

BUILDING AN ENGINE STORAGE FRAME FOR FAIRMONT TWO-CYCLE ENGINES

BY JEFF FORD

In the motorcar hobby, you stand a pretty good chance of accumulating spare parts. Spare engines are among the heaviest and most awkward items to move and store. Specifically, Fairmont two-cycle engines don't lay flat on the floor because the flywheels extend below the base of the engine. It's a pretty simple operation to attach a couple of wood rails or a block of wood to the base of the engine to keep it up off the floor. The main shortcoming of this approach is side-to-side stability.

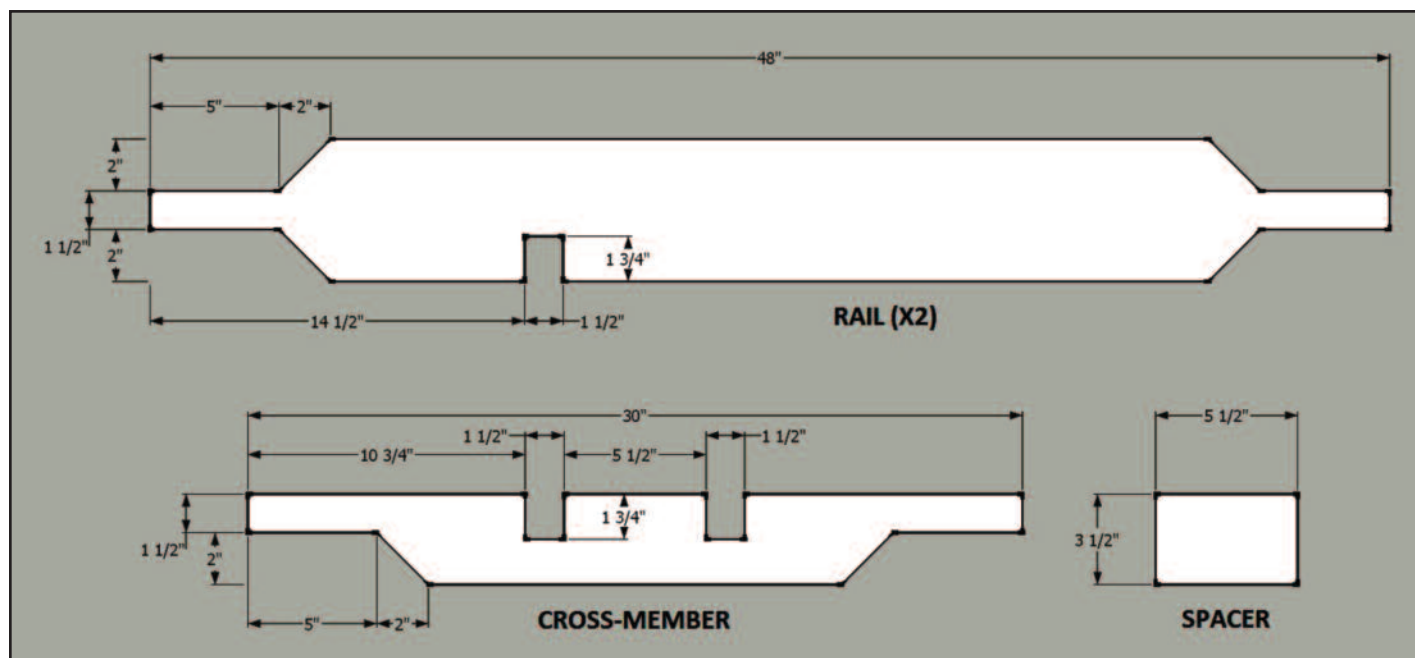
In the course of restoring three ROC engines, my good friend Garrett came up with a refinement of the wood rail idea: He added a horizontal cross-member that provides the needed stability. As a bonus, the ends of the cross-member also provide convenient lift points. These engines are heavy and lifting them is a potentially awkward operation, so the extra lift points come in handy. With this design, it's possible to lift an engine with three people, which gives you an added measure of safety when lifting heavy QB and RQ engines. In addition to storage, these frames can support an engine for test running, if needed.

