



Repairing Sony SL-HF750 Open/Eject Mechanism

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Written By: Brian Fox



INTRODUCTION

This guide will show you how to fix intermittent or non-working open and eject functions on the venerable Sony SL-HF750 betamax player due to a cracked gear on the shaft of the transport motor.

TOOLS:

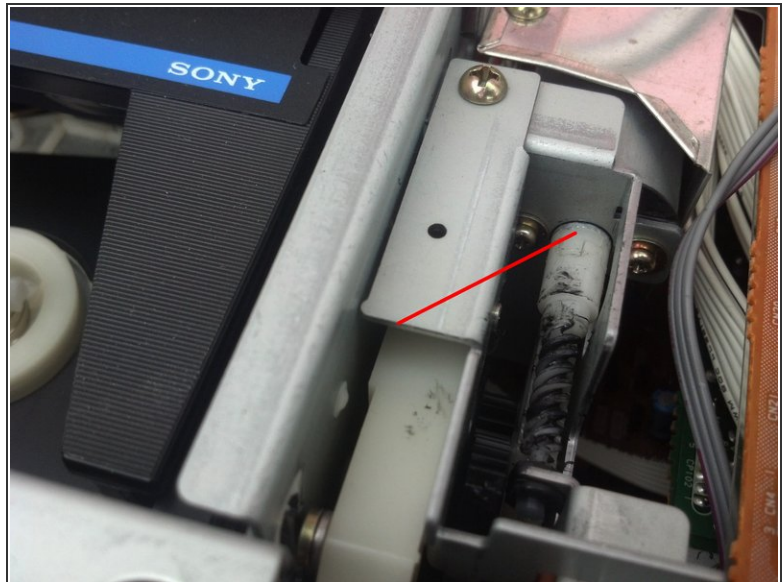
- [Phillips #2 Screwdriver](#) (1)
 - [Phillips #1 Screwdriver](#) (1)
 - [8" Needle Nose Plier](#) (1)
 - [Super Glue](#) (1)
 - [Rubber Band](#) (1)
 - [High Content Rubbing Alcohol](#) (1)
 - [File Set](#) (1)
 - [Soldering Iron](#) (1)
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Step 1 — Repairing Sony SL-HF750 Open/Eject Mechanism



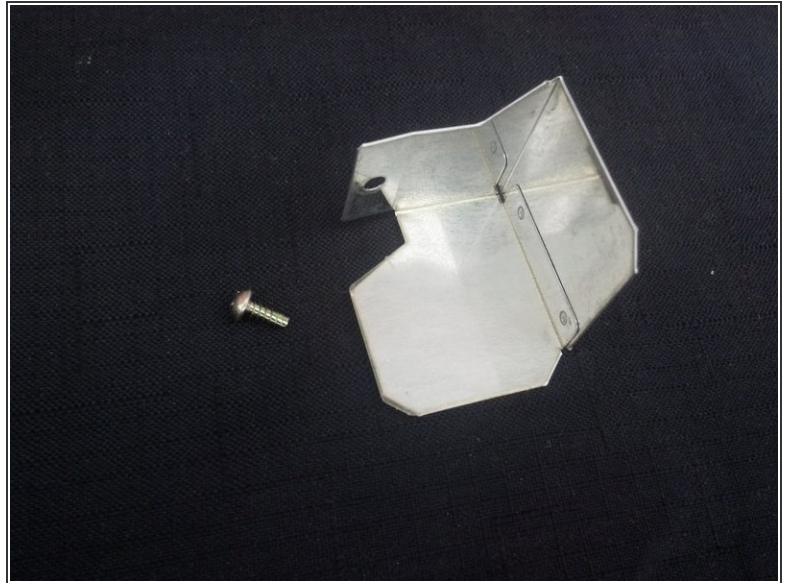
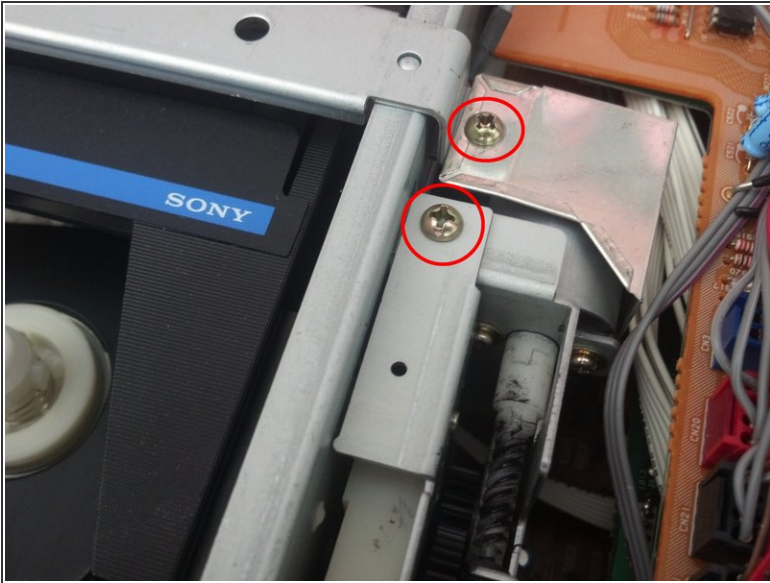
- It's very simple to open up. Just remove the 2 philips #2 screws on each side of the unit and remove the top metal case.

