

Installation Note

Agilent Technologies ESA Spectrum Analyzers and EMC Analyzers Cover and Handle Kits

Kit Numbers:

E4401-60244 (Dress cover hardware)

E4401-60246 (Handle assembly)

E4401-60265 (Chassis cover and dress cover)

E4401-60266 (Dress cover)



Agilent Technologies

Notice.

The information contained in this document is subject to change without notice.

Agilent Technologies makes no warranty of any kind with regard to this material, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Agilent Technologies shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Microsoft® is a U.S. registered trademark of Microsoft Corp.

Introduction

This installation note is included in four different kits. Select only the section of this note that pertains to the kit that you have received.

Products Affected:	E4401B E4402B E4403B E4404B E4405B E4407B E4408B E4411B E7401A E7402A E7403A E7404A E7405A
Serial Numbers:	US00000000/US99999999 MY00000000/MY99999999
Options:	all
To Be Performed By:	(X) Agilent Technologies Service Center (X) Personnel Qualified by Agilent (X) Customer
Estimated Installation Time:.....	0.5 Hours (E4401-60244) 0.5 Hours (E4401-60246) 0.5 Hours (E4401-60265) 0.2 Hours (E4401-60266)

Chassis Cover and Dress Cover Kit, E4401-60265

Qty	Description	Part Number
1	Chassis Cover	E4401-00067
1	Dress Cover	E4401-00073
1	Tracking Form (blank labels)	9320-6050
1	HiPot Passed Label	7121-7398
4	M4 T-10 TORX Screws, 12 mm LG	0515-0382
9	M3 T-10 TORX Screws, 10 mm LG	0515-2600
11	M3 T-10 TORX Screws, 8 mm LG	0515-0372
1	Installation Note	E4401-90276

Tools Required

T-10 TORX screwdriver

T-15 TORX screwdriver

C-Clip removal tool (Can be purchased at local hardware or auto parts store.)

Heat gun or >1200 W blow dryer

Razor blade

Torque Settings

To avoid potential RFI leakage, tighten screws to the following torque limits:

Item	Torque in Inch-Pounds
M3 T-10 TORX screws	9
M4 T-15 TORX screws	21

Procedure

WARNING Before you disassemble the instrument, turn the power switch to Standby and unplug the instrument. Failure to unplug the instrument can result in personal injury.

CAUTION Electrostatic discharge (ESD) can damage or destroy electronic components. All work on electronic assemblies should be performed at a static-safe workstation. Refer to the documentation that pertains to your instrument for information about static-safe workstations and ordering static-safe accessories.

Summary

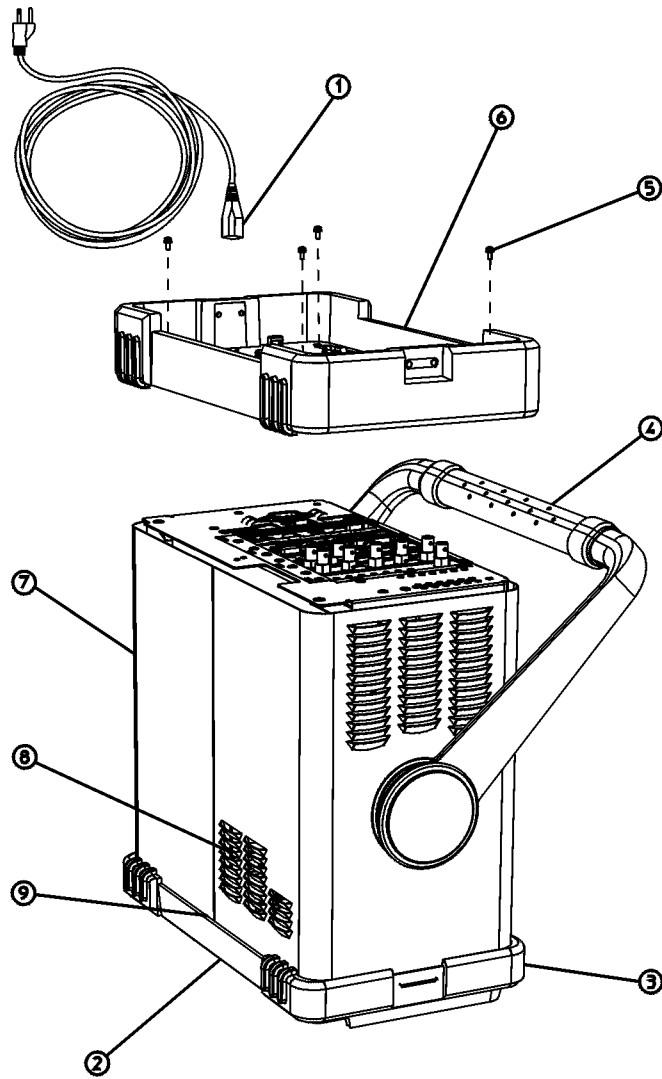
If you received this kit, you **MUST** change both the chassis cover and the dress cover due to incompatibility issues, even if just a chassis cover or a dress cover was ordered separately. Remove the existing dress cover and chassis cover and install the new ones provided in this kit.

