



Wayne Keith designed this “chunker” that busts scrap wood into easy-to-handle pieces. Photo shows green wood being fed into chunker’s drum.



As chunks come off the machine, they’re scooped into piles for storage. Keith uses the little chunks of wood in his wood-powered trucks.

“Chunker” Makes Wood Gas Fuel Fast

Wayne Keith has driven 250,000 miles in vehicles powered by wood gas over the past 10 years (see Vol. 33, No. 2). Little chunks of wood work best in his wood-powered trucks. So, he designed a “chunker” that busts scrap wood into easy-to-handle pieces.

“If I had to buy wood, driving my trucks around would cost less than a penny a mile. But because I use waste from my sawmill, I am driving around for free,” he says. “My home-built chunker can chop enough sawmill slabs into fist-size chunks in a morning to take me to California and back.”

The wood chunker is crude, but it gets the job done. Keith used a rear axle from an International truck and attached a cutting surface to one end with the other end welded solid so it doesn’t rotate. A pto shaft attached

to the differential extends through a heavy cast brake drum that serves as a flywheel.

“The flywheel smoothes out the power requirements and allows faster operation,” says Chris Saenz, Keith’s assistant.

The axle is reinforced by several pieces of channel iron. Other channel iron pieces serve as legs to provide a comfortable working height, bringing the pto shaft level with the small tractor that powers it.

The chunking action is provided by the inner edge of a heavy steel rim mounted on the axle. The inner rim edge has been trimmed on the bias like a spiral, so as it rotates, the edge varies from nothing to full width.

A length of cross-reinforced channel iron mounted just ahead of the cutting rim serves

as an anvil. A steel plate welded perpendicular to the channel iron is a backstop for pieces of wood inserted into the blade.

As the drum rotates, Keith inserts a branch or piece of slab wood. As the drum edge rotates, it breaks off chunks at a rate of 70 to 80 per min.

A small nipper blade on the other side of the drum rotates through a notch in the anvil. “The nipper starts a split in wide boards,” explains Saenz. “Once inserted into the chunker, the split will continue down the length of the board, making two pieces instead of one.”

As chunks come off the machine, they are scooped into piles for storage. Saenz says green wood cuts easiest. Dry wood can be cut, but it’s harder on the machine.

No plans are available for the machine at this time. However, Keith is marketing plans for his wood gas system and has written a book about his work with wood gas. He also operates a website with restricted access for those who have purchased plans, though other parts of the site are open to all.

Keith recently set a world speed record of 73 mph for biomass-powered trucks. For videos related to the wood chunker and Keith’s wood gas-fueled trucks, go to www.farmshow.com.

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Even at 1/3 scale, Charlie Glass’s Big Bud tractor measures 78 in. tall, 78 in. wide and 10 ft. long. “I have to take 2 wheels off just to haul it on my trailer,” he says.

Big Bud 500 Still Big At 1/3rd Scale

Charlie Glass built half-scale tractor models – until he decided to tackle a Big Bud. The monstrous size of the real tractor intrigued him when he saw one on a television program. When it came to building his own, the Mechanicsburg, Penn., model builder decided to go one-third scale.

“It’s still too wide for my trailer. I have to take two wheels (32 by 12-in.) off to haul it,” Glass notes about his finished model, which is 78 in. tall, 78 in. wide and 10 ft. long.

After purchasing a couple of toy Big Buds and downloading specs from the internet, he purchased a used, commercial, 4-WD Jacobson lawn mower. It had a diesel engine to sound like a Big Bud.

He used as many parts as he could off the mower and cut sheet metal to scale to resemble a Big Bud.

“It’s all hydraulic driven on every set of wheels,” Glass says. He marked and used the

hydraulics from the mower and purchased hoses. The first time he hooked them up he discovered that the hoses were backwards on the back set of tires. It was a simple fix to switch them.

Using the swivel joints from the mower, he notes he didn’t have any problems with the articulation. Getting the cab door to open and shut properly was, oddly enough, the most challenging part of the project.

Glass admits that he isn’t a showman, though people who have seen his 1/3-scale Big Bud encourage him to take it to local shows. The retired welder and electrician finds satisfaction in the building process – not showing his results. Another collector purchased other tractors he built, but Glass is hanging on to the Big Bud for now.

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Baler pickup with bent, rusted steel bands.



Pickup fitted with new Tobin poly bands.



In addition to longer wear, hay feeds more smoothly after bands are installed, says manufacturer George Zimmerman.

Poly Pickup Bands Boost Baler Performance

After a custom baler complained to George Zimmerman about rocks and other objects continually bending the metal pickup bands on his big square baler, George and his wife, Faith, developed their new heavy-duty poly pickup bands.

The Zimmermans had been manufacturing traffic cones and other safety products out of various plastics since 2005. The poly pickup bands are their first ag product. The bands are catching on fast with farm equipment dealers across the country who have been signing up to handle them.

“Our goal in developing these was to eliminate the problem of bending and wearing. These bands are made heavy and will withstand impacts without damage. If pickup teeth do rub against the bands, they will not wear through nearly as quickly as steel bands.

In addition, hay feeds through much more smoothly and easily,” says Zimmerman.

The 1/2-in. thick bands have a 1/4-in. support ring on the inside to strengthen and maintain shape. Longer bolts (included) are required to attach the poly bands. Zimmerman notes that you can replace them one or two at a time as steel bands wear, or do them all at once.

They sell for \$22.50 apiece to fit most models of Case IH, New Holland, and Hesston big square balers. They will be available this summer to fit Deere round balers.

Check out a video of the poly bands being installed at www.farmshow.com.

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