

PROCESSOR



Machine Operator
Chris Duval

Log Handler
None

Time
29 min. 0 sec.

Cords Processed
1.5

Cords/Hour
3.1

Woodbine Jr.

IF ANYONE KNOWS his machines, it is Chris Duval. As president and CEO of CRD Metalworks, he designs and oversees the manufacture of the Woodbine line of firewood processors in Williamsburg, Massachusetts. He felt right at home at the controls of the “Woodbine Jr.,” the smallest of his firewood processors. “I designed and built the first Woodbine Jr. just after the 2007 Firewood Competition in South Carolina,” he explained. Chris has worked around sawmills most of his life, so he understands wood as well as the machines that work it. “All my machines are built from off-the-shelf parts,” he continued. He says that this keeps down manufacturing costs, and makes it easier for owners to maintain and repair their machines.

There are several distinctive characteristics built into the Woodbine firewood processors. One is the oversized umbrella over the operator’s station, which, on this cloudy day, did not need to provide shade or (thank

goodness) rain protection. The machine is an open frame design which gives easy access to all the parts. A wooden walkway provides the operator easy access to the length of the infeed conveyer, making it easy to encourage uncooperative logs along the short journey to the cutoff saw. With the cleated chain conveyer, all logs fed without hesitation during the competition.



The Woodbine Jr. has options for either PTO power or, as Chris chose to demonstrate, a self-contained 24-hp Honda engine. On the output side of the Honda is a three-pump hydraulic system, which runs all the functions and is controlled by a bank of hydraulic levers. Chris showed that a good eye and experience can be just as effective as an electric eye on the cutoff saw. Pulling one lever first engages the log clamp, starts the hydraulic chain saw, and pushes the blade through the log. Reversing the lever returns the saw to its upright position and stops the chain. The Woodbine machines incorporate a flow control valve to adjust the cutting pressure according to the wood and saw conditions.

With its dedicated hydraulic pump, the 20-ton hydraulic ram pushed the wood through the 6-

way splitter and returned in about 6 seconds. "I can probably run it a little faster than most people," said Chris. With his left hand on the two splitting valves and his right hand taking care of the log infeed and splitting, the Honda engine never had a chance to drop down to an idle. The 20-foot conveyer is split into two sections with a 2-inch gap between them. This allows the bark and small chips to fall out separately from the firewood.

Chris described his selection of logs, "I think I had bigger wood than most." Even though some of the logs were near the capacity of the Woodbine Jr., the 0.404 pitch harvester cutoff saw handled them all easily. As expected, it did take longer to chew its way through the larger logs, but the machine made respectable time for the process. Man and machine processed the

cord and a half in 29 minutes flat. This comes to 3.1 cords per hour—24% faster than their advertised splitting speed.

Since Chris manufactures both circle saw and chain saw type machines, he was willing to discuss the pros and cons of each. "The circle blade is faster. It cuts the big logs as fast as the small ones. There is also less time for sharpening and maintenance. But it is more expensive, and not everyone is comfortable being that close to a spinning blade that doesn't stop between cuts." He finds the chain saw blades more practical on the smaller machines because owners are less production oriented and like the idea of a blade that only runs when actually making a cut. "They do fine, especially if the wood is clean, and it takes about a minute and a half to put on a fresh chain when it needs it." ■

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