



# How to Perform an IBM ThinkPad X60s Fan Spindle Replacement

This guide details an IBM ThinkPad X60s fan spindle replacement.

Written By: Samuel Lees



## INTRODUCTION

This guide details how to replace the rotating spindle piece inside of the fan. Replacing this piece can solve cooling and noise problems associated with a broken fan. The fan spindle is only accessible after exposing the bottom of the motherboard and removing the fan housing.

### TOOLS:

- Small Needle Nose Pliers (1)
- Phillips #1 Screwdriver (1)

### PARTS:

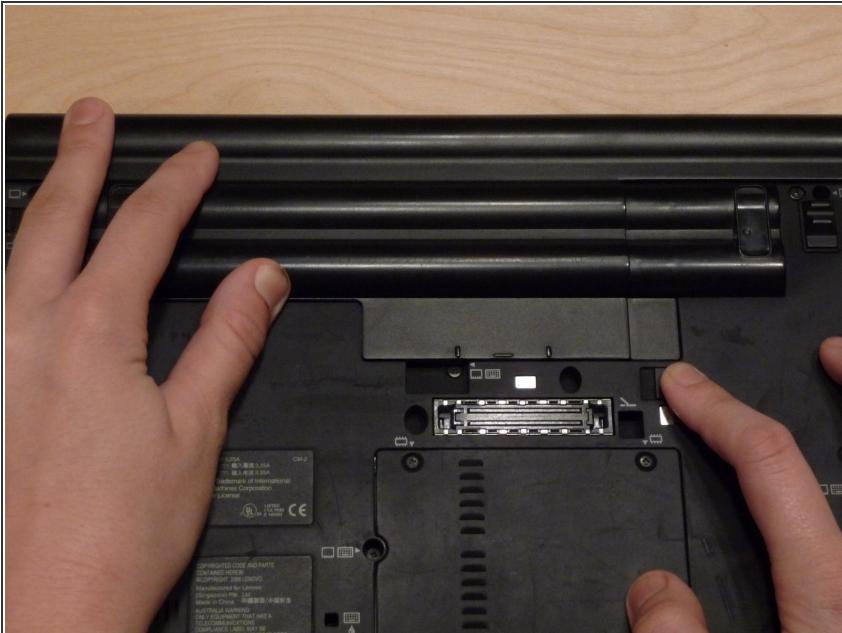
- IBM ThinkPad X60s Fan Spindle (1)

## Step 1 — Fan Spindle



- Turn the laptop upside-down, with the battery oriented away.
- Slide the battery lock switch to the left.

## Step 2



! Complete these steps after disconnecting the laptop from power and after powering the laptop down.

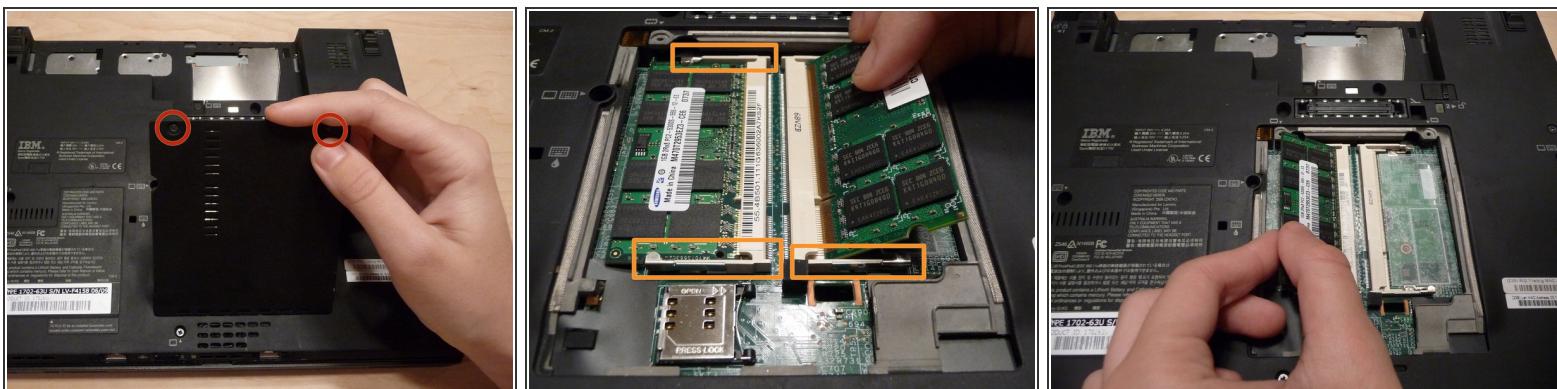
- Simultaneously complete the following:
  - Slide and hold the battery release switch to the right.
  - Push the battery away from you, out of the back of the laptop.

