

RYCA CS-1 FRAME CUTTING GUIDE

[The CS-1 installation guides should be used as supplements to the videos found on our [Youtube Channel](#). There is no strict order to the build process, but it is highly recommended that you read through all of the [guides](#) and watch all the videos before beginning your project. The Clymer manual for the Suzuki S40/Savage is also a good reference, and can be used in the future for service and maintenance. Another great resource is the [Suzuki Savage forum](#).]

This guide covers the frame cutting process. The frame cutting video can be found [here](#).

A bare frame is shown in these steps for instructional purposes. **There is no need to remove the engine from the frame.** An angle grinder with a cut off attachment is recommended for the cuts, but you can also use a Dremel tool, or even a hacksaw. A file or flapper disc can be used to clean up and smooth the edges. Brush-on automotive paint (Duplicolor Universal Black NG SF 100 or similar) can be used for frame touch-ups.

Cutting the motor mount tubes is optional, but highly recommended for a clean appearance. The hardware included in the kit is designed to be used with motor mounts cut to the specs below. **If you choose not to make the recommended cuts, or you make the cuts at different lengths than described below, it's up to you to source the necessary hardware.**

Using masking tape as a guide, mark the motor mounts at the proper lengths to be cut as shown below. A caliper is highly recommended:



Begin with the top right motor mount. Measure and mark it at **1.75 inches from the end**:



Next is the bottom right motor mount. Measure and mark it at **1.75 inches from the end**:



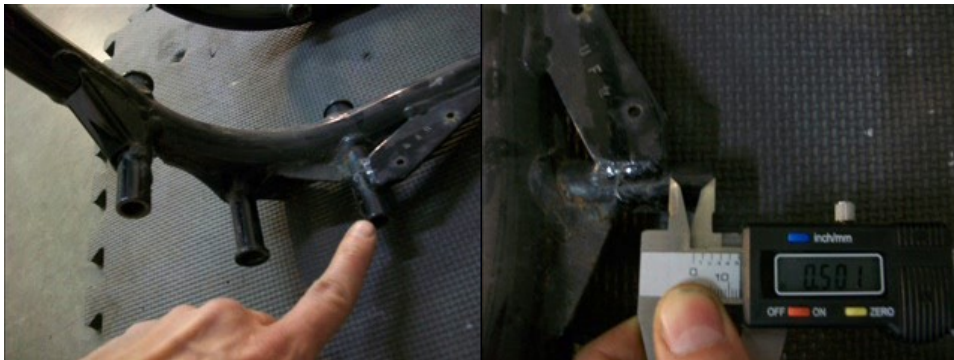
Next is the sidestand mount on the left side (between the top and bottom motor mounts). Measure and mark it at **1.5 inches from the end**:



Next is the top left motor mount. Measure and mark it at **1.0 inch from the end**:



Next is the bottom left motor mount. Measure and mark it at **0.5 inches from the end**:



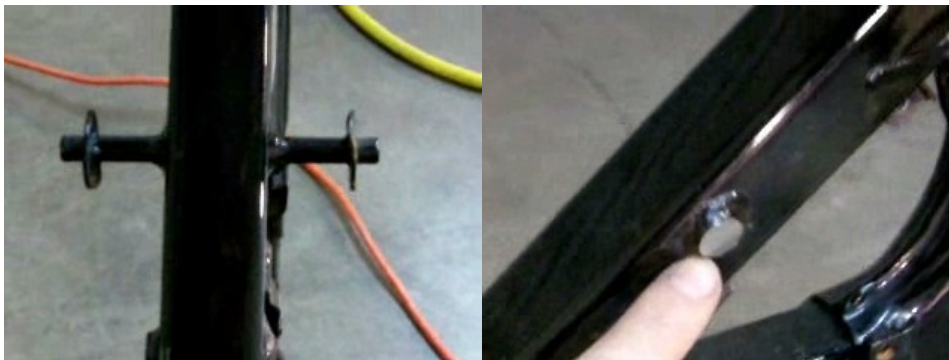
Cut the motor mounts at the tape lines you have marked off:



Use a file or flapper disc to make sure they are smooth and perfectly flat when you are finished:



Cut the stock tank mounts off. This step doesn't require measurements. Just cut them fairly close to the frame:



Remove the stock keyswitch mount:



In the next step, you will cut the seat tubes. **Note: the cuts to the seat tubes are NOT optional. The seat will not fit if you don't make the cuts.**

A caliper is highly recommended to measure the proper lengths to be cut. Set your caliper to **1.8 inches**. Measure 1.8 inches down from the bottom of the upper bolt holes of the seat tubes. You can scratch the mark into the paint, or use masking tape:



Next, measure **0.65 inches** from the bottom of the bolt holes on the **reverse side** of seat tubes:



Connect the marks you made on the front and back sides with a horizontal line around the circumference of the seat tubes. This is your guide for cutting:



Cut the seat tubes **slightly above the lines you marked**. You can always take a little more off at the test fit stage. Try to make the cuts as straight and level as possible:



Clean up the edges and smooth with a flapper disc or file. The goal is to create a flat and level surface for the seat mount:



Use the seat mount to test the flatness of the cuts you made to the seat tubes. If there are gaps between the tubes and the seat mount, shave off the high spots in **very gradual increments** until the seat mount sits flush with the tops of the tubes:



You can test fit the seat assembly with the tank and side covers at this point. The seat should sit level in relation to the bottom of the tank:



There are also a few tabs on the swingarm that can optionally be removed:



Do not cut the following tab off the frame. It is used as a mount for the sidestand reinforcement strap:

