




Dell™ Inspiron™ 580 Service Manual

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Notes, Cautions, and Warnings

-  **NOTE:** A NOTE indicates important information that helps you make better use of your computer.
 -  **CAUTION:** A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.
 -  **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.
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Models DCMF

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Before You Begin

Dell™ Inspiron™ 580 Service Manual

- [Technical Specifications](#)
- [Recommended Tools](#)
- [Turning Off Your Computer](#)
- [Safety Instructions](#)

This manual provides procedures for removing and installing the components in your computer. Unless otherwise noted, each procedure assumes that the following conditions exist:

- 1 You have performed the steps in [Turning Off Your Computer](#) and [Safety Instructions](#).
- 1 You have read the safety information that ships with your computer.
- 1 A component can be replaced or—if purchased separately—installed by performing the removal procedure in reverse order.

Technical Specifications

For information on technical specifications of your computer, see the *Comprehensive Specifications* at support.dell.com/manuals.

Recommended Tools

The procedures in this document may require the following tools:

- 1 Small Phillips screwdriver
- 1 Small flat-blade screwdriver
- 1 BIOS executable update program available at support.dell.com

Turning Off Your Computer

 **CAUTION:** To avoid losing data, save and close all open files and exit all open programs before you turn off your computer.

1. Save and close all open files and exit all open programs.
2. Turn off your computer:

Windows Vista®:

Click **Start** , click the arrow , and then click **Shut Down**.


Windows® 7:


Click **Start** , and click **Shut Down**.

3. The computer turns off after the operating system shutdown process is complete.
4. Ensure that the computer is turned off. If your computer did not automatically turn off when you shut down the operating system, press and hold the power button until the computer turns off.

Safety Instructions

Use the following safety guidelines to help protect your computer from potential damage and to help to ensure your own personal safety.

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

 **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell is not covered by your warranty.

⚠ CAUTION: When you disconnect a cable, pull on its connector or on its pull-tab, not on the cable itself. Some cables have connectors with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.

⚠ CAUTION: To avoid damaging the computer, perform the following steps before you begin working inside the computer.

1. Ensure that the work surface is flat and clean to prevent the computer cover from being scratched.
2. Turn off your computer (see [Turning Off Your Computer](#)).

⚠ CAUTION: To disconnect a network cable, first unplug the cable from your computer and then unplug the cable from the network device.

3. Disconnect all telephone or network cables from the computer.
4. Disconnect your computer and all attached devices from their electrical outlets.
5. Disconnect all attached devices from your computer.
6. Press and eject any installed cards from the optional Media Card Reader.
7. Press and hold the power button while the system is unplugged to ground the system board.

⚠ CAUTION: Before touching anything inside your computer, ground yourself by touching an unpainted metal surface, such as the metal at the back of the computer. While you work, periodically touch an unpainted metal surface to dissipate static electricity, which could harm internal components.

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Front Bezel

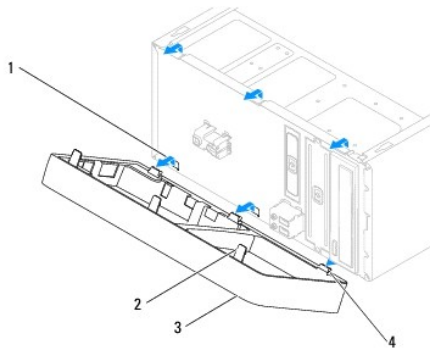
Dell™ Inspiron™ 580 Service Manual

- [Removing the Front Bezel](#)
- [Replacing the Front Bezel](#)

- ⚠ **WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.
 - ⚠ **WARNING:** To guard against electrical shock, always unplug your computer from the electrical outlet before removing the cover.
 - ⚠ **WARNING:** Do not operate your equipment with any cover(s) (including computer covers, bezels, filler brackets, front-panel inserts, etc.) removed.
 - ⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
-

Removing the Front Bezel

1. Follow the procedures in [Before You Begin](#).
2. Remove the computer cover (see [Removing the Computer Cover](#)).
3. Grasp and lift the front-bezel grips one at a time to release it from the front panel.
4. Rotate and pull the front bezel away from the front of the computer to release the front-bezel clamps from the front-bezel inserts.



1	front-bezel inserts (3)	2	front-bezel grips (3)
3	front bezel	4	front-bezel clamps (3)

5. Set aside the front bezel in a secure location.
-

Replacing the Front Bezel

1. Follow the procedures in [Before You Begin](#).
 2. Align and insert the front-bezel clamps into the front-bezel inserts.
 3. Rotate the front bezel towards the computer until the front-bezel grips snap into place.
 4. Replace the computer cover (see [Replacing the Computer Cover](#)).
 5. Connect your computer and devices to electrical outlets, and then turn them on.
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PCI and PCI Express Cards

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- [Removing the Card Retention Bracket](#)
- [Replacing the Card Retention Bracket](#)
- [Removing PCI and PCI Express Cards](#)
- [Replacing PCI and PCI Express Cards](#)
- [Configuring Your Computer After Removing or Installing a PCI or PCI Express Card](#)

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

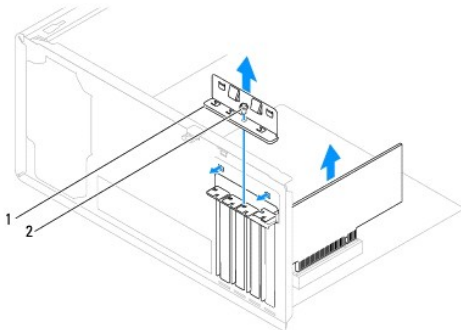
WARNING: To guard against electrical shock, always unplug your computer from the electrical outlet before removing the cover.

WARNING: Do not operate your equipment with any cover(s) (including computer covers, bezels, filler brackets, front-panel inserts, etc.) removed.

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

Removing the Card Retention Bracket

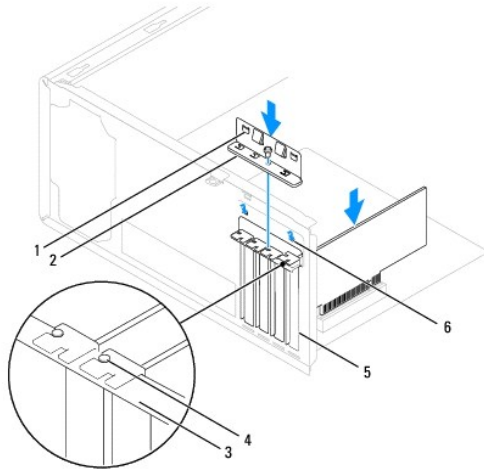
1. Follow the procedures in [Before You Begin](#).
2. Remove the computer cover (see [Removing the Computer Cover](#)).
3. Remove the screw that secures the card retention bracket to the chassis.
4. Lift the card retention bracket and set it aside in a secure place.



1	card retention bracket	2	screw
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Replacing the Card Retention Bracket

1. Follow the procedures in [Before You Begin](#).
2. Replace the card retention bracket, ensuring that:
 - 1 The guide clamp is aligned with the guide notch.
 - 1 The tops of all cards and filler brackets are flush with the alignment bar.
 - 1 The notch in the top of the card or filler bracket fits around the alignment guide.

