

Bell Housing work Stand

by Tom Endy

A wooden work stand can easily be fabricated to assist in the restoration of the Model A Ford bell housing.



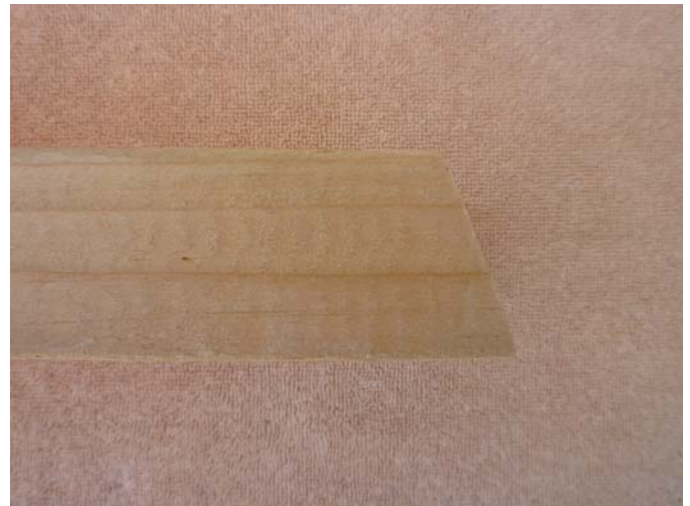
The work stand is constructed of 2X4's and provides a secure platform to remove and install parts on the bell housing. An additional support is added to the rear of the stand to allow the transmission to be bolted up to it.



The hardware required is all 5/16" with 1/2" hex heads in the following quantities. Three hex bolts 3&1/2" long, with three matching hex nuts, five lag bolts 3" long, one lag bolt 1&1/2" long, and twelve flat washers. The washers are 1/4", but will fit 5/16" bolts and lags.



One ten-foot long 2X4 will make two stands with only a few inches of scrap left over. Four pieces for each work stand need to be cut to the following lengths. Top to bottom, 21", 18", 12", and 8". The 8" piece has one end cut at a 20 degree angle.

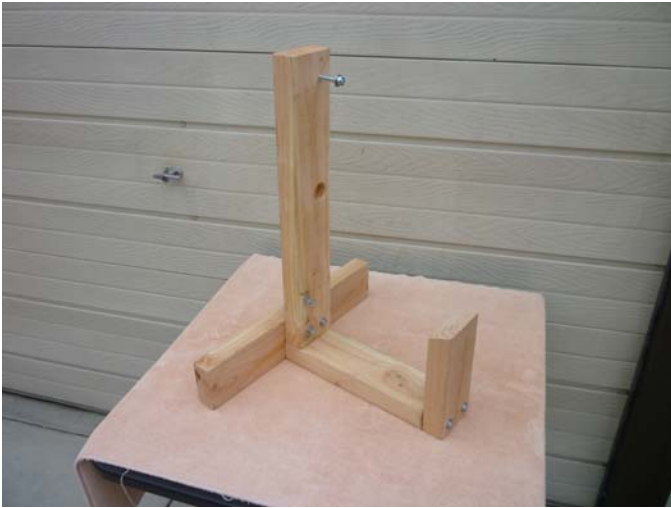


The 8" piece is cut to a 20-degree angle at one end with the overall length at 8".



5/16" holes are drilled in each of the four pieces to accommodate the hex bolts and lag bolts. The 12"

base piece bottom has the two lag bolt holes counter sunk as it sits flat on a work bench surface.



The vertical piece is 21" long. The cross piece is 18" long. The base piece is 12" long. The transmission support is 8" long with the top cut at a 20-degree angle and angle toward the front.

The bolt at the top of the 21" piece is used to secure the top mounting bolt hole of the bell housing. The bolt hole is located 1 $\frac{3}{4}$ " from the top and 1" from the right side. The large hole is a nominal 1 $\frac{1}{4}$ " in diameter (drilled partially through) and is located 7 $\frac{1}{2}$ " down from the top mounting bolt (center line to center line) and 1" from the right side. The purpose of the large hole is to provide a recess for the front end of the input shaft of the transmission when attached to the bell housing.

The 1 $\frac{1}{2}$ " lag is used to secure the bell housing at the bottom using the bottom left mounting hole. A pilot hole is drilled into the vertical piece 1" from the left side. The vertical position of the hole is determined by placing a bell housing on the top mounting hole and positioning the bottom left mounting hole over a line scribed 1" from the left side.

The vertical piece is attached to the front end of the base piece with a single 3" lag bolt. Line up centerlines of the two pieces and drill a pilot hole into the base through the 5/16" hole already pre-drilled in the vertical piece. When the two pieces are secured drill 5/16" holes through the two pre-drilled holes in the cross piece through the vertical piece and install two hex bolts and nuts.



The cross piece is secured to the base piece with a lag bolt at the bottom. The two hex bolts above secure the vertical to the cross piece.



The base piece is secured from the bottom through the countersunk holes with lag bolts into the vertical piece. Care should be taken to offset the two holes so that the lags do not conflict with the two hex bolts above.



The 8" transmission support piece is attached to the rear of the base piece with two lags.

Carpenter's glue should be used when attaching all four pieces.

Flat washers are installed under the head of all bolts, lags, and nuts.



A piece of carpeting is attached to the top of the transmission support with staples and glue to prevent scratching a newly painted transmission housing. The 20-degree angle cut into the support will fit the bottom angle of the transmission housing.



A transmission housing is shown attached to the bell housing. The work stand will easily support the weight of a bell housing and a fully assembled transmission.



The positioning of the lag bolts and hex bolts are a nominal 3/4" from the sides and the centerlines. The only important consideration is that the lags in the counter sunk holes at the bottom of the base should be offset so as not to conflict with the hex bolts above.