Step 2



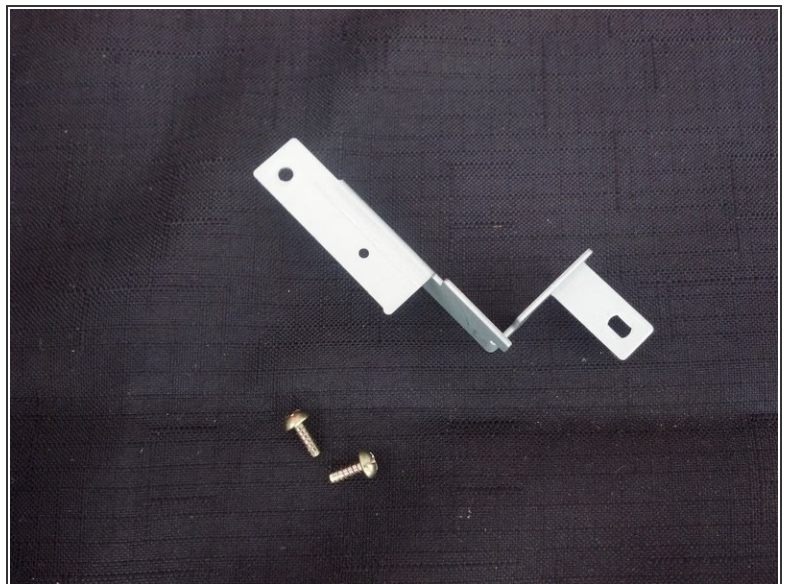
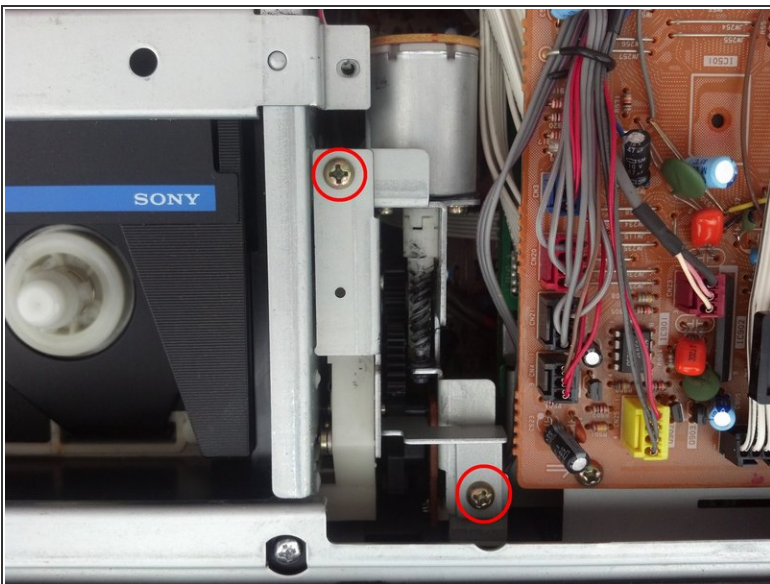
- Now with the top off locate the eject motor. It is in the middle front of the unit next to the main transport. The gear that is attached to the motors' shaft is your culprit.