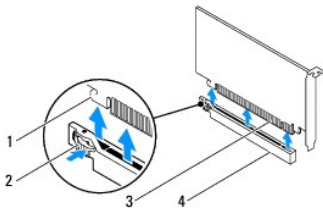


1	guide clamps (2)	2	card retention bracket	3	alignment bar
4	alignment guide	5	filler bracket	6	guide notches (2)

3. Replace the screw that secures the card retention bracket to the chassis.

Removing PCI and PCI Express Cards

1. Follow the procedures in [Before You Begin](#).
2. Remove the computer cover (see [Removing the Computer Cover](#)).
3. Remove the card retention bracket (see [Removing the Card Retention Bracket](#)).
4. If necessary, disconnect any cables connected to the card and remove the card.
 - 1 For a PCI or PCI Express x1 card, grasp the card by its top corners, and ease it out of its connector.
 - 1 For a PCI Express x16 card, press the retention mechanism, grasp the card by its top corners, and then ease it out of its connector.



1	securing tab	2	retention mechanism
3	PCI Express x16 card	4	PCI Express x16 card slot

5. If you are removing the card permanently, install a filler bracket in the empty card-slot opening.

NOTE: Installing filler brackets over empty card-slot openings is necessary to maintain FCC certification of the computer. The brackets also keep dust and dirt out of your computer.

6. Replace the card retention bracket (see [Replacing the Card Retention Bracket](#)).
7. Replace the computer cover (see [Replacing the Computer Cover](#)).
8. Connect your computer and devices to electrical outlets, and then turn them on.
9. Remove the card's driver from the operating system.

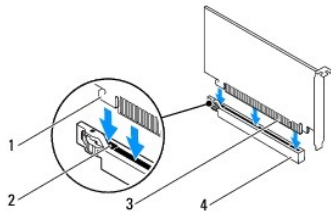
10. To complete the removal procedure, see [Configuring Your Computer After Removing or Installing a PCI or PCI Express Card](#).

Replacing PCI and PCI Express Cards

1. Follow the procedures in [Before You Begin](#).
2. Remove the computer cover (see [Removing the Computer Cover](#)).
3. Remove the card retention bracket (see [Removing the Card Retention Bracket](#)).
4. If this is a new card installation, remove the filler bracket covering the card-slot opening.
5. Prepare the card for installation.

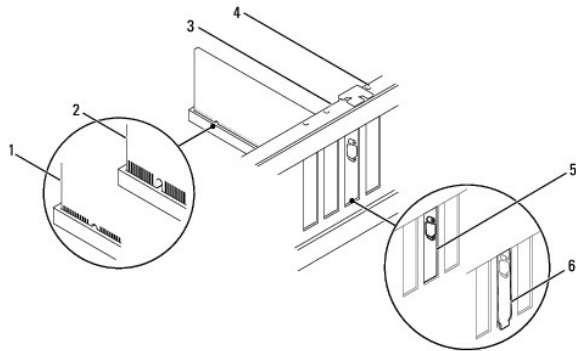
See the documentation that came with the card for information on configuring the card, making internal connections, or otherwise customizing it for your computer.

6. If you are installing the PCI Express card into the x16 card connector, position the card so the securing slot is aligned with the securing tab.



1	securing tab	2	securing slot
3	PCI Express x16 card	4	PCI Express x16 card slot

7. Place the card in the connector and press down firmly. Ensure that the card is fully seated in the slot.



1	fully-seated card	2	not fully-seated card	3	alignment bar
4	alignment guide	5	bracket within slot	6	bracket caught outside of slot

8. Replace the card retention bracket (see [Replacing the Card Retention Bracket](#)).
9. Connect any cables that should be connected to the card.

See the documentation for the card for information about the card's cable connections.

CAUTION: Do not route card cables over or behind the cards. Cables routed over the cards can prevent the computer cover from closing properly or cause damage to the equipment.

10. Replace the computer cover (see [Replacing the Computer Cover](#)).

11. Connect your computer and devices to electrical outlets, and then turn them on.

12. To complete the installation, see [Configuring Your Computer After Removing or Installing a PCI or PCI Express Card](#).

Configuring Your Computer After Removing or Installing a PCI or PCI Express Card

 **NOTE:** For information on location of external connectors, see the *Setup Guide*. For information on installing drivers and software for your card, see the documentation that shipped with the card.

	Installed	Removed
Sound Card	<ol style="list-style-type: none">1. Enter system setup (see Entering System Setup).2. Go to Onboard Audio Controller and then change the setting to Disabled.3. Connect the external audio devices to the sound card's connectors.	<ol style="list-style-type: none">1. Enter system setup (see Entering System Setup).2. Go to Onboard Audio Controller and then change the setting to Enabled.3. Connect the external audio devices to the computer's back panel connectors.
Network Card	<ol style="list-style-type: none">1. Enter system setup (see Entering System Setup).2. Go to Onboard LAN Controller and then change the setting to Disabled.3. Connect the network cable to the network card's connector.	<ol style="list-style-type: none">1. Enter system setup (see Entering System Setup).2. Go to Onboard LAN Controller and then change the setting to Enabled.3. Connect the network cable to the integrated network connector.

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Battery

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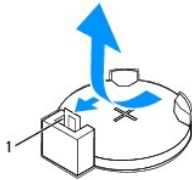
- [Removing the Battery](#)
- [Replacing the Battery](#)

- WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.
- WARNING:** A new battery can explode if it is incorrectly installed. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.
- WARNING:** To guard against electrical shock, always unplug your computer from the electrical outlet before removing the cover.
- WARNING:** Do not operate your equipment with any cover(s) (including computer covers, bezels, filler brackets, front-panel inserts, etc.) removed.
- CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
-

Removing the Battery

1. Record all the screens in System Setup (see [System Setup](#)) so that you can restore the correct settings after the new battery has been installed.
2. Follow the procedures in [Before You Begin](#).
3. Remove the computer cover (see [Removing the Computer Cover](#)).
4. Locate the battery socket (see [System Board Components](#)).

- CAUTION:** If you pry the battery out of its socket with a blunt object, be careful not to touch the system board with the object. Ensure that the object is inserted between the battery and the socket before you attempt to pry out the battery. Otherwise, you may damage the system board by prying off the socket or by breaking circuit traces on the system board.

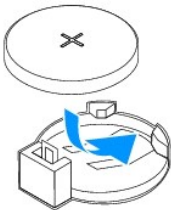


1 battery release lever

5. Press the battery release lever to remove the battery.
-

Replacing the Battery

1. Follow the procedures in [Before You Begin](#).
2. Insert the new battery (CR2032) into the socket with the side labeled "+" facing up, and press the battery into place.



3. Replace the computer cover (see [Replacing the Computer Cover](#)).

4. Connect your computer and devices to electrical outlets, and then turn them on.
5. Enter System Setup (see [Entering System Setup](#)) and restore the settings you recorded in [step 1](#).

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Computer Cover

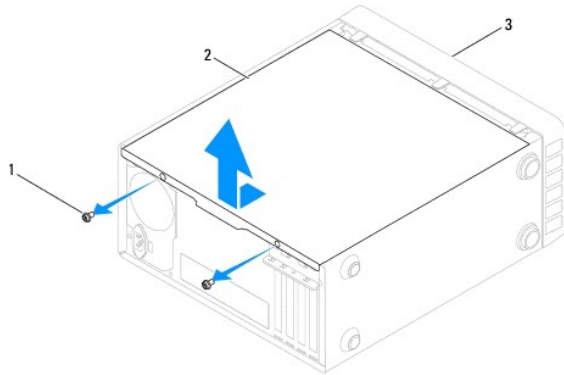
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- [Removing the Computer Cover](#)
- [Replacing the Computer Cover](#)

- ⚠ **WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.
 - ⚠ **WARNING:** To guard against electrical shock, always unplug your computer from the electrical outlet before removing the cover.
 - ⚠ **WARNING:** Do not operate your equipment with any cover(s) (including computer covers, bezels, filler brackets, front-panel inserts, etc.) removed.
 - ⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
 - ⚠ **CAUTION:** Ensure that sufficient space exists to support the system with the cover removed—at least 30 cm (1 ft.) of desk top space.
-

Removing the Computer Cover

1. Follow the procedures in [Before You Begin](#).
2. Lay your computer on its side with the computer cover facing up.
3. Using a screwdriver, remove the two screws that secure the computer cover to the chassis.
4. Release the computer cover by pulling it away from the front of the computer and lifting it up.



