Lab - Computer Disassembly

In this lab, you will disassemble a computer using safe lab procedures and the proper tools. Use extreme care and follow all safety procedures. Familiarize yourself with the tools you will be using in this lab.

**Note**: If you cannot locate or remove the correct component, ask your instructor for help.

1. Recommended Tools

|  |  |
| --- | --- |
| Safety glasses  Antistatic wrist strap  Antistatic mat  Flat head screwdrivers  Phillips head screwdrivers  Torx screwdrivers  Hex driver | Part retriever  Thermal compound  Can of compressed air  Cable ties  Parts organizer  Containers for storing computer parts  Antistatic bags for electronic parts |

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* 1. Open the Computer Case.

Remove the side panel from the computer case.

If you have a camera or smartphone, take a picture of the inside of the computer case to be used as a reference when reassembling the computer.

**Note**: Some manufacturers do not use screws to fasten components inside of the computer case. Some may use plastic or metal clips that fasten components to the computer chassis. Be careful to remove only screws that are holding components in place, and not the screws that hold components together.

What type of screwdriver did you use to remove the screws?

The computer case did not require any removal of screws. There was a latch release.

How many screws secured the side panels?

The computer case did not require any removal of screws. There was a latch release.

* 1. Antistatic Wrist Strap.

When working with computers, you should use an antistatic wristband or antistatic map. For this lab, an antistatic wristband is not needed.

What is the purpose for doing this?

The wrist wrap helps discharge electric static from the technician so that they do not short out any electrical components on accident.

* 1. Remove the Hard Drive.
     1. Locate the hard drive. Carefully disconnect the power and data cables from the back of the hard drive.

Which type of data cable did you disconnect?

SATA and Power Cable

* + 1. Locate all of the screws that hold the hard drive in place. Use the proper size and type of screwdriver to remove the hard drive screws. Put all of these screws in one place and label them.

The hard-drive was help in place by a hot swappable chassis that allows for easy removal of the hard-drive.

What type of screws secured the hard drive to the case?

No screws, it is held into the computer case by a rail system.

How many screws secured the hard drive to the case?

No screws, it is held into the computer case by a rail system.

Is the hard drive connected to a mounting bracket? If so, what type of screws secure the hard drive to the mounting bracket?

Yes, it appears to be held to the bracket by rivets so that students cannot steal the drives.

Caution: Do NOT remove the screws that hold the hard drive together.

* + 1. Gently remove the hard drive from the case. Look for a jumper reference chart on the hard drive. If there is a jumper installed on the hard drive, use the jumper reference chart to see if the hard drive is set for a Master, Slave, or Cable Select (CS) drive.

What is the jumper setting of the hard drive?

There is no Jumper Reference chart on my drive.

* 1. Remove Optical Drive.
     1. Locate the optical drive (Blu-ray, DVD, etc.). Carefully disconnect the power and data cables from the optical drive. Remove the audio cable from the optical drive if there is one connected.

What kind of data cable did you disconnect?

SATA and Power Cable.

Is there a jumper on the optical drive? What is the jumper setting?

My Drive does not have a Jumper Reference

* + 1. Locate and remove all of the screws that secure the optical drive to the case. Put all of these screws in one place and label them. Place the optical drive in an antistatic bag.

How many screws secured the optical drive to the case?

There were no screws to remove, but had to remove faceplate and slide the blue lever down to release tension on a screw.

* 1. Remove the Power Supply.
     1. Locate the power supply. Find the power connection(s) to the motherboard.
     2. Gently remove the power connection(s) from the motherboard. How many pins are there in the motherboard connector?
        1. The connector did not want to come out and I did not want to force it, 24 pins.
     3. Disconnect the power cables from any case fans.
     4. Disconnect the power cable from the video card if it requires one.
     5. Disconnect any other power supply cables from where they were connected.

If there were additional cables disconnected, to what were they connected?

* + 1. Locate and remove all of the screws that secure the power supply to the case. Put all of these screws in one place and label them.

How many screws secure the power supply to the case?

4 screws and a lever.

* + 1. Carefully remove the power supply from the case. Place the power supply with the other computer components.
  1. Remove Adapter Cards.
     1. Locate any adapter cards that are installed in the computer, such as a video, NIC, or sound card.
     2. Locate and remove the screw that secures the adapter card to the case. Put the adapter card screws in one place and label them.
     3. Carefully remove the adapter card from the slot. Be sure to hold the adapter card by the mounting bracket or by the edges. Place the adapter card in an antistatic bag. Repeat this process for all of the adapter cards.

**Note**: Be very careful when removing video adapters. There is often a locking tab on the slot that must be released before the card can be removed.

* + 1. List the adapter cards and the slot types below.

|  |  |
| --- | --- |
| Adapter Card | Slot Type |
| Graphics Card – DVI-d | PCIe |
|  |  |

* 1. Remove Memory Modules.
     1. Locate the memory modules on the motherboard.

What type of memory modules are installed on the motherboard?

4gb 2Rx8 PC3

How many memory modules are installed on the motherboard?

2 Sticks

* + 1. Remove the memory modules from the motherboard. Be sure to release any locking tabs that may be securing the memory module. Hold the memory module by the edges and gently lift out of the slot. Put the memory modules in an antistatic bag.
  1. Remove Data Cables.
     1. Remove all data cables from the motherboard. Make sure to note the connection location of any cable you disconnect.

What types of cables were disconnected?

SATA

* + 1. The computer case should contain the motherboard, the CPU, and any cooling devices. Do not remove any additional components.
  1. Find the processor.
     1. After locating the processor, find the “handle” that is used to remove it. Pay close attention to how it fits in the socket. Remove the processor, examine it and securely put in back in the socket.

Does the processor fit in a particular way? What indicators are there on how to seat it in the socket?

The processor must be placed in the correct way to make sure all of the pins make proper connection. Line the notch up in the corner of the CPU with the notch in the socet.

* 1. Reassemble the computer.

Make sure all connections, cables and components fit properly.

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