Step 3



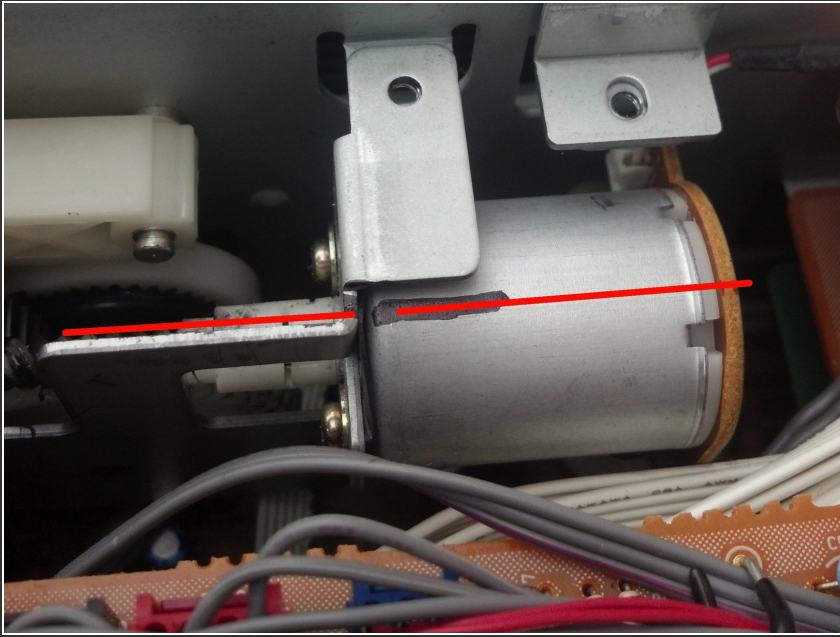
- Remove the screws holding the shield and mounting bracket. Then remove the shield

Step 4



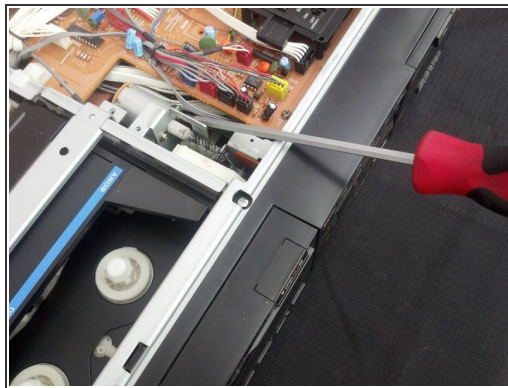
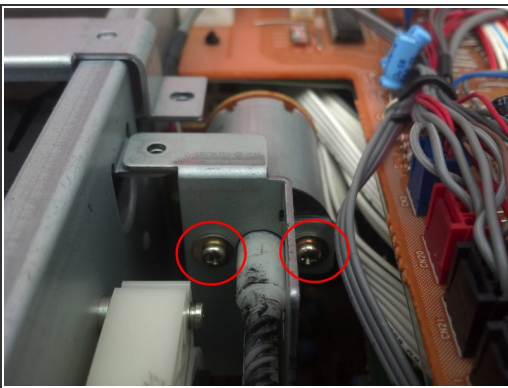
- Remove the bracket screws and then the bracket. Please note that the whole motor assembly is loose now. If you do it right, it will stay in one place, but for safeties sake pay close attention to how everything is lined up, as if you pull the gears outta sync, you will have to realign them, which is not too hard do, but be aware!

Step 5



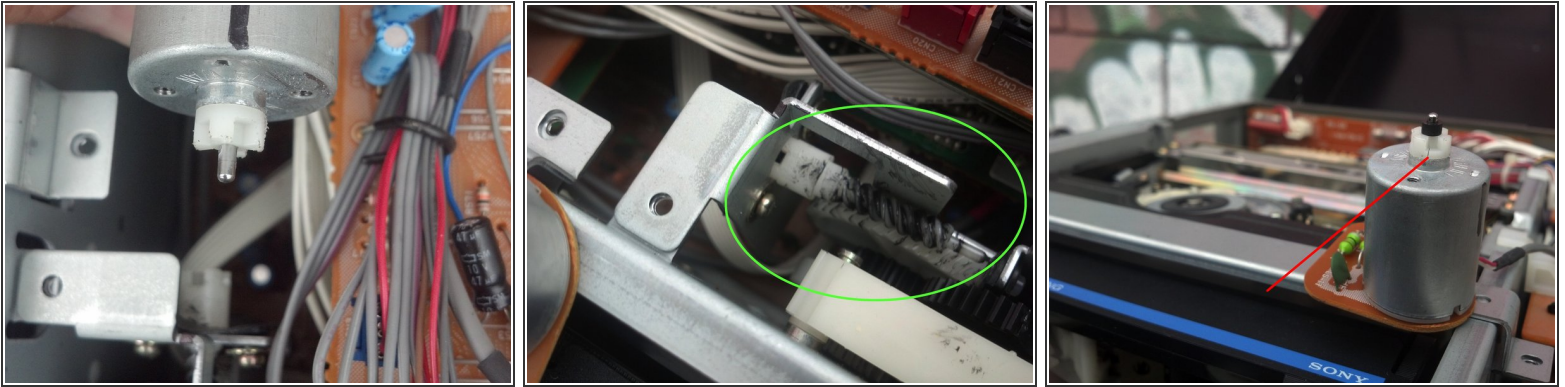
- Now mark the motor with a sharpie so you know how it lines up when putting it back together. Trust me, it seems trivial, but you will thank me later.