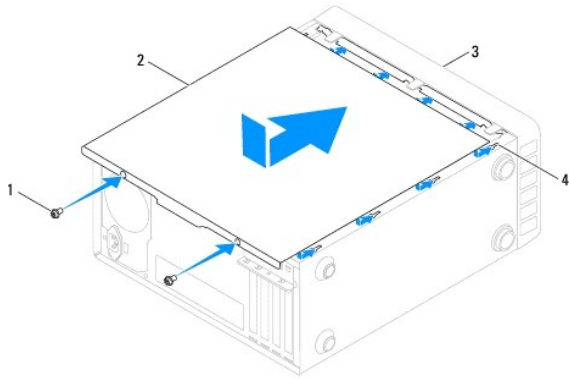
1	screws (2)	2	computer cover	3	front of computer
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5. Set the cover aside in a secure location.
-

Replacing the Computer Cover

1. Follow the procedures in [Before You Begin](#).
2. Ensure that all cables are connected, and fold cables out of the way.
3. Ensure that no tools or extra parts are left inside the computer.
4. Align the tabs at the bottom of the computer cover with the slots located along the edge of the computer.
5. Press the computer cover down and slide it towards the front of the computer until you feel a click or feel the computer cover securely installed.
6. Ensure that the cover is seated correctly.

7. Using a screwdriver, replace the two screws that secure the computer cover to the chassis.



1	screws (2)	2	computer cover
3	front of the computer	4	slot

8. Place the computer in an upright position.

CAUTION: Ensure that none of the system air-vents are blocked. Blocking them would cause serious thermal problems.

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Processor

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- [Removing the Processor](#)
- [Replacing the Processor](#)

- ⚠ **WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.
- ⚠ **WARNING:** To guard against electrical shock, always unplug your computer from the electrical outlet before removing the cover.
- ⚠ **WARNING:** Do not operate your equipment with any cover(s) (including computer covers, bezels, filler brackets, front-panel inserts, etc.) removed.
- ⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell is not covered by your warranty.
- ⚠ **CAUTION:** Do not perform the following steps unless you are familiar with hardware removal and replacement. Performing these steps incorrectly could damage your system board. For technical service information, see the *Setup Guide*.

Removing the Processor

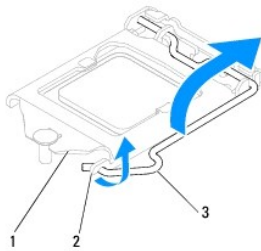
1. Follow the procedures in [Before You Begin](#).
2. Remove the computer cover (see [Removing the Computer Cover](#)).

⚠ **CAUTION:** Despite having a plastic shield, the heat sink assembly may be very hot during normal operation. Be sure that it has had sufficient time to cool before you touch it.

3. Remove the processor fan and heat sink assembly from the computer (see [Removing the Processor Fan and Heat Sink Assembly](#)).

🔧 **NOTE:** Unless a new heat sink is required for the new processor, reuse the original heat sink assembly when you replace the processor.

4. Press the release lever down and then pull it outwards to release it from the tab that secures it.
5. Extend the release lever completely to open the processor cover.

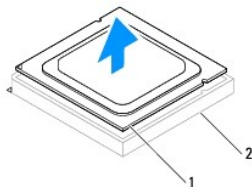


1	processor cover	2	tab	3	release lever
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⚠ **CAUTION:** When removing the processor, do not touch any of the pins inside the socket or allow any objects to fall on the pins in the socket.

6. Gently lift the processor to remove it from the socket.

Leave the release lever extended in the release position so that the socket is ready for the new processor.



1	processor	2	socket
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Replacing the Processor

△ **CAUTION:** Ground yourself by touching an unpainted metal surface on the back of the computer.

△ **CAUTION:** When replacing the processor, do not touch any of the pins inside the socket or allow any objects to fall on the pins in the socket.

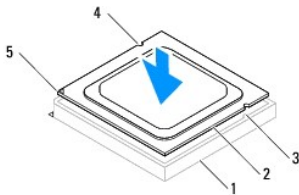
1. Follow the procedures in [Before You Begin](#).
2. Unpack the new processor, being careful not to touch the underside of the processor.

△ **CAUTION:** You must position the processor correctly in the socket to avoid permanent damage to the processor and the computer when you turn on the computer.

3. If the release lever on the socket is not fully extended, move it to that position.
4. Orient the alignment notches on the processor with the alignment tabs on the socket.
5. Align the pin-1 corners of the processor and socket.

△ **CAUTION:** To avoid damage, ensure that the processor aligns properly with the socket, and do not use excessive force when you install the processor.

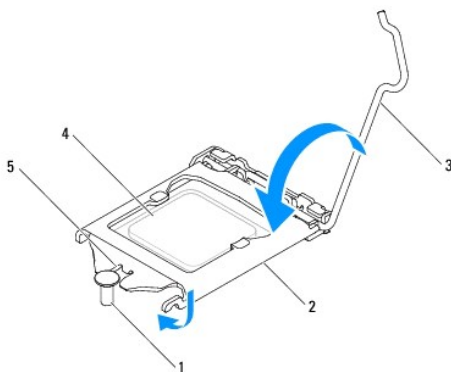
Set the processor lightly in the socket and ensure that the processor is positioned correctly.



1	socket	2	processor	3	alignment tabs (2)
4	alignment notches (2)	5	processor pin-1 indicator		

△ **CAUTION:** Ensure that the processor cover notch is positioned underneath the alignment post.

6. When the processor is fully seated in the socket, close the processor cover.
7. Pivot the release lever down and place it under the tab on the processor cover.



1	alignment post	2	processor cover	3	release lever
4	processor	5	processor cover notch		

8. Clean the thermal grease from the bottom of the heat sink.

⚠ CAUTION: Ensure that you apply new thermal grease. New thermal grease is critical for ensuring adequate thermal bonding, which is a requirement for optimal processor operation.

9. Apply the new thermal grease to the top of the processor.

10. Replace the processor fan and heat sink assembly (see [Replacing the Processor Fan and Heat Sink Assembly](#)).

⚠ CAUTION: Ensure that the processor fan and heat sink assembly is correctly seated and secure.

11. Replace the computer cover (see [Replacing the Computer Cover](#)).

12. Connect your computer and devices to electrical outlets, and turn them on.

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Drives

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- [Hard Drive](#)
- [Media Card Reader](#)
- [Optical Drive](#)

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Hard Drive

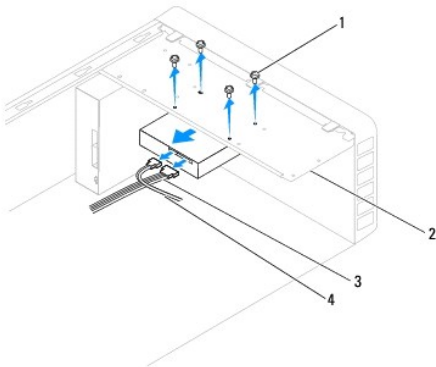
Removing the Hard Drive

- ⚠ **CAUTION:** If you are replacing a hard drive that contains data that you want to keep, back up your files before you begin this procedure.