## Step 3



- Unscrew the black 4mm Phillips #2 screw securing the hard drive enclosure cover.
- Pull the hard drive enclosure cover up and to the left to expose the hard drive caddy.
- Pull the hard drive caddy out by the plastic pull tab.

## Step 4



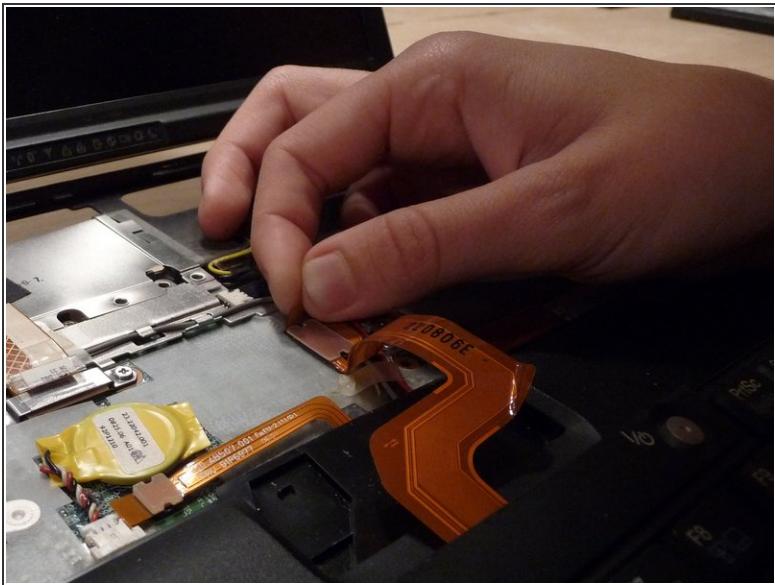
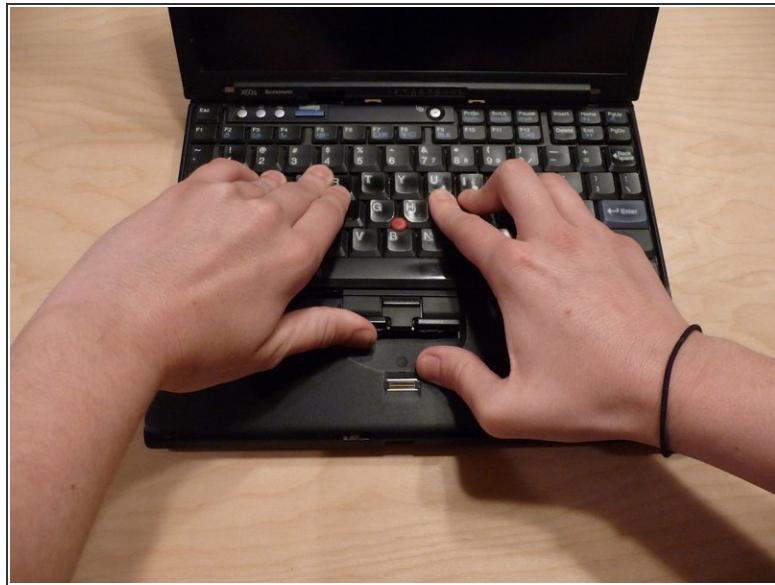
- Unscrew the two black Phillips #1 screws securing the RAM cover plate.
- *(i)* These screws will remain attached to the cover plate.
- Remove the exposed RAM sticks by prying outward (away from the edges of the RAM sticks) on the securing tabs.

## Step 5



- Unscrew the eleven black 6mm Phillips #1 screws securing the keyboard and palmrest.
- Flip the laptop over.

## Step 6



- Simultaneously complete the following:
  - Push the keyboard backwards (away from yourself) with both hands.
  - Pry your thumb under the mouse buttons to lift the keyboard upwards (away from the work surface).
- Pull up to detach the keyboard ribbon tab.