Step 6



- Now remove the motor mounting screws with a philips #1.
- You will have to come in at an angle and use some pressure to assure it won't strip the screw.
- Its normal to slightly damage(by slipping) the screws in the process. Being patient and aware will minimize that.

Step 7



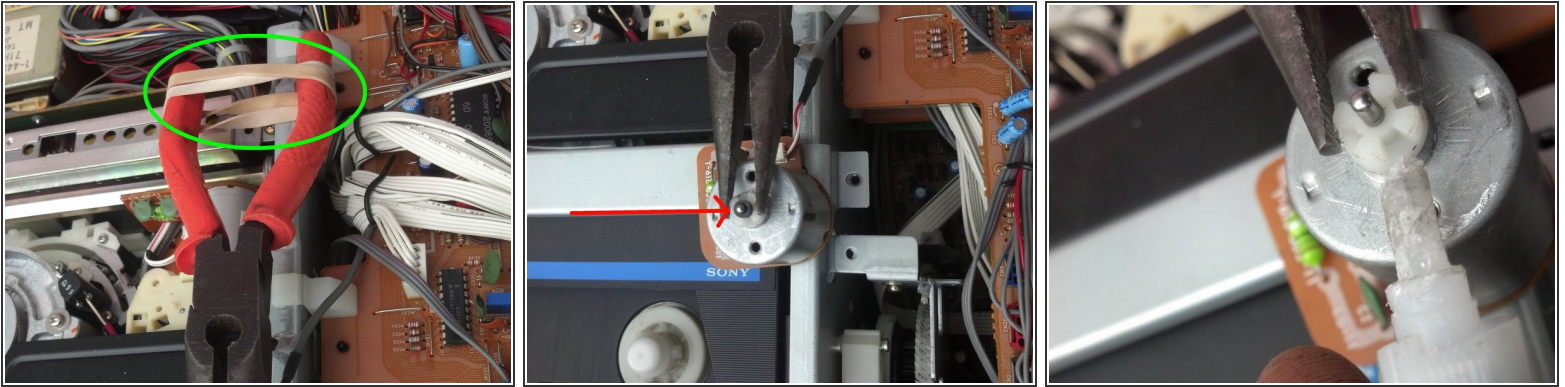
- Once the screws are removed, pull the motor out towards the back of the machine.
- Be careful to leave the transfer gear(circled in green) stay in place as its annoying to dig it outta the machine if it falls in.
- Now we can see the crack in the gear.

Step 8



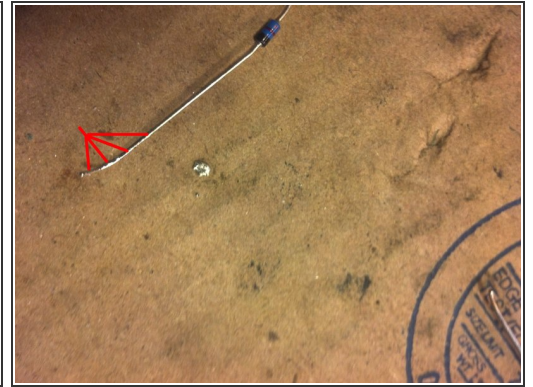
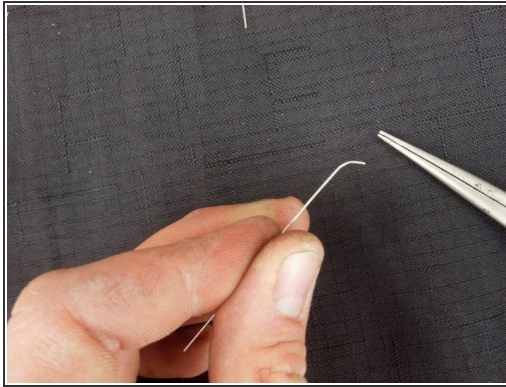
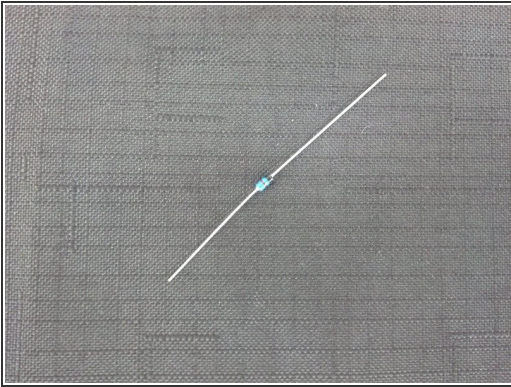
- Remove the rubber washer. Put it somewhere safe!!! NOT like I did :)