1. Follow the procedures in [Before You Begin](#).
2. Remove the computer cover (see [Removing the Computer Cover](#)).
3. Disconnect the power cable and the data cable from the hard drive.
4. Remove the four screws that secure the hard drive to the drive panel.

- ⚠ **CAUTION:** Ensure that you do not scratch the hard drive's circuit board, while removing or replacing the hard drive.

5. Slide the hard drive out towards the back of the computer.



1	screws (4)	2	drive panel
3	power cable	4	data cable

6. If removing the hard drive changes the drive configuration, ensure that you reflect these changes in System Setup (see [System Setup](#)).

Replacing the Hard Drive

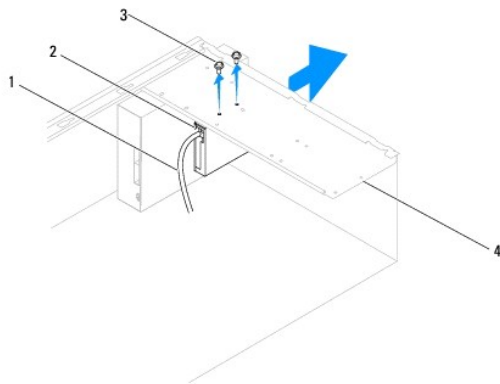
1. Follow the procedures in [Before You Begin](#).

2. Check the documentation for the drive to verify that it is configured for your computer.
 3. Slide the hard drive into the hard-drive bay.
 4. Align and replace the four screws that secure the hard drive to the drive panel.
 5. Connect the power cable and the data cable to the hard drive.
 6. Check all cables to be certain that they are properly connected and firmly seated.
 7. Replace the computer cover (see [Replacing the Computer Cover](#)).
 8. Connect your computer and devices to electrical outlets, and then turn them on.
 9. See the documentation that came with the hard drive for instructions on installing any software required for hard drive operation.
 10. Check the System Setup for hard drive configuration changes (see [Entering System Setup](#)).
-

Media Card Reader

Removing the Media Card Reader

1. Follow the procedures in [Before You Begin](#).
2. Remove the computer cover (see [Removing the Computer Cover](#)).
3. Remove the front bezel (see [Removing the Front Bezel](#)).
4. Disconnect the FlexBay USB cable from the FlexBay USB connector on the system board (see [System Board Components](#)).
5. Remove the two screws that secure the Media Card Reader to the drive panel.
6. Slide the Media Card Reader out through the front of the computer.

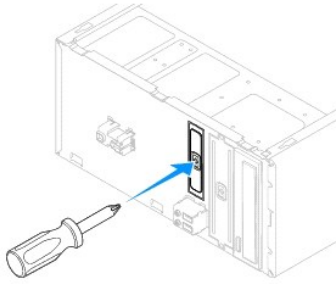


1 FlexBay USB cable	2 Media Card Reader (not present on all computers)
3 screws (2)	4 drive panel


Replacing the Media Card Reader

1. Follow the procedures in [Before You Begin](#).

2. If this is a new Media Card Reader installation, remove the break-away metal plate. Align the tip of a Phillips screwdriver with the slot on the break-away metal plate and rotate the screwdriver outwards to break and remove the metal plate.



3. Gently slide the Media Card Reader into place in the FlexBay slot.
4. Align the screw holes in the Media Card Reader with the screw holes in the drive panel.
5. Replace the two screws that secure the Media Card Reader to the drive panel.


 **NOTE:** Ensure that the Media Card Reader is installed before the FlexBay USB cable is connected.

6. Connect the FlexBay USB cable to the FlexBay USB connector on the system board (see [System Board Components](#)).
 7. Replace the front bezel (see [Replacing the Front Bezel](#)).
 8. Replace the computer cover (see [Replacing the Computer Cover](#)).
 9. Connect your computer and devices to electrical outlets, and then turn them on.
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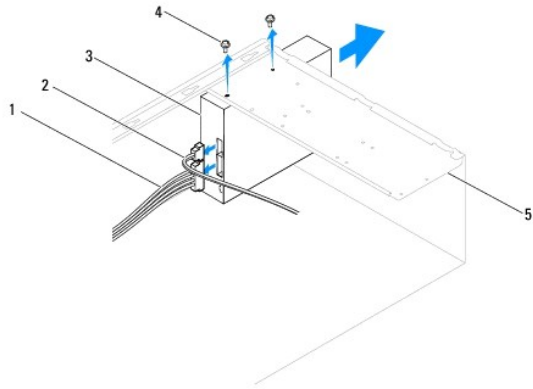
Optical Drive

Removing the Optical Drive

1. Follow the procedures in [Before You Begin](#).
2. Remove the computer cover (see [Removing the Computer Cover](#)).
3. Remove the front bezel (see [Removing the Front Bezel](#)).
4. Disconnect the power cable and the data cable from the back of the optical drive.

 **NOTE:** If you are not replacing the optical drive at this time, disconnect the other end of the data cable from the system board and set it aside. You can use the data cable to install an optical drive at a later time.

5. Remove the two screws that secure the optical drive to the drive panel.
6. Slide the optical drive out through the front of the computer.



1	power cable	2	data cable	3	optical drive
4	screws (2)	5	drive panel		

7. Replace the front bezel (see [Replacing the Front Bezel](#)).
8. Replace the computer cover (see [Replacing the Computer Cover](#)).
9. Connect your computer and devices to electrical outlets, and then turn them on.
10. Configure the drives in system setup (see [System Setup Options](#)).

Replacing the Optical Drive

1. Follow the procedures in [Before You Begin](#).
2. Gently slide the optical drive into the optical-drive bay through the front of the computer.
3. Align the screw holes in the optical drive with the screw holes in the drive panel.
4. Replace the two screws that secure the optical drive to the drive panel.
5. Connect the power cable and the data cable to the optical drive.
6. If disconnected, connect the data cable to the system board connector (see [System Board Components](#)).
7. Replace the front bezel (see [Replacing the Front Bezel](#)).
8. Replace the computer cover (see [Replacing the Computer Cover](#)).
9. Connect your computer and devices to electrical outlets, and turn them on.

See the documentation that came with the optical drive for instructions on installing any software required for optical drive operation.

10. Check the System Setup for drive configuration changes (see [Entering System Setup](#)).

Fans

Dell™ Inspiron™ 580 Service Manual

- [Removing the Processor Fan and Heat Sink Assembly](#)
- [Replacing the Processor Fan and Heat Sink Assembly](#)
- [Removing the Chassis Fan](#)
- [Replacing the Chassis Fan](#)

- ⚠ **WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.
 - ⚠ **WARNING:** To guard against likelihood of electric shock, laceration by moving fan blades or other unexpected injuries, always unplug your computer from the electrical outlet before removing the cover.
 - ⚠ **WARNING:** Do not operate your equipment with any cover(s) (including computer covers, bezels, filler brackets, front-panel inserts, etc.) removed.
 - ⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
-

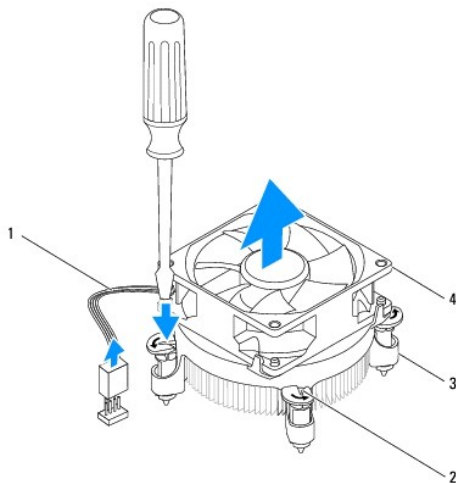
Removing the Processor Fan and Heat Sink Assembly

- ⚠ **CAUTION:** The processor fan with the heat sink is one single unit. Do not try to remove the fan separately.
 - ⚠ **CAUTION:** Do not touch the fan blades when you are removing the processor fan and heat sink assembly. This could damage the fan.
1. Follow the procedures in [Before You Begin](#).
 2. Remove the computer cover (see [Removing the Computer Cover](#)).
 3. Disconnect the processor fan cable from the system board connector (see [System Board Components](#)).
 4. Carefully move away any cables that are routed over the processor fan and heat sink assembly.
- ⚠ **CAUTION:** Despite having a plastic shield, the processor fan and heat sink assembly may be very hot during normal operation. Be sure that it has had sufficient time to cool before you touch it.

