NEC
Versa S900
Disassembly Manual

Table of contents

Overview

This document contains step-by-step disassembly instructions for the Versa S900 chassis. The instructions are illustrated where necessary with images of the part that is being removed or disassembled. Furthermore, the screws that are removed are shown next to the image of the parts themselves.

NEC reserves the right to make changes to the Versa S900 chassis without notice.

Technician Notes

Only technicians authorized by NEC Computers International BV should attempt to repair this equipment. All troubleshooting and repair procedures are detailed to allow only subassembly/module level repair. Because of the complexity of the individual boards and subassemblies, no one should attempt to make repairs at the component level or to make modifications to any printed wiring board. Improper repairs can create a safety hazard. Any indication of component replacement or printed wiring board modifications may void any warranty or exchange allowances.

Disassembly Instructions

When disassembling the system unit, follow these general rules:

- ■ Do not disassemble the system into parts that are smaller than those specified in the instructions.
- ■ Label all removed connectors. Note where the connector goes and in what position it was installed.
- ■ Turn off the power and disconnect all power and all options.

Reassembly Instructions

Reassembly is the reverse of the disassembly process. Use care to ensure that all cables and screws are returned to their proper positions. Check that no tools or any loose parts have been left inside the chassis. Check that everything is properly installed and tightened.

Required Tools

All disassembly procedures can be performed using the following tools:

- ■ Tweezers
- ■ Small Philips screwdriver #0, #1
- ■ Small Flat screwdriver Ø 1.4 mm, 2.0 mm
- ■ Spacer screwdriver Ø 5 mm

Hazardous Voltage

There is hazardous voltage present inside the computer when it is connected to an AC supply, even when the computer's power switch is off. Exposure to hazardous voltage could cause personal injury. To avoid risk of injury, contact an Authorized Service Provider for proper (un)installation of optional hardware devices.

Avoid Electrostatic Discharge

Electrostatic electricity can easily damage circuit cards and integrated circuits (ICs). To reduce risk of damage, store them in protective packaging whenever they are not installed in your system.

Add-in cards can be extremely sensitive to ESD and always require careful handling. After removing the card from the computer, place the card flat on a grounded, static-free surface, component-side up. Use a conductive foam pad if available, but not the card wrapper. Do not slide the card over any surface.

Before you install or remove memory modules, video memory, disk drives, circuit cards or other devices, protect them from static electricity. To do so, make sure your computer's power switch is OFF. Then, unplug the computer's AC power cord. Before picking up the device you (un)install, you should wear an anti-static wrist wrap (available at electronic supply stores). Be sure to connect the wrist wrap to an unpainted metal portion of the computer chassis. As an alternative, you can dissipate electrostatic build-up by touching an unpainted metal portion of the computer chassis with one hand. Then touch the device you are (un)installing with the other hand, and maintain continuous contact with it until it is (un)installed in the computer.

Power Supply Unit

Under no circumstances should you attempt to disassemble the power supply. The power supply contains no user-serviceable parts. Inside the power supply are hazardous voltages that can cause serious personal injury. Always return a defective power supply to your dealer.

WARNING

Ensure that the computer is disconnected from its power source and from all telecommunications links, networks, or modem lines whenever the chassis cover is removed. Do not operate the computer with the cover removed.

AVERTISSEMENT

Assurez-vous que le système est débranché de son alimentation ainsi que de toutes les liaisons de télécommunication, des réseaux, et des lignes de modem avant d'enlever le capot. Ne pas utiliser le système quand le capot est enlevé.

WARNUNG

Das System darf weder an eine Stromquelle angeschlossen sein noch eine Verbindung mit einer Telekommunikationseinrichtung, einem Netzwerk oder einer Modem-Leitung haben, wenn die Gehäuseabdeckung entfernt wird. Nehmen Sie das System nicht ohne die Abdeckung in Betrieb.