Step 9



- First, it's probably a good idea to clean the crack first with some alcohol, just in case there is any lubricant leftover on there as it will prevent the glue from adhering well.
- Next get a pair of needle nose pliers (preferably ones with grooved "teeth") Then wrap a rubber band around them so they hold tension. The tension should be something you can fight against, but not so tight it may crack the gear.
- Fill in the crack with a little bit of super glue. Then use the pliers to push the crack in the gear back together slightly.
- Necessary NOTE: Use a thicker type of super glue. I recommend Loctite gel type. If it's too thin it will get in the motor bearing, then you are SOL. Also a little bit goes a long way. I used a dental pick to work it into the crack.
- I also wanna reiterate NOT to get glue on the Bottom of the gear or onto the main part of the motor. IF you do, immediately remove it before it dries. There is super glue remover available, but I find if a little gets in the way, just turn the shaft to break it free and clean it with an Exacto knife.

Step 10



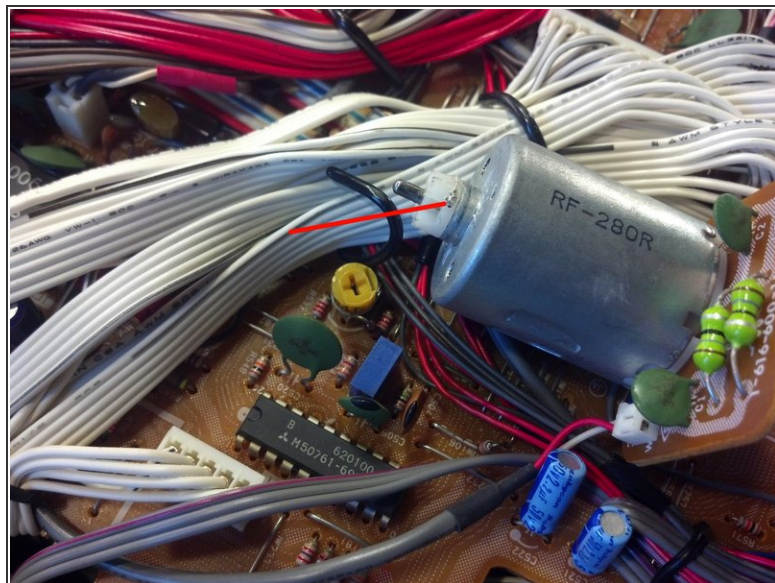
- While the super glue dries, find an old leaded component, resistor, capacitor, or a diode, whatever, then shape it to the roundness of the broken gear as you are now going to melt it into it. Yes, melt it into. Once shaped "tin" the lead with some solder as it will help heat flow.