5. Depending on the processor fan and heat sink assembly installed in your computer, perform the following steps:

Type 1

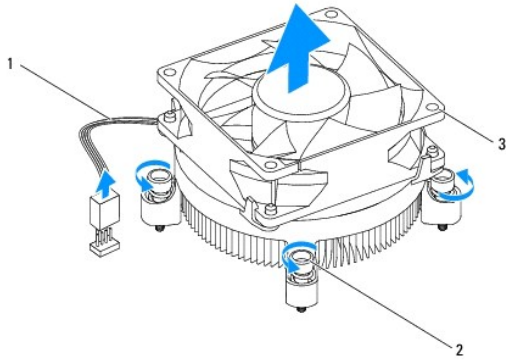
- a. Align the tip of a flat-blade screwdriver with the fastener grooves and rotate the four fasteners in anticlockwise direction to unlock them.
- b. Lift the processor fan and heat sink assembly out of the computer.



1	processor fan cable	2	fastener grooves (4)
3	fasteners (4)	4	processor fan and heat sink assembly

Type 2

- a. Loosen the four captive screws that secure the processor fan and heat sink assembly to the system board.
- b. Lift the processor fan and heat sink assembly out of the computer.



1	processor fan cable	2	captive screws (4)
3	processor fan and heat sink assembly		

Replacing the Processor Fan and Heat Sink Assembly

CAUTION: When reinstalling the fan, ensure that you do not pinch the wires that run between the system board and the fan.

1. Follow the procedures in [Before You Begin](#).
2. Clean the thermal grease from the bottom of the processor fan and heat sink assembly.
3. Apply the new thermal grease to the top of the processor.

CAUTION: Ensure that you apply new thermal grease. New thermal grease is critical for ensuring adequate thermal bonding, which is a requirement for optimal processor operation.

4. Replace the processor fan and heat sink assembly:

Type 1

- a. If required, rotate the fasteners on the processor fan and heat sink assembly clockwise to ensure that they are in the lock position.
- b. Align and press the four fasteners on the processor fan and heat sink assembly into the screw holes on the system board.

Type 2

- a. Align the four captive screws on the processor fan and heat sink assembly with the screw holes on the system board.
- b. Tighten the four captive screws that secure the processor fan and heat sink assembly to the system board.

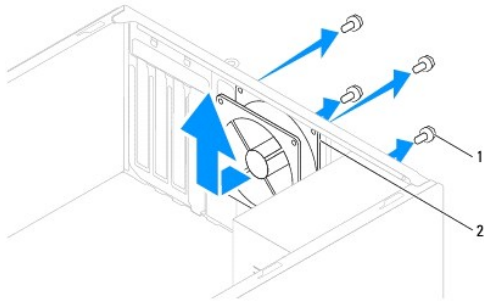
NOTE: Ensure that the processor fan and heat sink assembly is correctly seated and secure.

5. Connect the processor fan cable to the system board connector (see [System Board Components](#)).
6. Replace the computer cover (see [Replacing the Computer Cover](#)).
7. Connect your computer and devices to electrical outlets, and turn them on.

Removing the Chassis Fan

CAUTION: Do not touch the fan blades when you are removing the chassis fan. This could damage the fan.

1. Follow the procedures in [Before You Begin](#).
2. Remove the computer cover (see [Removing the Computer Cover](#)).
3. Disconnect the chassis fan cable from the system board connector (see [System Board Components](#)).
4. Remove the four screws that secure the chassis fan to the chassis.
5. Slide the chassis fan towards the front of the computer and lift it out.



1	screws (4)	2	chassis fan
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Replacing the Chassis Fan

1. Follow the procedures in [Before You Begin](#).
2. Slide the chassis fan in place towards the back of the computer.
3. Replace the four screws that secure the chassis fan to the chassis.
4. Connect the chassis fan cable to the system board connector (see [System Board Components](#)).
5. Replace the computer cover (see [Replacing the Computer Cover](#)).
6. Connect your computer and devices to electrical outlets, and turn them on.

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Front I/O Panel

Dell™ Inspiron™ 580 Service Manual

- [Removing the Front I/O Panel](#)
- [Replacing the Front I/O Panel](#)

- ⚠ **WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.
 - ⚠ **WARNING:** To guard against electrical shock, always unplug your computer from the electrical outlet before removing the cover.
 - ⚠ **WARNING:** Do not operate your equipment with any cover(s) (including computer covers, bezels, filler brackets, front-panel inserts, etc.) removed.
 - ⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
-

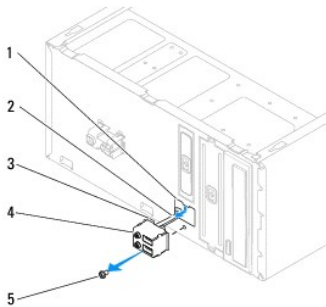
Removing the Front I/O Panel

🔧 **NOTE:** Note the routing of all cables as you remove them so that you can re-route them correctly when installing the new front I/O panel.

1. Follow the procedures in [Before You Begin](#).
2. Remove the computer cover (see [Removing the Computer Cover](#)).
3. Remove the front bezel (see [Removing the Front Bezel](#)).

⚠ **CAUTION:** When sliding the front I/O panel out of the computer, be extremely careful. Carelessness may result in damage to the cable connectors and the cable routing clips.

4. Disconnect all the cables that are connected to the front I/O panel from the system board connectors. Note the routing of all cables as you remove them so that you can re-route them correctly after installing the new front I/O panel.
5. Remove the screw that secures the front I/O panel to the chassis.
6. Carefully slide the front I/O panel down and out of the front I/O panel clamp slot.



1	front I/O panel clamp slot	2	cables	3	front I/O panel clamp
4	front I/O panel	5	screw		

Replacing the Front I/O Panel

⚠ **CAUTION:** Take care not to damage the cable connectors and the cable routing clips when sliding the front I/O panel into the front I/O panel clamp slot.

1. Follow the procedures in [Before You Begin](#).

2. Route and connect the cables that you disconnected from the system board connectors.
 3. Align and slide the front I/O panel clamp into the front I/O panel clamp slot.
 4. Replace the screw that secures the front I/O panel to the chassis.
 5. Replace the front bezel (see [Replacing the Front Bezel](#)).
 6. Replace the computer cover (see [Replacing the Computer Cover](#)).
 7. Connect your computer and devices to electrical outlets, and turn them on.
-

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Memory Module(s)

Dell™ Inspiron™ 580 Service Manual

- [Removing the Memory Module\(s\)](#)
- [Replacing the Memory Module\(s\)](#)
- [Recommended Memory Configuration](#)
- [Setting Up Dual-Channel Memory Configuration](#)

⚠ WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

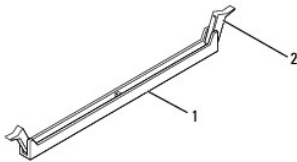
⚠ WARNING: To guard against electrical shock, always unplug your computer from the electrical outlet before removing the cover.