## Step 7



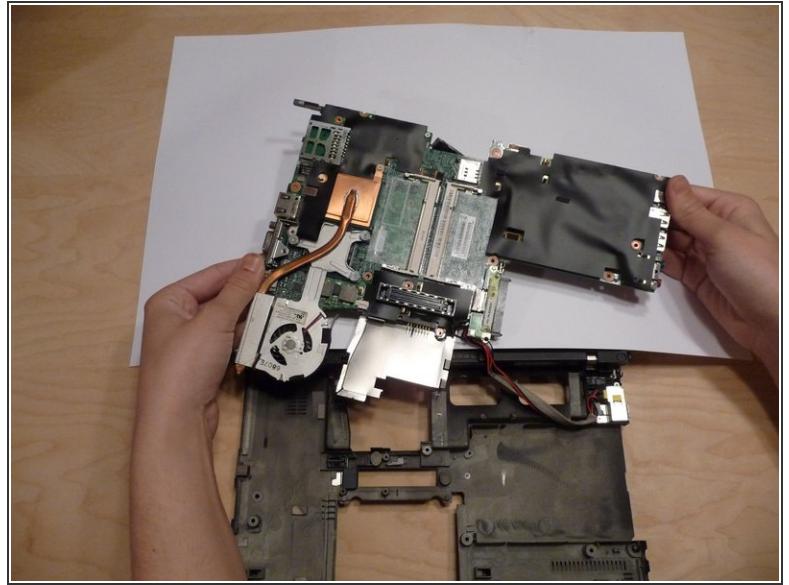
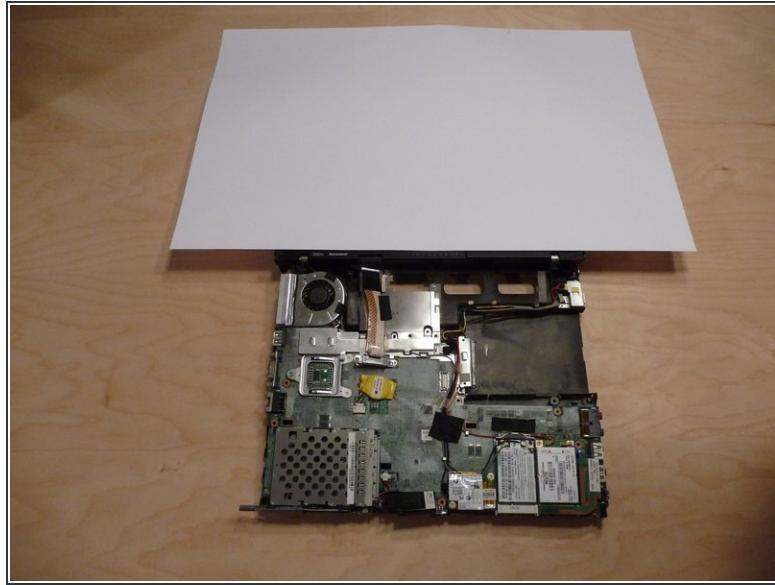
- Pull up to detach the fingerprint scanner ribbon tab.
- Lift up on the faceplate to remove it.

## Step 8



- Unscrew the five silver 3mm Phillips #1 screws securing the motherboard.
- Unscrew the silver 7mm Phillips #1 screw securing the motherboard.

## Step 9



- ⓘ (Optional) Lay a piece of paper, or other protective material, over the laptop screen.
- Flip the motherboard over onto the screen (or protective material).
- ⓘ Flipping the motherboard over should not require forceful motion.

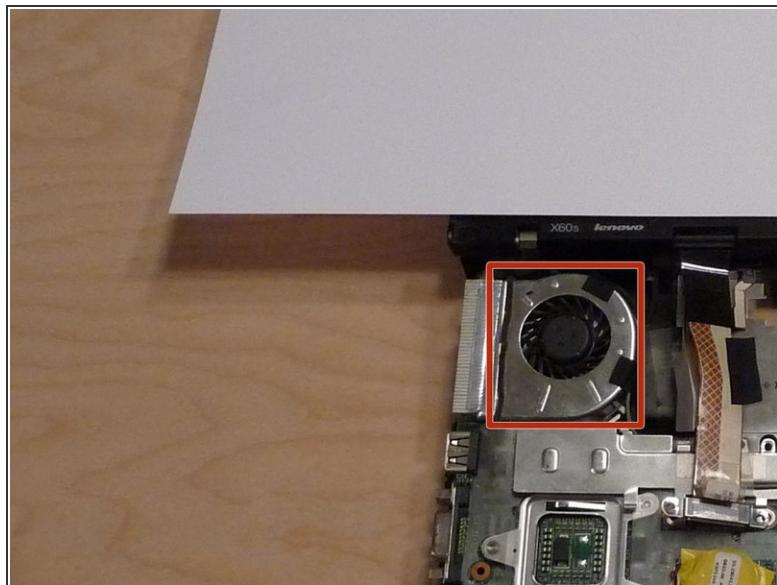
**⚠** Take extreme care not to damage any ribbon cables or wires still connected to the motherboard.

## Step 10



- Pry back the three metal tabs on the now-exposed underside of the fan housing with needle-nose pliers.
- Flip the motherboard back over.
  - ⓘ Flipping the motherboard over should not require forceful motion.
- ⚠ Take extreme care not to damage any ribbon cables or wires still connected to the motherboard.

## Step 11



- Lift the metal housing off of the fan.
- There may be foil tape securing the housing. If so, remove it carefully in order to put it back after replacing the fan spindle.
- Remove and replace the fan spindle.

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