innovative Pendo hanging cab.



The 2005 Elmia show was especially important for Tigercat as the company unveiled its new family of 1000 series forwarders. The culmination of five years of research and development, Tigercat's new forwarder line consists of the 14 tonne 1055, the 18 tonne 1065 and the 20 tonne 1075. All three machines are powered by the Mercedes 906.

According to Persson, "Our new 14 tonne forwarder was greatly approved by the show visitors. The 1055 will set a new standard for 14 tonne forwarders."

Durable design and construction, a large comfortable operator's station and unparalleled access to the engine and hydraulic components characterize the Tigercat forwarder line. Forwarder designer Jeff Lotz comments, "On the Tigercat forwarders, when you tilt the hood, you get access to the whole engine. When you tilt the cab over, you get access to the entire hydraulic system. This sort of service access is unique to the Tigercat forwarder line."



(L-R) Ron Montgomery, Canadian sales administrator; Anthony Goad, dealer development; Jon Cooper, CTL product manager; Göran Persson, Tigercat AB managing director; Lars Johansson, owner of the first 1075 forwarder; Lex McLean, Forest Centre Pty Ltd managing director (Australian Tigercat dealer); Ken MacDonald, Tigercat owner and chairman; Dick Loton, Western Australia contractor; Matt Roberts, international sales manager; Jeff Loton, Western Australia contractor and Tigercat customer; Jimmy Power, J & K Power Pty Ltd; Jeff Lotz, Tigercat designer, CTL group; Anthony Keegan, Forestry Shop managing director (UK Tigercat dealer); Tomas Hansson, H09 owner and demo operator; Chris Baldwin, Tigercat district manager, eastern Canada and UK; Josh Jenkins, Tigercat designer, CTL group

Tigercat also showed the H09 and the H16 wheel harvesters. As the Tigercat brand name is becoming more recognized in the Swedish market, Elmia 2005 was an appropriate time to introduce these two well established machines painted in Tigercat yellow for the first time ever. The agile H09 – always a crowd pleaser – was demonstrated in a thinning application throughout the four-day event.

"The Tigercat H09 was attracting a lot of

interest and so did our clear felling harvester, the Tigercat H16," comments Persson. "A number of persons from various countries such as Australia, Chile and Germany expressed a genuine interest in the Pendo cabin equipped H16 as well as in the H09 after having taken a ride together with the owners of the harvesters."

To reflect the international presence at Elmia Wood, Tigercat displayed an H860C track harvester in addition to the wheel models. The H860C harvester is a new offering for Tigercat, based on the new 860C platform. Designed in response to market demand from Scotland, the machine attracted especially strong interest from UK, Australian and North American contractors. The H860C may also be well suited to contractors working in the extensive blow-down in southern Sweden and Denmark. ■



The agile H09 harvester performed a thinning demonstration, piloted by operator and H09 owner, Tomas Hansson.





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PRODUCTION EFFICIENCY and 860C feller buncher

By Michael Fischer,
vice president of
manufacturing,
Tigercat Woodstock

Good communication between engineering and manufacturing improves efficiency of 860C production right out of the gate.

In May 2004, members of the track machine advanced engineering group met with fabrication team members to review preliminary designs for the prototype 860C feller buncher. The hope was that collaboration between the manufacturing team in Woodstock and the engineering and final assembly people in Paris would identify potential manufacturing problems as well as generate ideas to gain manufacturing efficiencies.

In 2003, due to floor space limitations at the assembly plants in both Paris and

Brantford, the Woodstock fabrication plant was chosen to take on the complete assembly of subframes for the 200 series loaders. This was the first time since Tigercat's inception that assembly work of this magnitude was co-located at a fabrication plant. The goal was to create additional floor space at the final assembly plant, eliminate duplication of services such as spray paint finishing and allow streamlined and efficient shipping.

Currently, the Woodstock facility manufactures loader, skidder and track feller buncher cabs, upper and lower loader structures, track feller buncher upper assemblies, booms and various drive-to-tree feller buncher components.