⚠ WARNING: Do not operate your equipment with any cover(s) (including computer covers, bezels, filler brackets, front-panel inserts, etc.) removed.

⚠ CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

Removing the Memory Module(s)

1. Follow the procedures in [Before You Begin](#).
2. Remove the computer cover (see [Removing the Computer Cover](#)).
3. Locate the memory module(s) on the system board (see [System Board Components](#)).
4. Press out the securing clip at each end of the memory-module connector.



1	memory-module connector	2	securing clip
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5. Grasp the memory module and pull it upwards.

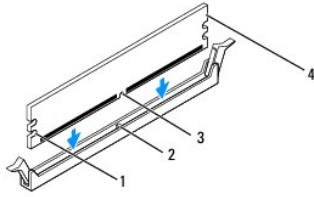
If the memory module is difficult to remove, gently ease the memory module back and forth to remove it from the memory-module connector.

Replacing the Memory Module(s)

1. Follow the procedures in [Before You Begin](#).
2. Press out the securing clip at each end of the memory-module connector.
3. Follow the memory installation guidelines (see [Recommended Memory Configuration](#)).

⚠ CAUTION: Do not install ECC memory modules.

4. Align the notch on the bottom of the memory module with the tab in the memory-module connector.

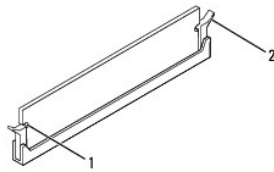


1	cutouts (2)	2	tab
3	notch	4	memory module

CAUTION: To avoid damage to the memory module, press the memory module straight down into the memory-module connector while you apply equal force to each end of the memory module.

5. Insert the memory module into the memory-module connector until the memory module snaps into position.

If you insert the memory module correctly, the securing clips snap into the cutouts at each end of the memory module.



1	cutouts (2)	2	securing clip (snapped in position)
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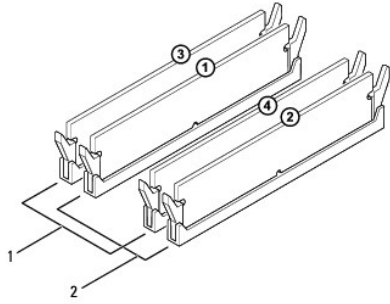
6. Replace the computer cover (see [Replacing the Computer Cover](#)).
7. Connect your computer and devices to electrical outlets, and then turn them on.
If the message appears stating that memory size has changed, press <F1> to continue.
8. Log on to your computer.
9. Right-click the **My Computer** icon on your Microsoft® Windows® desktop and click **Properties**.
10. Click the **General** tab.
11. To verify that the memory is installed correctly, check the amount of memory (RAM) listed.

Recommended Memory Configuration

While installing or replacing memory, refer to the table below. For the location of the memory-module connectors, see [System Board Components](#).

One module	Two modules	Three modules	Four modules
DIMM1	DIMM1 DIMM3	DIMM1 DIMM3 DIMM2	DIMM1 DIMM3 DIMM2 DIMM4

Setting Up Dual-Channel Memory Configuration



1	Pair A: matched pair of memory modules in connectors DIMM3 and DIMM4	2	Pair B: matched pair of memory modules in connectors DIMM1 and DIMM2
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Power Supply

Dell™ Inspiron™ 580 Service Manual

- [Removing the Power Supply](#)
- [Replacing the Power Supply](#)

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage on www.dell.com/regulatory_compliance.

WARNING: To guard against electrical shock, always unplug your computer from the electrical outlet before removing the cover.

WARNING: Do not operate your equipment with any cover(s) (including computer covers, bezels, filler brackets, front-panel inserts, etc.) removed.

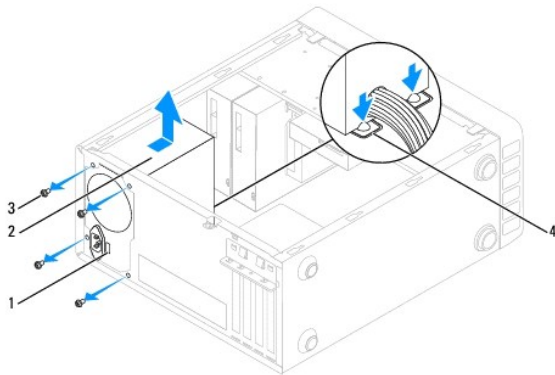
CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

Removing the Power Supply

1. Follow the procedures in [Before You Begin](#).
2. Remove the computer cover (see [Removing the Computer Cover](#)).
3. Disconnect the DC power cables from the system board and the drives.

Note the routing of the DC power cables underneath the tabs in the computer chassis as you remove them from the system board and drives. You must route these cables properly when you replace them to prevent them from being pinched or crimped.

4. Remove all the cables from the securing clip on the side of the power supply.
5. Remove the four screws that secure the power supply to the back of the chassis.
6. While pressing down on the power supply retention snaps, slide out the power supply and lift it out.



1	voltage selector switch	2	power supply
3	screws (4)	4	power supply retention snaps (2)

Replacing the Power Supply

1. Follow the procedures in [Before You Begin](#).
2. Press down on the power supply retention snaps and slide the replacement power supply into the chassis.

WARNING: Failure to replace and tighten all screws may cause electrical shock as these screws are a key part of the system grounding.


3. Replace the four screws that secure the power supply to the back of the chassis.

 **NOTE:** Route the DC power cables under the chassis tabs. The cables must be properly routed to prevent the cables from being damaged.

4. Connect the DC power cables to the system board and drives.
5. Secure all the cables to the securing clip on the side of the power supply.

 **NOTE:** Double-check all cable connections to make sure they are secure.

6. Replace the computer cover (see [Replacing the Computer Cover](#)).

 **CAUTION:** To help avoid damaging your computer, ensure that the voltage selector switch is set for the voltage that most closely matches the AC power available in your location.

7. Connect your computer and devices to electrical outlets, and turn them on.

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System Setup

Dell™ Inspiron™ 580 Service Manual


- [Overview](#)
- [Entering System Setup](#)
- [Clearing Forgotten Passwords](#)
- [Clearing CMOS Settings](#)
- [Flashing the BIOS](#)


Overview

Use System Setup to:

- 1 Change the system configuration information after you add, change, or remove any hardware in your computer.
- 1 Set or change a user-selectable option such as the user password.
- 1 View the installed amount of memory or set the type of hard drive installed.


 **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

 **CAUTION:** Do not change the settings in system setup unless you are an expert computer user. Certain changes can cause your computer to work incorrectly.

 **NOTE:** Before you use System Setup, it is recommended that you write down the System Setup screen information for future reference.

Entering System Setup

1. Turn on (or restart) your computer.
2. When the DELL logo appears, press <F2> immediately.

 **NOTE:** Keyboard failure may result when a key on the keyboard is held down for extended periods of time. To avoid possible keyboard failure, press and release <F2> in even intervals until the system setup screen appears.

If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft® Windows® desktop, then shut down your computer and try again.

System Setup Screens


Options List — This field appears on the top of the system setup window. The tabbed options contain features that define the configuration of your computer, including installed hardware, power conservation, and security features.

Option Field — This field contains information about each option. In this field you can view your current settings and make changes to your settings. Use the right- and left-arrow keys to highlight an option. Press <Enter> to make that selection active.

Help Field — This field provides context sensitive help based on the options selected.

Key Functions — This field appears below the Option Field and lists keys and their functions within the active system setup field.

System Setup Options

 **NOTE:** Depending on your computer and installed devices, the items listed in this section may not appear, or may not appear exactly as listed.