ADVERTENCIA

Asegúrese de que cada vez que se quite la cubierta del chasis, el sistema haya sido desconectado de la red de alimentación y de todos lo enlaces de telecomunicaciones, de red y de líneas de módem. No ponga en funcionamiento el sistema mientras la cubierta esté quitada.

WAARSCHUWING

Zorg er voor dat alle verbindingen van en naar de computer (stroom, modem netwerk, etc) verbroken worden voordat de behuizing geopend wordt. Zet de computer nooit aan als de behuizing geopend is.

AVVERTENZA

Prima di rimuovere il coperchio del telaio, assicurarsi che il sistema sia scollegato dall'alimentazione, da tutti i collegamenti di comunicazione, reti o linee di modem. Non avviare il sistema senza aver prima messo a posto il coperchio

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Removing the Battery

Perform the following steps to remove the battery:

1. Make sure the notebook is powered off.
2. Close the lid of the notebook
3. Turn the unit upside down
4. Unlock the battery and slide it out of its place as shown here (Fig. 1).

Fig. 1 *Removing the Battery*

Removing the Versa Bay IV Module

To remove the Versa Bay IV module, first remove the battery (see *Removing the Battery*), then perform the following steps:

1. Push the Versa Bay IV Lock and hold it in position as shown in (Fig. 2).
2. Pull the Versa Bay IV module out of the system.

Fig. 2 *Removing the Versa Bay IV Module*

Removing the Memory Module

To remove the memory module, first remove the battery (see *Removing the Battery*), then perform the following steps:

1. Unscrew the one screw holding the memory cover in place (Fig. 3)

Fig. 3 *Removing the memory cover*

2. Pull apart the retaining clips in order to release the memory module.
3. Take the memory module out of its location and put it aside.

Removing the Wireless Mini PCI Card

To remove the wireless mini PCI card, first remove the battery (see *Removing the Battery*), then perform the following steps:

1. Unscrew the one screw holding the cover of the mini PCI card in place (Fig. 4).

Fig. 4 *Removing the cover of the mini PCI card*

2. Disconnect the antenna wires marked in Fig. 5 .

3. Unclip the wireless mini PCI card as shown in Fig. 5 and put it aside.

Fig. 5 *Removing the mini PCI card*

Removing the Keyboard Cover and the Keyboard

To remove the keyboard cover and the keyboard, first remove the battery (see *Removing the Battery*), then perform the following steps:

1. Using a plastic flatbed screwdriver, carefully disengage the keyboard cover as shown in Fig. 6

Fig. 6 *Removing the keyboard cover*

2. Carefully tilt the keyboard cover, disconnect the cable shown in Fig. 7 and put the keyboard cover aside.

Note: Be very careful when tilting the keyboard cover as you may damage the cable that connects the keyboard cover to the system.

Fig. 7 Disconnecting the keyboard cover cable

3. Carefully flip over the keyboard, disconnect the keyboard cable (Fig. 8) and put the keyboard aside.

Note: Be very careful when flipping over the keyboard as you may damage the cable that connects the keyboard to the system.
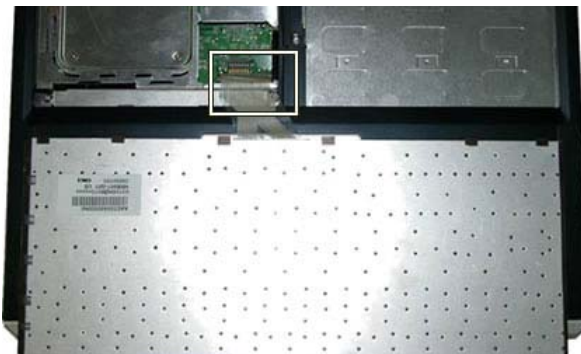

Fig. 8 Disconnecting keyboard cable

Removing the Touchpad

To remove the touchpad, first remove the battery (see *Removing the Battery*), then perform the following steps:

1. Remove the screws from the battery compartment, as shown in Fig. 9 .

Fig. 9 Removing the touchpad assembly screws

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2. Carefully flip over the touchpad assembly as shown (Fig. 10).