A quick summary of the process starts with the brake out department, which manufactures all piece parts from raw material sheet metal and steel plate. Three fabrication groups fit and weld piece parts. Following fit and weld, the machine shop machines piece parts and weldments.

Paint preparation, grit blast and painting operations are performed in the finishing department. This department also does intermediate assembly work such as the installation of doors on cabs and full assembly of the loader subframes.

Building on the success of the loader subframe project, the track feller buncher group hoped to gain similar efficiencies on the new 860C/870C series track machines. An integral part of the plan called for the upper frame, consisting of a dozen fabricated components, to be pre-assembled in Woodstock and shipped to Paris as one part. This would create additional floor space in Paris, ensure the proper fit-up of the sub-components and streamline the production process.

Grant Somerville, advanced engineering group, is enthusiastic. "So far the results have been very good, with improved fit and finish and lower overall costs."

The upper turntable assembly including the fuel tank, hydraulic tank, roof and engine enclosure is assembled and final painted in Woodstock. According to track machine assembler, Paul Brown, "A lot of ground is made up in final assembly because the machine doesn't have to be masked and painted again."

Communication between the engineering, fabrication and fixturing teams prior to the issue of first-release 860C drawings allowed potential design and manufacturing problems to be identified and eliminat-



ed even before the first machine was built. Tooling needs were identified before the first frames were manufactured and consequently many jigs, fixtures and templates were used in the manufacture of the prototype machine. These tools allow for improved product consistency and increased manufacturing throughput.

"Improving the quality and reducing the cost of a complex structure like this is a difficult task," explains Somerville. "Everyone involved needs to see the whole picture and communication is key. Our strategy with the 860C was to give the manufacturing of the entire structure to one group under one roof, where everyone from brake out to finish paint could see how their work affected the final product. This project involved people from design, planning, tooling, machining, fitting and welding, brake out, paint, QC and final assembly. I'm very impressed with the way everyone involved took on a project of this size and made it work."

Upon completion of the first 860C, members of the Woodstock fabrication team visited their assembly and engineering colleagues and saw the completed prototype machine. Everyone had the opportunity to discuss challenges they faced with the new machine and propose solutions.

This close interaction between the design

Woodstock Tigercat plant vice president of manufacturing Mike Fischer (extreme left), along with Igor Levkovich and Grant Somerville (advanced engineering group) and the Woodstock fabrication team posing in front of the prototype H860C they worked on.

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engineers, assemblers, fabrication team members and the tooling group has resulted in a very successful prototype experience. Tigercat faces significant competition in the marketplace and efficiency challenges in

light of a 100 percent increase in the cost of raw material steel and many petroleum based products over the last 18 months. Continued collaboration is key to future success. ■

A blast from the past... The entire Tigercat team in front of the prototype 853 feller buncher back in 1994. This extremely successful model gave rise to the 860 and the third generation 860C.



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Tigercat

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Feeling Minnesota

By Mike Ross, sales coordinator

The logging industry in Minnesota has undergone quite a transformation in recent years. The mills have a healthy appetite for fiber, and contractors like Berthiaume Logging are working hard to oblige.

It's early afternoon in February and Jacob Berthiaume is en route to his cousin's college basketball game. Berthiaume should be running the feller buncher but today he feels the game is more important. Besides, Berthiaume knows he can easily make up the time with his Tigercat 822. In his late twenties, he is an excellent operator with natural talent when it comes to felling wood.

Berthiaume's Tigercat 822 is equipped with a 110 degree wrist and a Tigercat 5400 felling saw – an ideal set-up for the type of conventional logging he is involved in. Typically, he is clear felling or selective cutting aspen, maple and birch.