System Info	
BIOS Info	Displays the BIOS version and date.
System	Displays the computer model number.
Service Tag	Displays the service tag of the computer.
Asset Tag	Displays the asset tag for the computer, if present.
Processor Type	Displays the processor type.

Processor L1 Cache	Displays the amount of processor Level 1 cache.
Processor L2 Cache	Displays the amount of processor Level 2 cache.
Processor L3 Cache	Displays the amount of processor Level 3 cache.
Memory Installed	Indicates the amount of installed memory.
Memory Available	Indicates the amount of available memory.
Memory Speed	Indicates the frequency of installed memory.
Memory Technology	Indicates the type of installed memory.
Standard CMOS Features	
System Date	Displays current date in the format (mm:dd:yyyy).
System Time	Displays current time in the format (hh:mm:ss).
SATA-1	Displays the SATA drives connected to the SATA1 connector.
SATA-2	Displays the SATA drives connected to the SATA2 connector.
SATA-3	Displays the SATA drives connected to the SATA3 connector.
SATA-4	Displays the SATA drives connected to the SATA4 connector.
Advanced BIOS Features	
CPU Feature	<ul style="list-style-type: none"> 1 Hyper-Threading Technology — Enabled; Disabled (Enabled by default) 1 Intel SpeedStep® — Enabled; Disabled (Enabled by default) 1 Virtualization — Enabled; Disabled (Disabled by default) 1 Limit CPUID Value — Enabled; Disabled (Disabled by default) 1 CPU XD Support — Enabled; Disabled (Enabled by default) 1 Multi Core Support — Enabled; Disabled (Enabled by default) 1 Intel TurboMode tech — Enabled; Disabled (Enabled by default)
USB Device Setting	<ul style="list-style-type: none"> 1 USB Controller — Enabled; Disabled (Enabled by default)
Advanced Chipset Features	
Onboard Audio Controller	Enabled; Disabled (Enabled by default)
Onboard LAN Controller	Enabled; Disabled (Enabled by default)
Onboard LAN Boot ROM	Enabled; Disabled (Disabled by default)
Boot Device Configuration	
Boot Settings Configuration	<ul style="list-style-type: none"> 1 Numlock Key — On; Off (On by default) 1 Keyboard Errors — Report; Do Not Report (Report by default)
Hard Disk Boot Priority	Used to set the device priority of hard drives. The items displayed are dynamically updated according to the hard drives detected.
CD/DVD Drives Boot Priority	Used to set the device priority of CD/DVD drives. The items displayed are dynamically updated according to the CD/DVD drives detected.
1st Boot Device	Removable; CD/DVD; Hard Drive; Disabled (Hard Drive by default)
2nd Boot Device	Removable; CD/DVD; Hard Drive; Disabled (CD/DVD by default)
3rd Boot Device	Removable; CD/DVD; Hard Drive; Disabled (Removable by default)
Power Management Setup	
ACPI Suspend Type	S1; S3 (S3 by default)
Remote Wake Up	Enabled; Disabled (Enabled by default)
AC Recovery	Power Off; Power On; Last Power State (Power Off by default)
Auto Power On	Enabled; Disabled (Disabled by default)
Auto Power On Date	0
Auto Power On Time	0:00:00
BIOS Security Features	
Supervisor password	Indicates if the supervisor password is set or clear.
User password	Indicates if the user password is set or clear.
Set Supervisor Password	Press <Enter> to set the supervisor password.
User Access Level	No Access; View Only; Limited; Full Access (Full Access by default)
Set User Password	Press <Enter> to set the user password.
Password Check	Setup; Always (Setup by default)

Changing Boot Sequence for the Current Boot

You can use this feature, for example, to tell the computer to boot from the CD drive so that you can run the Dell Diagnostics on the *Drivers and Utilities* media, but you want the computer to boot from the hard drive when the diagnostic tests are complete. You can also use this feature to restart your computer to a USB device such as a floppy drive, memory key, or CD-RW drive.

1. If you are booting to a USB device, connect the USB device to a USB connector.
2. Turn on (or restart) your computer.
3. When **F2 = Setup**, **F12 = Boot Options** appears on the screen, press <F12>.

If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft Windows desktop. Then shut down your computer and try again.

The **Boot Device Menu** appears, listing all available boot devices.


4. Use the up- or down-arrow keys to select the current boot device and press <Enter>.

For example, if you are booting to a USB memory key, highlight **USB Flash Device** and press <Enter>.

 **NOTE:** To boot to a USB device, the device must be bootable. To make sure your device is bootable, check the device documentation.


Changing Boot Sequence for Future Boots

1. Enter system setup (see [Entering System Setup](#)).
2. Use the arrow keys to highlight the **Boot Device Configuration** menu option and press <Enter> to access the menu.


 **NOTE:** Write down your current boot sequence in case you want to restore it.

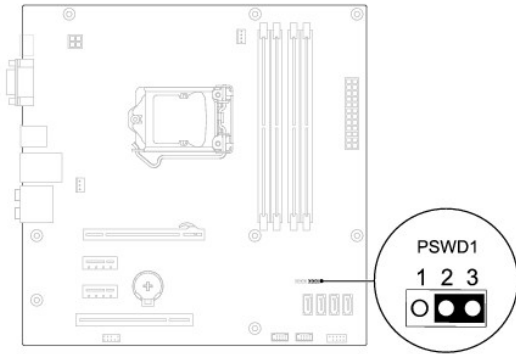
3. Press the up- and down-arrow keys to move through the list of devices.
4. Press plus (+) or minus (-) to change the boot priority of device.

Clearing Forgotten Passwords

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the [Regulatory Compliance Homepage](http://www.dell.com/regulatory_compliance) at www.dell.com/regulatory_compliance.

1. Follow the procedures in [Before You Begin](#).
2. Remove the computer cover (see [Removing the Computer Cover](#)).
3. Locate the 3-pin password reset jumper on the system board (see [System Board Components](#)).


 **NOTE:** The location of the password connector may vary depending on the system.



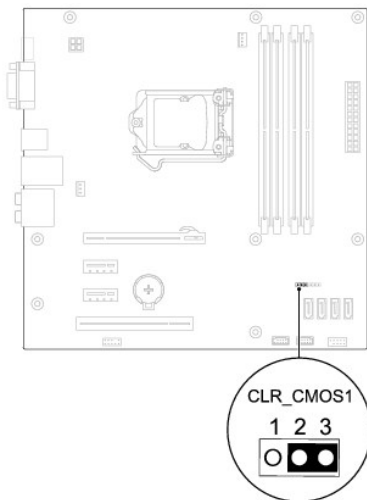
4. Remove the 2-pin jumper plug from pins 2 and 3 and fix it on pins 1 and 2.
5. Turn on the computer, wait for approximately five seconds, and then turn off the computer. If required, press and hold the power button to turn off the computer.
6. Remove the 2-pin jumper plug from pins 1 and 2 and replace it on pins 2 and 3 to enable the password feature.
7. Replace the computer cover (see [Replacing the Computer Cover](#)).
8. Connect your computer and devices to electrical outlets, and turn them on.

Clearing CMOS Settings

1. Follow the procedures in [Before You Begin](#).

 **NOTE:** The computer must be disconnected from the electrical outlet to clear the CMOS setting.

2. Remove the computer cover (see [Removing the Computer Cover](#)).
3. Reset the current CMOS settings:
 - a. Locate the 3-pin CMOS reset jumper on the system board (see [System Board Components](#)).
 - b. Remove the jumper plug from the CMOS reset jumper pins 2 and 3.
 - c. Place the jumper plug on the CMOS reset jumper pins 1 and 2 and wait for approximately five seconds.
 - d. Remove the jumper plug and replace it on the CMOS reset jumper pins 2 and 3.