Fig. 10   Flipping over the touchpad assembly

Note: Be very careful flipping over the touchpad assembly as it is at this point still connected via a cable to the system. The cable may be damaged by carelessly removing the assembly from its position.

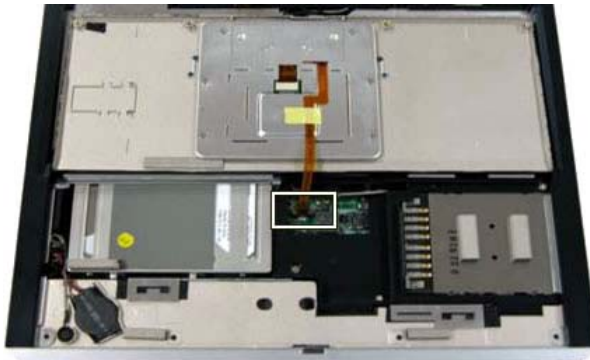3. Disconnect the cable connecting the touchpad to the main board (Fig. 11).

Fig. 11   Disconnecting the touchpad cable
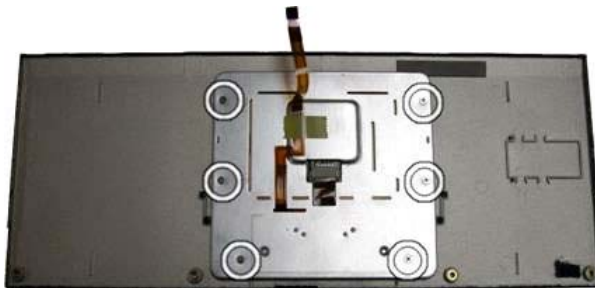
4. Remove the screws marked in Fig. 12

Fig. 12   Removing the touchpad screws

5. Lift the topuchpad to remove it from its place as shown in Fig. 13 and put it aside.
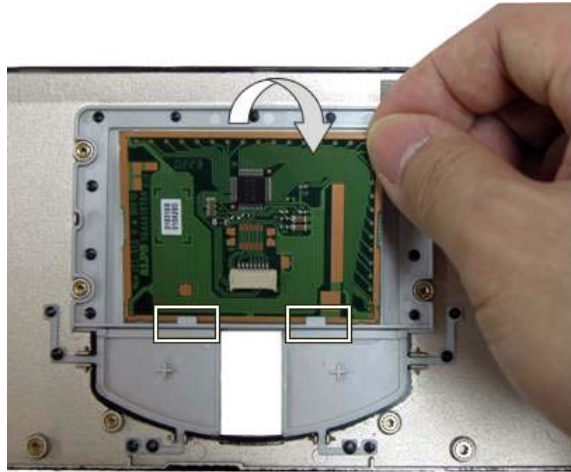

Fig. 13   Removing the touchpad

Note: Be careful when lifting out the touchpad. Notice that it is held in place by two latches marked in Fig. 13

Removing the Hard Disk Drive

To remove the hard disk drive, first remove the Keyboard (see *Removing the Keyboard Cover and the Keyboard*), remove the touchpad (see *Removing the Touchpad*), then perform the following steps:

1. Remove the screws next to the hard disk drive as shown in Fig. 14 .

Fig. 14   Removing the hard disk drive screws

2. Take out of the system the hard disk drive holder that has come free after removing the screws in Fig. 14 .
3. Slide the hard disk drive as shown in Fig. 15 and lift it out of the system.
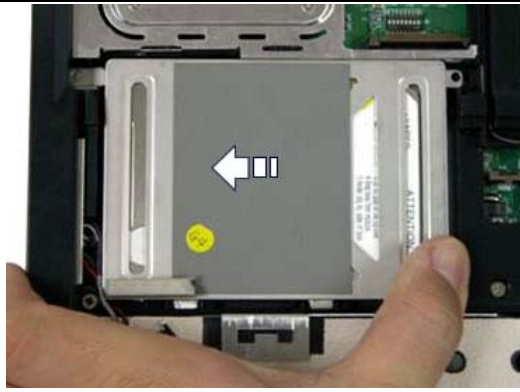