Soil conditions are usually sand or clay with rolling hills. The 5400 saw and mid-rotation wrist work great in all conditions Berthiaume faces. "The maneuverability of the 5400 saw along with the 110° wrist, make it so easy when selective cutting in thick forests," says Berthiaume. "That 5400 saw can cut and place wood fast." Although he thoroughly enjoys this machine, he is already talking about his next Tigercat being equipped with a high rotation 340° wrist. With the extra rotation, he figures he will be able to cut and place wood even more quickly.

The trees are conveyed tree-length using four-wheel grapple skidders to a central delimiting area. Stroke delimiters remove the branches and tops. Loaders equipped with circle saw slashers merchandise and stack the logs. The majority of the wood goes to Sappi pulp and paper mills in eight or sixteen foot (2.4 - 4.8 m) lengths.



Berthiaume is responsible for felling the wood and laying it in bunches specific to species. At any given time he is working for five or six different contractors. Although he always stays ahead of the skidder operators, downtime can easily change that. "Knock on wood, but I haven't had any downtime yet this winter."

In high school, Berthiaume worked weekends and holidays for the family business. Right out of school, he began working full-time for Berthiaume Logging. He started as a skidder operator, then switched to a '78 Deere 693B feller buncher. He subsequently ran a Case 1187B, Timberjack 608 and Timberjack 608B before upgrading to the Tigercat 822.

Berthiaume Logging, owned by Jacob's father and two uncles, purchased the 822 in September, 2003. Jacob notes that although the TJ 608B had more track speed, it lacked track power compared with the 822. "I can easily make up for the slower travel speed. I only cut 200 cords in a ten-hour day with the 608B, whereas now I can cut 300 cords on average in the same time, same

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conditions with the Tigercat," says Berthiaume. "The maximum I can cut with the 822 is 500 cords whereas with the 608B, it was only 250." On average Berthiaume cuts 10-12 in. (25-30 cm) diameter trees that are 55-60 ft. (16-18 m) in height.

Berthiaume attributes the production difference between the two machines to the extra boom reach. At 28 ft. (8.5 m), the 822 has four feet of additional reach compared with the 608B. The low effort ER boom system is also a likely factor.

"The speed of the functions is far greater compared to the 608B," says Berthiaume. "I also have to attribute the production difference to the comfort of the cab. With the 608B, my legs would cramp up after four or five hours, whereas in the Tigercat I can go ten hours without feeling any discomfort. Saw recovery is very minimal with the 822 whereas with the 608B, I had to wait between cuts to let the saw recover."

"The fuel economy is approximately 20% better too and with the increase in fuel

costs, it really helps out. The only negative comment about the 822 is the weight. The 608B was only 51,000 pounds (23,000 kg) whereas the 822 weighs in at 69,000 pounds (31,000 kg). We are now set-up to float the 822, whereas at first we were not."

Before purchasing the 822, Berthiaume toured the Tigercat facilities with St. Joseph Equipment (Hermantown) sales representative, Larry Ugstad. Berthiaume talked to the track engineers to confirm that the 822 was suited to his application and terrain conditions. Former and current product managers for track machines, Grant Somerville and Andy Hoshel, were a big help. "Grant seemed to know exactly what I was talking about when it came to the conditions I was running in and the problems I was having with my current machine," says Berthiaume. "He had answers for everything I threw at him."

In 2005, Berthiaume is planning to fell 33,000 cords – 7,000 cords less than last year. "Last year was a better season because

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the cold weather came before the snow fell and it came on time," says Berthiaume. Frozen ground allows access into job sites that are normally inaccessible. Conversely, early snow insulates the ground and prevents it from freezing, denying access to certain timber tracts. Volume also depends on the terrain and how many of the contracts are clear-fell versus selective felling.

The majority of the logging in Minnesota is conventional full-tree felling. A few contractors run cut-to-length systems. The difficulty with CTL systems in the region is producing enough volume.

Some loggers are experimenting with track harvesters. With this method, they don't have to use their skidders to return branches and tops to the forest floor from the central delimiting site. In some areas, spreading the brush is a regulation set out by the ministry.