4. Replace the computer cover (see [Replacing the Computer Cover](#)).
 5. Connect your computer and devices to electrical outlets, and turn them on.
-

Flashing the BIOS

The BIOS may require flashing when an update is available or when replacing the system board. To flash the BIOS:

1. Turn on the computer.
2. Go to support.dell.com/support/downloads.
3. Locate the BIOS update file for your computer:


 **NOTE:** The Service Tag for your computer is located on top of the chassis towards the back.

- If you have your computer's Service Tag:

- a. Click **Enter a Tag**.
- b. Enter your computer's Service Tag in the **Enter a service tag:** field, click **Go**, and proceed to [step 4](#).

- If you do not have your computer's Service Tag:

- a. Click **Select Model**.
- b. Select the type of product in the **Select Your Product Family** list.
- c. Select the product brand in the **Select Your Product Line** list.
- d. Select the product model number in the **Select Your Product Model** list.

 **NOTE:** If you have selected a different model and want to start over again, click **Start Over** on the top right of the menu.

- e. Click **Confirm**.

4. A list of results appear on the screen. Click **BIOS**.
 5. Click **Download Now** to download the latest BIOS file.
The **File Download** window appears.
 6. Click **Save** to save the file on your desktop. The file downloads to your desktop.
 7. Click **Close** if the **Download Complete** window appears.
The file icon appears on your desktop and is titled the same as the downloaded BIOS update file.
 8. Double-click the file icon on the desktop and follow the procedures that appear on the screen.
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System Board

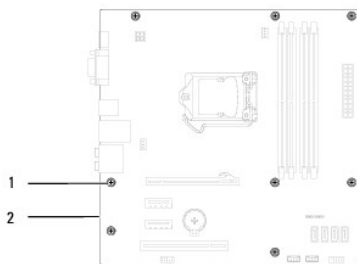
Dell™ Inspiron™ 580 Service Manual

- [Removing the System Board](#)
- [Replacing the System Board](#)

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-

Removing the System Board

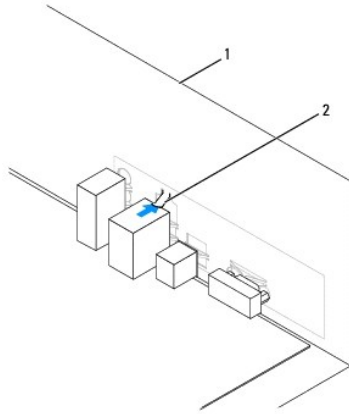
1. Follow the procedures in [Before You Begin](#).
2. Remove the computer cover (see [Removing the Computer Cover](#)).
3. Remove any PCI and PCI Express cards on the system board (see [Removing PCI and PCI Express Cards](#)).
4. Remove the processor fan and heat sink assembly (see [Removing the Processor Fan and Heat Sink Assembly](#)).
5. Remove the processor (see [Removing the Processor](#)).
6. Remove the memory modules (see [Removing the Memory Module\(s\)](#)) and document which memory module is removed from each memory-module connector so that the memory modules can be installed in the same location after the board is replaced.
7. Disconnect all cables from the system board. Note the routing of all cables as you remove them so that you can re-route them correctly after installing the new system board.
8. Remove the eight screws that secure the system board to the chassis.
9. Lift the system board up and out of the chassis.



1	screws (8)	2	system board
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Replacing the System Board

- 🔍 **NOTE:** Compare the system board that you removed with the replacement system board to ensure that they are identical.
- 1. Follow the procedures in [Before You Begin](#).
- ⚠ **CAUTION:** Ensure that the port retention springs are not damaged while replacing the system board.
- 2. Gently align the system board into the chassis and slide it towards the back of the computer.



1	back of the computer	2	port retention spring
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3. Replace the eight screws that secure the system board to the chassis.
4. Route and connect the cables that you disconnected from the system board.

⚠ CAUTION: Ensure that the processor fan and heat sink assembly is correctly seated and secure.

5. Replace the processor (see [Replacing the Processor](#)).
6. Replace the processor fan and heat sink assembly (see [Replacing the Processor Fan and Heat Sink Assembly](#)).
7. Replace the memory modules (see [Replacing the Memory Module\(s\)](#)).
8. Replace any PCI and PCI Express cards on the system board (see [Replacing PCI and PCI Express Cards](#)).
9. Replace the computer cover (see [Replacing the Computer Cover](#)).
10. Connect your computer and devices to electrical outlets, and turn them on.
11. Flash the system BIOS, as needed (see [Flashing the BIOS](#)).

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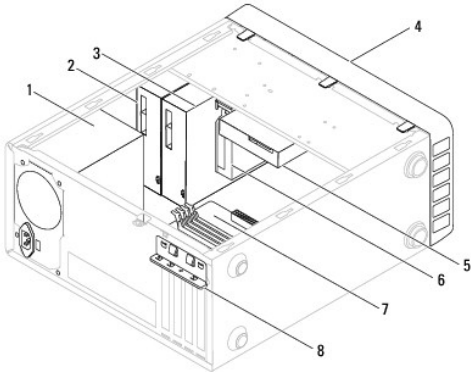
Technical Overview

Dell™ Inspiron™ 580 Service Manual

- [Inside View of Your Computer](#)
- [System Board Components](#)

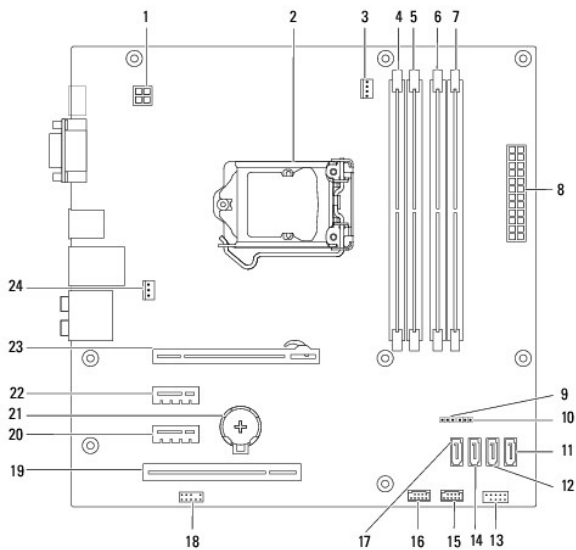
⚠ WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

Inside View of Your Computer



1	power supply	2	primary optical drive
3	secondary optical drive (optional)	4	front bezel
5	hard drive	6	Media Card Reader (optional)
7	system board	8	card retention bracket

System Board Components



1	12 V power connector (PWR2)	2	processor socket
3	processor fan connector (CPU_FAN1)	4	memory-module connector (DIMM3)
5	memory-module connector (DIMM1)	6	memory-module connector (DIMM4)

7	memory-module connector (DIMM2)	8	main power connector (PWR1)
9	CMOS reset jumper (CLR_CMOS1)	10	password reset jumper (PSWD1)
11	SATA connector (SATA1)	12	SATA connector (SATA2)
13	front-panel connector (FP1)	14	SATA connector (SATA3)
15	FlexBay USB connector (F_USB1)	16	front-panel USB connector (F_USB2)
17	SATA connector (SATA4)	18	front-panel audio connector (F_AUDIO1)
19	PCI card slot (PCI1)	20	PCI-Express x1 card slot (PCI-EX1_1)
21	battery socket (BAT1)	22	PCI-Express x1 card slot (PCI-EX1_2)
23	PCI-Express x16 card slot (PCI-EX16_1)	24	chassis fan connector (SYS_FAN1)

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