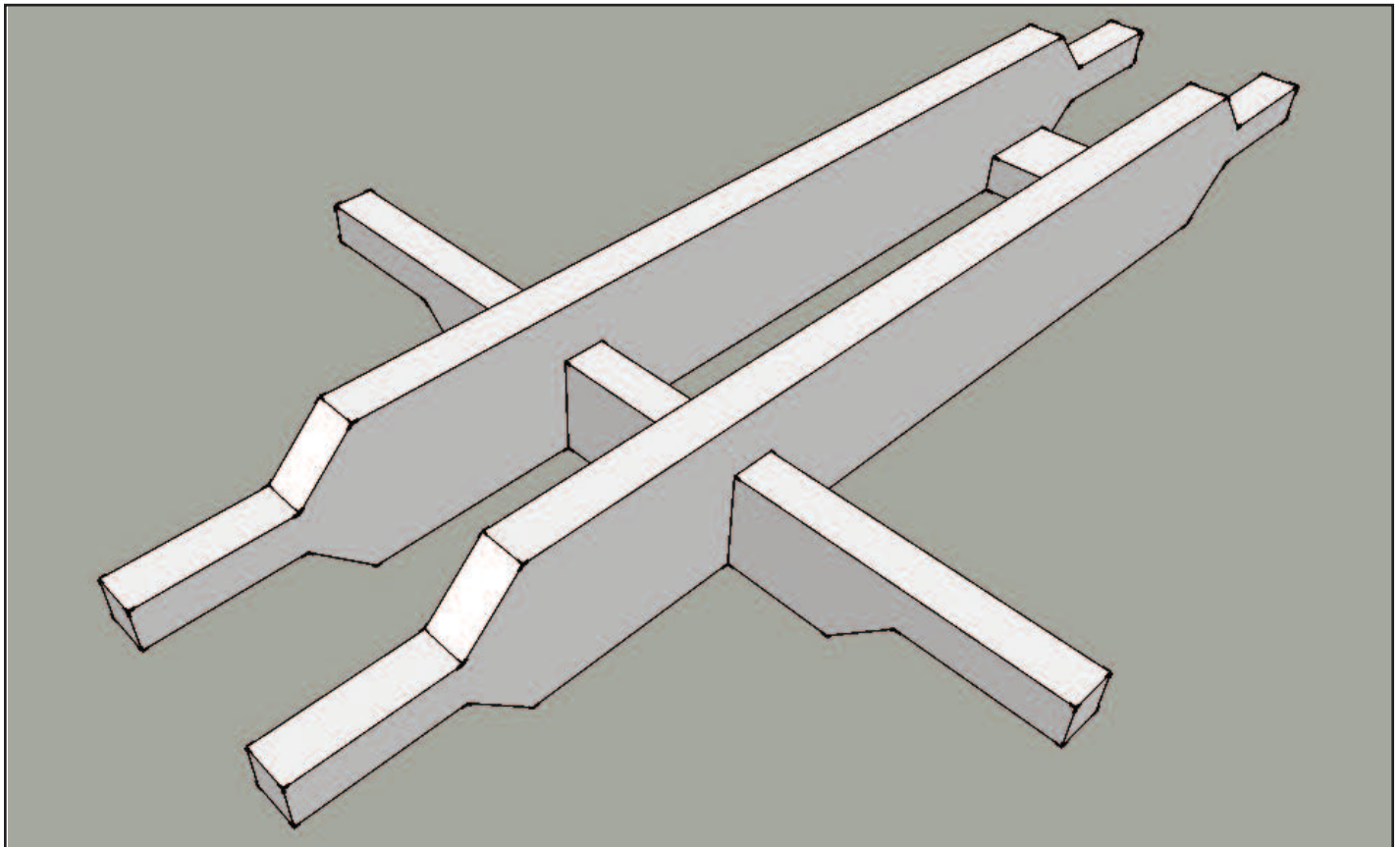
Central to the rigidity of this design is the lap joint between the two engine rails and the cross-member. Also note the spacer block at the rear of the frame. This braces the rear of the frame and provides additional structural integrity. It's important to note that 2x4's

will not raise the engine off the ground a sufficient distance to clear the flywheels. This holds true for both sizes of the Fairmont single-cylinder engines. That's why this design specifies 2x6 material for the rails. We used 2x4 on the first of these and had to add spacer material to raise the flywheels to clear the floor. I rectified that problem with 2x6 material when I built one of these frames for my QBA.

Construction is straightforward and only requires a few tools. Take the time to work safely, using safety glasses and hearing protection. If this project is beyond your skills or comfort, by all means find someone who has the appropriate skills to help. The few tools you'll need to complete this project are pretty common. To cut the 2x6 and 2x4 material to length, you will need a chop saw or a circular saw. To produce the lap joints and the handles, you will need a jig saw, a band saw, or a coping saw. A router can be used to ease the edges of the handles for comfort. A drill is used to make pilot holes for the screws and lag bolts.

Assemble the frame with 2 1/2" "drywall" screws. Lag screws are used to attach the engine to the frame. Drill pilot holes for all the screws; this will prevent the wood from splitting and make driving the screws easier. If you like, you can finish the frame off with small chair casters. If you do plan to add casters, I'd recommend





attaching the rail spacer flush with the bottom of the rails to provide a good surface to attach the casters.

This frame has proven useful for storing and transporting my spare engine. I've also used it on top of saw horses for engine reassembly and painting. I hope this frame will help you "tame" your spare parts pile as well.

* Please note these drawings reflect the dimensions of large QB or RQ-series engines. You will need to change the spacing of the rails for OD or RO engines. In that case, use a spacer block 5" wide and adjust the spacing of the notches in the 2x4 cross-member accordingly. I don't have any experience with the RK "twin" engines, but from all appearances, this plan should accommodate those engines as well.

Cut List for Engine Frame:

- 2 – 2x6x48
- 1 – 2x4x30
- 1 – 2x4x5 ½ for large engine or 5" for small engine