Step 11



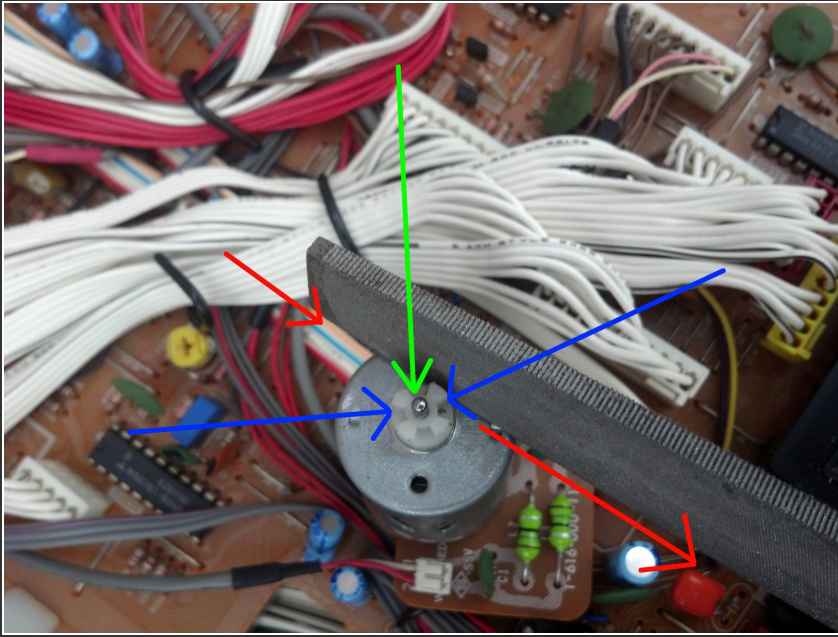
- Now heat the component lead. Then line it up so it is perpendicular to the crack and equally spaced on both sides of the crack.
- Melt it evenly and gently into the gear across the crack. Try to only press it in 1-2mm, so most of it is beyond the edge of the gear, but don't push it in too far that it touches the shaft.
- Let it cool for 3-5 seconds and then move. Moving beforehand may weaken the bond between the metal and plastic.
- Necessary note: This is an art and may take time to get right, I highly suggest practicing with other plastic pieces you care less about first. Plan your attempts first. Its not quite a do or die thing, but you will start to render the plastic useless if you do not properly insert the lead.

Step 12



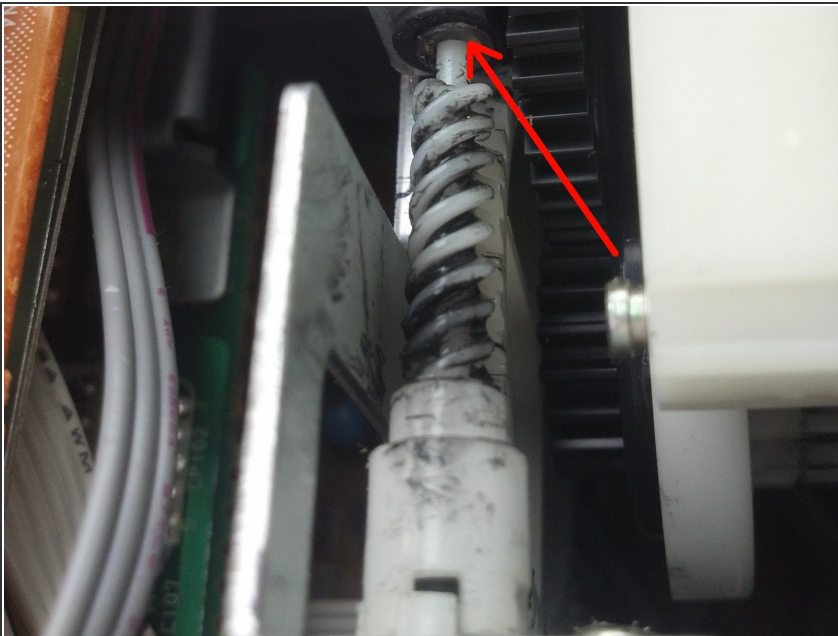
- Heres a before and after image. Once again heat the lead, pull it in and then it will end up lodged into the plastic, making it stronger than it was before. Once the heat has dissipated(10 secs), cut the excess leads off.
- You can now see the lead imbedded within the plastic.

Step 13



- Now file the nubs only going in the direction the leads are sticking out. In the end you should shape it similar to the roundness of the gear.
- The Blue Arrows point to the ends of the leads that need to be filed.
- The Green Arrow Points to the center of the crack.
- The Red Arrows indicates the direction you should go to prevent pushing the lead you placed in there out. Please note the direction is the opposite on the side not indicated in this picture.

Step 14



- Now put it all back together!
- Here is a picture that reminds you to make sure the transfer gear goes back in correctly.
- Don't forget about the rubber washer that goes on the shaft of the motor.

Step 15



- Now its time to watch the Boston Computer Society Monthly Meeting from 1984 where Steve Jobs and his cohorts give a talk introducing on the future of Apple.

To reassemble your device, follow these instructions in reverse order.