

# DREMEL DIGILAB

## Replacing Top Cover

**⚠ WARNING** Read the Dremel 3D40 manual and these instructions. Failure to comply with the warnings and instructions may result in fire, equipment damage, property damage, or personal injury.

Always unplug Dremel 3D40 from its power before performing any service procedures. Failure to do so may result in personal injury and equipment damage.

Use only Dremel approved materials and components. Use of object materials, or 3D objects other than Dremel approved object materials and genuine Dremel components may void warranty.

Repairs on the Dremel 3D40 may require the use of special tools (pulling devices and bearing press). Authorized repair centers have trained repair technicians and equipment necessary to perform these repairs.

**⚠ WARNING** Do not touch the extruder tip or heated build platform during Dremel 3D40 operation or until it has cooled down to at least 60oC (140oF). Contact with the extruder tip or build platform during or after operation before tip and build platform has cooled may result in personal injury.

Use proper anti-static precautions when performing this replacement. Discharge static electricity before beginning. Work on a static-free surface.

For the location of the repair center near you, look on our web site at [www.Dremel3D.com](http://www.Dremel3D.com) and follow the link for 'Support'.

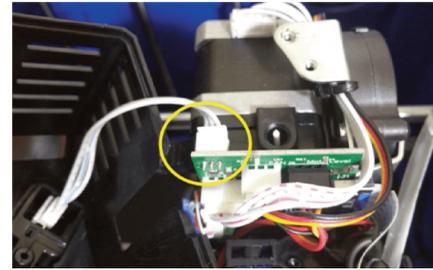
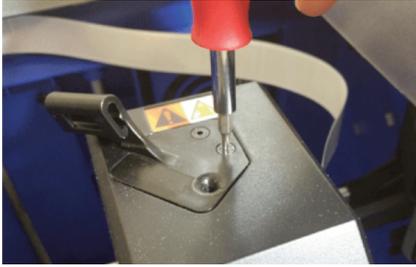
## SERVICE INSTRUCTIONS

This service document will outline the steps to replace the top cover of the extruder on the Dremel 3D40 3D printer. The top cover consists of the extruder cover and a runout switch assembly. The runout switch assembly senses the absence of the filament while printing and pauses, so that the user can load a new filament to continue printing. The user will need to replace the top cover if the printer shows a filament runout error but the filament is still going through the cap into the extruder or the printer does not have filament, but continues printing in the air.



**Step 1: Remove excess filament from the extruder** (if filament is running through the cover into the extruder)

- a. Turn on the printer.
- b. Cut the filament near the top of the extruder.
- c. Navigate to the preheat screen.
- d. Begin the preheat command and allow the extruder to heat up.
- e. Begin the purge command.
- f. Once filament is no longer leaving the extruder, press "stop purge" and exit the preheat screen.

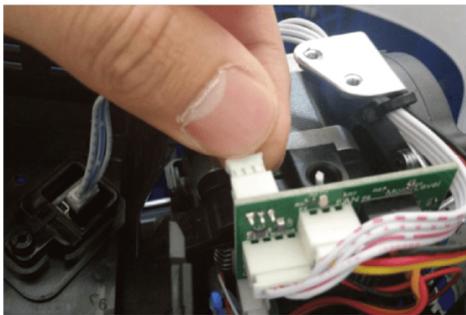


## Step 2: Bring printer to safe state for service

- a. If Step 1 was performed, allow the nozzle to cool until the thermometer icon reads cool (blue).
- b. Turn off and unplug the printer.

## Step 3: Remove top cover of extruder

- a. Unscrew the two screws on the top of the filament guide bracket.
- b. Remove the top cover.
- c. If the filament runout switch terminal (encircled) was already disconnected, reconnect it to the circuit board, replace the top cover and skip to step 6. This disconnection may have been the source of the issue.



## Step 4: Install new top cover of extruder

- a. Attach the filament runout switch terminal of the new cover to the extruder circuit board.
- b. Place the new top cover over the extruder.
- c. Replace the two 2mm screws onto the cover.

## Step 5: Load a filament

- a. Plug in and turn on the printer.
- b. Load a filament onto the spool.
- c. Load the filament onto the extruder by pressing the filament button on the screen.

## Step 6: Test the replacement

- a. Plug in and turn on the 3D40.
- b. Build the "Test Print" file on the machine to ensure the 3D40 printer is working properly.
- c. After 5 minutes of print time, pause the print and cut the filament as shown in Step 1. Press play to continue. The printer should automatically pause within a few minutes and show a "Filament Runout" Error. This confirms that the runout switch is working as intended.
- d. User can use the Filament Change option to load the filament again and build the rest of the print.