Handle and Dress Cover Removal

1. Referring to [Figure 1](#), disconnect the analyzer from ac power (1).
2. Remove any adapters or cables connected to the front panel (2).
3. Carefully place the analyzer on the work surface with the front frame (3) facing down.
4. Position the handle (4) to the rear of the analyzer (handle facing straight up).
5. Pull outward on the handle's hubs. Rotate the handle a few degrees in each direction as you pull outward to release the handle.
6. Remove the four screws (5) that hold the rear frame (6) and dress cover (7) in place.
7. Remove the rear frame (6).
8. Pull the dress cover (7) off towards the rear of the analyzer.

Figure 1

Dress Cover and Rear Frame Removal and Installation

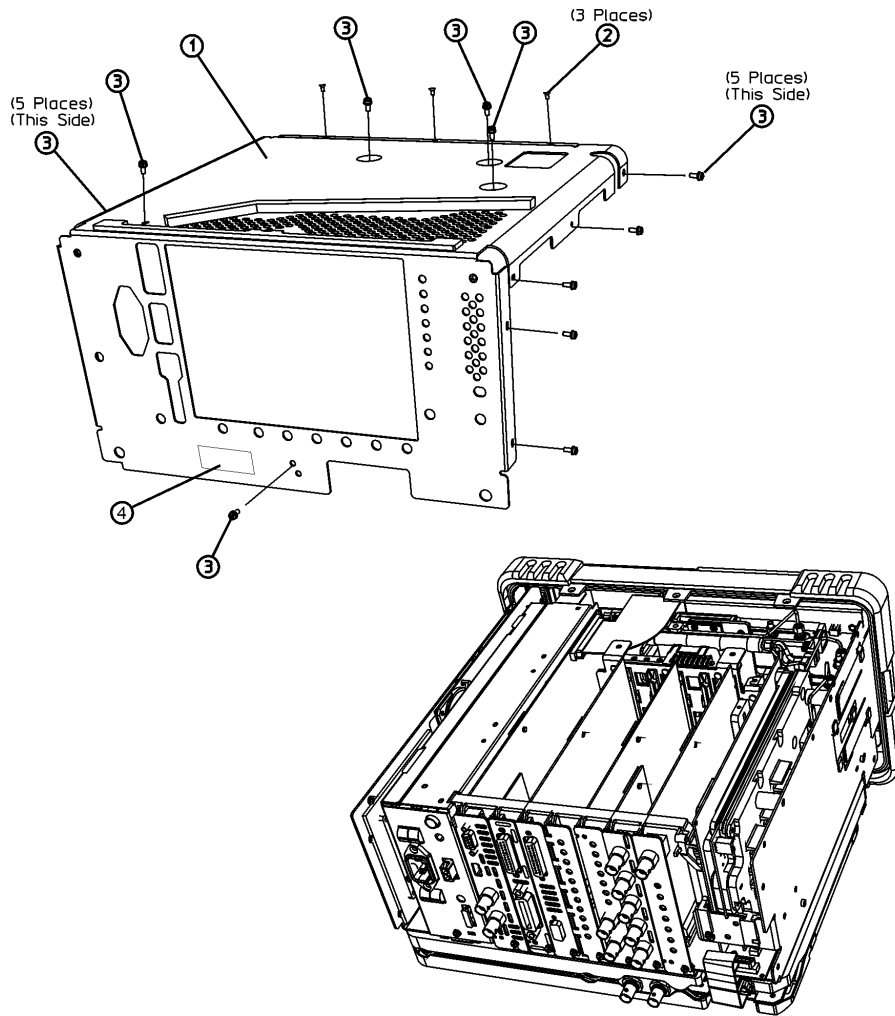


sl745b

Chassis Cover Removal

1. Lay the analyzer flat as shown in [Figure 2](#).
2. Remove the 17 screws (2) and (3) attaching the chassis cover to the chassis. Note that the number of screws attaching the chassis cover may vary with option mixes.
3. Remove the chassis cover (1) from the chassis.
4. Using a heat gun or a blow dryer and a sharp razor blade, carefully remove the instrument serial number label, Hi Pot label, and battery label from the old chassis cover. Immediately install the labels on the rear of the new chassis cover, supplied with this kit. If any of the labels are damaged during the removal process, blank serial and battery labels have been provided in this kit. Additionally, a "Hi Pot Passed" label has been included. Either type the serial number and battery date or write them with an indelible ink pen on the blank labels.