There are over twenty mills in Minnesota; only two accept tree-length logs. The remainder accepts eight to sixteen foot (2.4 - 4.8 m) lengths. Five of the major mills are paper mills, three produce chipboard and two are stud mills. To help overcome the wood supply shortage, the mills have reduced the minimum accepted top from four to two inches (100 to 50 mm).

The price per load has also increased substantially in the past few years. According to Warren MacDougall (general manager of St. Joseph's Hermantown branch) this has helped increase machine sales. "With the price increase, loggers can't afford to have equipment down," says MacDougall.

Contractors used to take a chance and run an older piece of equipment as long as they could. Fibre prices were simply too low to justify new equipment purchases. Many of the smaller contractors were forced out of business. Today, many of the loggers in Minnesota are running newer machines and trading them sooner. At current prices, it's imperative to keep downtime to a minimum and keep the logging trucks busy all day with continuous trips to the mill. This is all good news for Minnesota harvesting contractors, St. Josephs Equipment and Tigercat alike. ■

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New M726D Mulcher

Tigercat has added a smaller mulcher to the land clearing product line to compliment the 425 hp (317 kW) M760. The new, highly anticipated M726D is designed to propel horizontal drum mulching attachments requiring up to 230 hp (172 kW).

The Cummins QSC8.3 Tier II engine develops 245 hp (183 kW) at 1,800 rpm. The machine will mulch standing trees, brush and blow-down and is well suited to commercial land clearing and right-of-way applications. Relatively small and maneuverable, the M726D will excel in residential development applications where the operator must carefully work around standing trees and other obstacles.

The rear of the M726D is neatly divided into three separate compartments. The first houses Tigercat's cross-flow cooling system. The automatic variable speed hydraulic fan reverses manually or on a pre-set timer to clear debris from the coolers. The second

compartment houses the engine. The rearmost compartment contains the hydraulic pumps and filters.



Forwarder Production Expands

Tigercat forwarder production moves to dedicated facility, freeing up much needed floor space for skidder assembly.

As of May 2005, Tigercat forwarder production has moved from Savage Drive in Cambridge where it shared floor space with skidder assembly to a dedicated facility within the MacDonald Steel Avenue Road complex.

With the interest in Tigercat forwarders boosted by the broader product offering, Tigercat has expanded its assembly space by taking over four bays from the MacDonald Steel facility at Avenue Road in Cambridge.

With the development of the 14 tonne 1055, Tigercat now offers three heavy-duty forwarders ranging from 14 to 20 tonnes.

The 15,000 square feet ($1,400 \text{ m}^2$) of additional space dedicated to forwarder assembly reveals Tigercat's commitment to this product line. Tigercat vice-president of production Martin Jennings comments, "The demand for the new forwarder product line

is directly demonstrated by the addition of more and more assembly space and it has just as much to do with the increased demand for skidders," he explains.

"Skidder production outgrew its space allotment at 100 Savage Drive and could no longer share space with the forwarder line."

Longtime Tigercat supervisor Dave Goad has made the transition from wheel feller buncher shop foreman to foreman for the forwarder assembly group. Goad has been with Tigercat for twelve years. He has also been a floor supervisor for the loader and skidder groups. He sees the forwarder group as particularly interesting because of its varied geographic customer-base and component differences. ■



(L-R) Forwarder assemblers: Dan Hodson, Max Adams, Gardner Whyte, Ray Rimmer, Larry Walsh, Richard Bond, and Dan Caldwell.

2005 Show schedule

SHOW	LOCATION	DATE
Arkansas Timber Producers Show	Hot Springs, AR	Aug 12-13
LOGFOR	Quebec City, QC	Sept 8-10
Lake States Logging Congress	Marquette, MI	Sept 8-10
2005 Mid-South Forestry Equipment Show	Starkville, MS	Sept 9-10
Carolina Log'n Demo	Vass, NC	Sept 24
Expo Corma	Concepción, Chile	Nov 9-12

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