Fig. 15 *Extracting the hard disk drive from its location*

4. Remove the screws marked in Fig. 16 to release the hard disk drive from its brackest.

Fig. 16 *Removing the hard disk drive brackets*

Removing the Heat Sink

To remove the heat sink, first remove the Keyboard (see *Removing the Keyboard Cover and the Keyboard*), then perform the following steps:

1. Remove the screws shown in Fig. 17 to release the heat plate.

Fig. 17 *Removing the heat plate screws*

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2. Take the heat plate out of the system and put it aside
3. Disconnect the fan connector shown in Fig. 18

Fig. 18   Removing the heat sink screws and fan connector

4. Loosen the screws shown in Fig. 18 to release the heat sink.
5. Carefully lift the heat sink out of the system and put it aside.

Removing the CPU

To remove the CPU, first remove the heat sink (see *Removing the Heat Sink*), then perform the following steps:

1. With a small flatbed screwdriver, release the CPU lock (Fig. 19).

Fig. 19   Releasing the CPU lock

2. Carefully lift the CPU out of the socket and put it aside.

Note: Handle the CPU with care when inserting or extracting it from the socket, in order not to bent or damage any pin.

Removing the LCD Display

To remove the LCD display, first disconnect the antenna wires from the wireless PCI card (see *Removing the Wireless PCI Card*), remove the Keyboard (see *Removing the Keyboard Cover and the Keyboard*), remove the touchpad assembly (see *Removing the Touchpad*), then perform the following steps:

1. Using a small flatbed screwdriver, carefully remove the LCD hinge covers (Fig. 20).

Fig. 20   Removing the hinge cover

2. Disconnect the LCD connector from the main board (Fig. 21).

Fig. 21   Removing LCD connector and hinge screws

3. Carefully extract the antenna cable from its location and free it from anything that might hold it.
4. Remove the screws marked in Fig. 21
5. Carefully take the LCD display away from the base unit and put it aside.

Disassembling the LCD Display

To disassemble the LCD Display, first remove it from the base unit (see *Removing the LCD Display*), then perform the following steps:

1. Remove the rubber covers marked in Fig. 22 .

Fig. 22 Removing rubbers and screws

2. Remove the screws that have been uncovered in Fig. 22 .
3. Remove the ring around the right hinge (Fig. 23)

Fig. 23 Removing ring from right hinge

4. Carefully unclip the LCD cover and put it aside.
5. Remove the screws shown in Fig. 24 to release the LCD panel and the inverter board.

Fig. 24 Removing LCD panel and inverter board screws

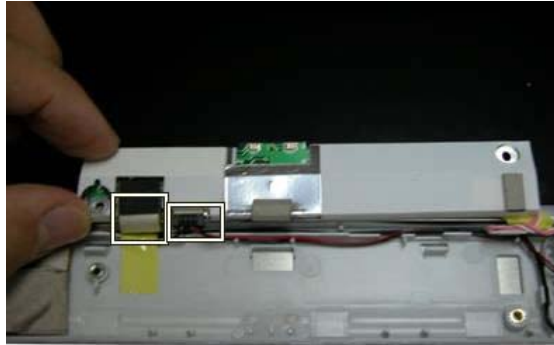6. Disconnect the flat cable and the speaker cable shown in

