

## SAFETY FIRST

IF YOU CONSIDER BUILDING A WOOD CHIPPER LIKE THIS PLEASE THINK SAFETY - ONE SECOND OF STUPIDITY CAN RESULT IN A LIFETIME OF SUFFERING! This piece of equipment has a sharp blade rotating at high speed which is designed to chip small tree branches but will also sever anything else it touches such as fingers.

I have wanted a small wood chipper for several years but could never justify the cost of a store bought unit so this year I finally got around to building one. The pictures below show the basic construction of the unit. It is designed to mount on the front of a 1050 Bolens lawn tractor but could easily be adapted to fit other tractors. It incorporates a 16 inch x 1/2 inch flywheel mounted on a 1 inch shaft driven at engine speed and has four adjustable legs. The front legs are left down for stability when using the unit and the rear legs are for the unit to sit on when it is not mounted to the tractor. The shaft which goes to the tractor PTO is 3/4 inch and both shafts use 4 inch diameter double groove pulleys. The bearings are 3/4 inch pillow block style for the PTO shaft and 1 inch four bolt flange style for the flywheel. The housing and chutes are made out of 1/8 inch steel for strength and protection. The flywheel uses a standard Yardman wood chipper blade with a 1 inch x 5 inch slot for the chips to pass through and two 1/8 inch x 1-1/2 inch pieces of angle iron bolted to the back side to create an exhaust fan. The housing is made up of two halves for easy inspection and replacement of the chipper blade. The flywheel was balanced by supporting the shaft of the assembled flywheel on two small ball bearings at each end and then welding a small weight 180 degrees from the blade location and then drilling away material in the heavy location until the flywheel could be stopped in any location without it moving. The intake chute has a 3 inch by 3 inch opening at the housing end - so far I have chipped up to 1- 1/2 diameter hardwood with good results. I hope you enjoy looking the pictures.



Here is the start - two rings cut off of a 15" car rim and 1/8" x 3" flat iron bent to make



Welded shell. Angle iron cut out for bearings



Welded front and back in. If I was doing this again I would have gotten someone to cut four half circles out of 1/8" plate - would have saved some welding and warpage



16" x 1/2" flywheel and 1" shaft as ordered from machine shop . Cardboard mock up of intake chute and pieces to make



Intake chute opening attached. Starting make cut out for chipper blade slot



Finished slot with support for blade. Shaft welded into flywheel



Test fit of flywheel. Upper half inside view. Ended up putting 1/4" spacer between upper and lower half to ensure flywheel clearance (hindsight is a wonderful view)



Bottom half inside view. Start of sub frame to mount to 1050 Bolens tractor



Subframe with bottom half bolted to it. Assembled and mounted to tractor



**Pulley, belts and drive shaft set up**



**Mounted on tractor for a trial run.**



**Painted**



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