Fig. 25   *Disconnecting the inverter board from cables*

7. Carefully extract the LCD panel from the back cover.
8. Remove the screws marked in Fig. 26 to release the LCD hinges and take both hinges and the LCD panel and put them aside.
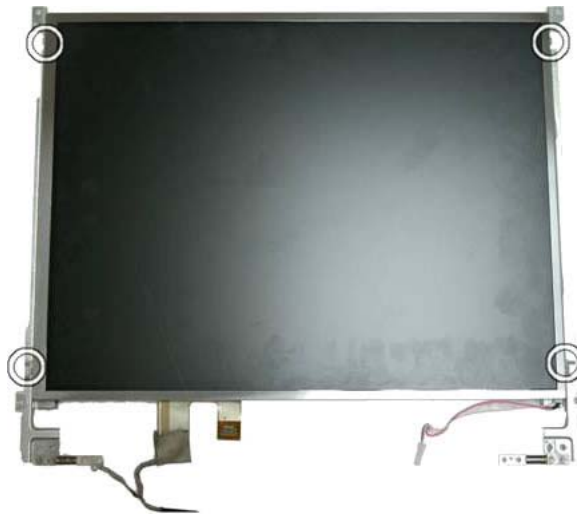

Fig. 26   *Removing hinge screws*

Removing the Top Cover

To remove the top cover, first remove the LCD display (see *Removing the LCD Display*), then perform the following steps:

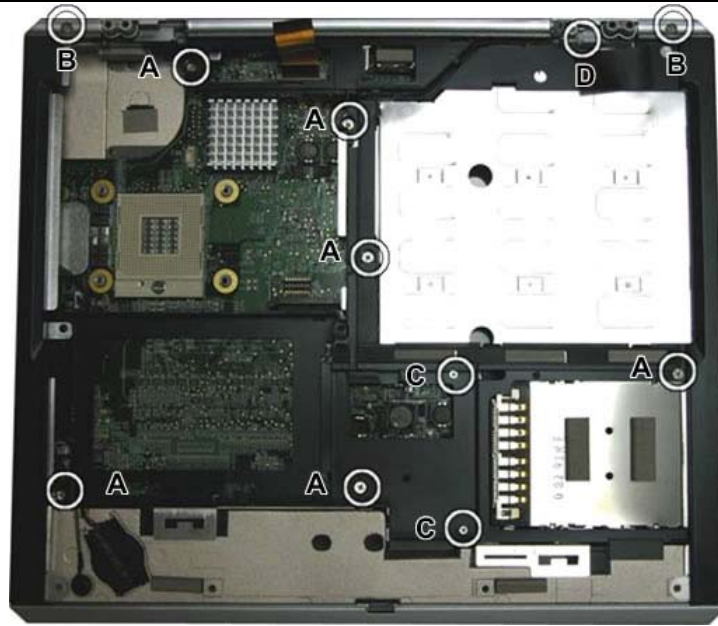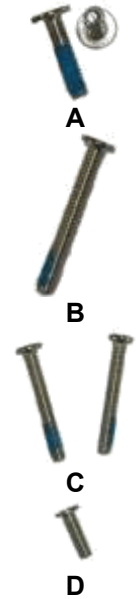1. Remove the screws marked in Fig. 27

Fig. 27   Removing the top cover screws

2.   Disconnect the microphone and the CMOS battery from the main board and take them out of the system.
3.   Remove the two screws at the back of the system that are marked in Fig. 28

Fig. 28   Removing screws on the back of the system

4.   Release the five small latches in the battery compartment.(Fig. 29)

Fig. 29   Disengaging the latches in the battery compartment

5.   Carefully lift up the top cover from the front side of the case and put it aside.

Removing the Main Board

To remove the main board, first remove the top cover (see *Removing the Top Cover*), then

perform the next steps:

1. Remove the screws holding the versa bay shield in place (Fig. 30).

Fig. 30 *Removing the Versa Bay shield*

2. Lift the shield out of the system and put it aside.
3. Remove the screw holding the AC socket and take the socket holder out of the system.

Fig. 31 *Removing the AC socket holder*

4. Remove the two Hex bold screws next to the VGA port.

Fig. 32 *Removing VGA port screws*

5. Carefully lift up the main board and put it aside.

Note: You can remove the wireless LAN button if it is in your way while removing the main board.

Removing the MDC Modem

To remove the MCD modem, first remove the main board (see *Removing the Main Board*), then perform the following steps:

1. Remove the two screws holding the mode in place.(Fig. 33)

Fig. 33 *Removing the MDC modem*

2. Carefully lift the modem and disconnect any cable attached to it.

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