Figure 2 Chassis Cover Removal and Installation

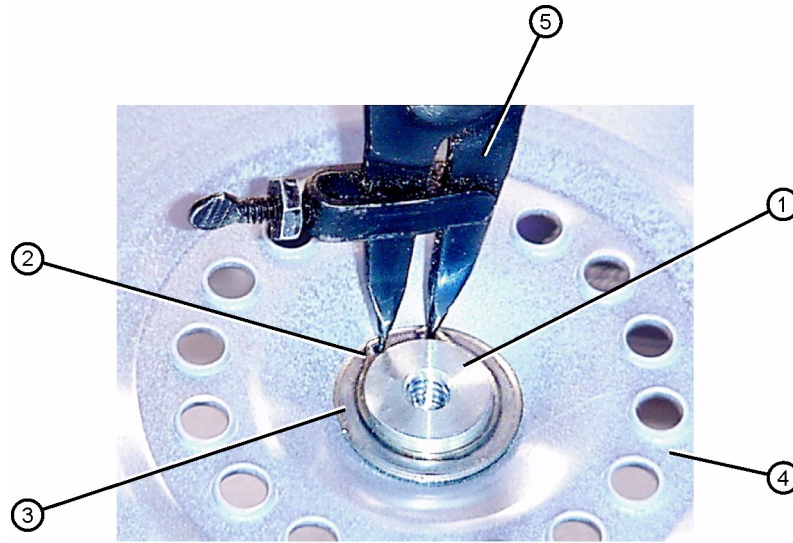


jl79b

Dress Cover Hardware Removal

The dress cover supplied in this kit comes with handle-mounting hardware attached, and it may not be compatible with the existing handle. If the handle hubs need to be pulled away from the sides of the instrument to change the handle position, you will need to remove the attached hardware in order to install your handle. To accomplish this, referring to [Figure 3](#), remove the retainer (1), the C-clip (2), and the washer (3) from each hub (4) before installing the new cover.

Figure 3 Hardware Removal from New Dress Cover



j173b

Replace Chassis Cover

1. Position the new chassis cover (1) over the instrument, then lower it onto the instrument. See [Figure 2](#).
2. Using the new screws provided in this kit, replace the 17 screws (2) and (3) as indicated in the instructions on the chassis cover. Tighten the screws to 9 inch-pounds.

Replace Dress Cover and Handle

1. Carefully place the spectrum analyzer on the work surface with the front frame (3) facing down. See [Figure 1](#).
2. Install the new dress cover, matching the grill (8) on the bottom of the dress cover to the bottom of the analyzer.
3. Fit the leading edge of the dress cover completely into the slot (9) on the back of the front frame assembly.
4. Replace the rear frame assembly (6) using the four screws (5) to fasten the rear frame to the analyzer. Tighten them to 21 inch-pounds.
5. Position the handle with the hubs over the keyholes on the dress cover and the handle pointed toward the rear of the analyzer. Rotate the handle a few degrees in each direction until the handle locks into place.
6. This concludes the installation of the Chassis Cover and Dress Cover Kit, E4401-60265.

Dress Cover Kit, E4401-60266

Qty	Description	Part Number
1	Dress Cover	E4401-00073
1	Installation Note	E4401-90276

Tools Required

T-15 TORX screwdriver

C-clip removal tool (Can be purchased at local hardware or auto parts store.)

Torque Settings

To avoid potential RFI leakage, tighten screws to the following torque limits:

Item	Torque in Inch-Pounds
M4 T-15 TORX screws	21

Procedure

WARNING Before you disassemble the instrument, turn the power switch to Standby and unplug the instrument. Failure to unplug the instrument can result in personal injury.

CAUTION Electrostatic discharge (ESD) can damage or destroy electronic components. All work on electronic assemblies should be performed at a static-safe workstation. Refer to the documentation that pertains to your instrument for information about static-safe workstations and ordering static-safe accessories.

Summary

If you received this kit, you need to remove the existing dress cover and install the new dress cover provided in this kit.

Handle and Dress Cover Removal

1. Referring to [Figure 1](#), disconnect the analyzer from ac power (1).
2. Remove any adapters or cables connected to the front panel (2).
3. Carefully place the analyzer on the work surface with the front frame (3) facing down.
4. Position the handle (4) to the rear of the analyzer (handle facing straight up).
5. Pull outward on the handle's hubs. Rotate the handle a few degrees in each direction as you pull outward to release the handle.
6. Remove the four screws (5) that hold the rear frame (6) and dress cover (7) in place.
7. Remove the rear frame (6).
8. Pull the dress cover (7) off towards the rear of the analyzer.

Dress Cover Hardware Removal

The dress cover supplied in this kit comes with handle hardware attached, and it may not be compatible with the existing handle. If the handle needs to be pulled away from the sides of the instrument to change its position, you will need to remove the attached hardware in order to install your handle. To accomplish this, referring to [Figure 3](#), remove the retainer (1), the C-clip (2), and the washer (3) from each hub (4) before installing the new cover.

Replace Dress Cover and Handle

1. Carefully place the spectrum analyzer on the work surface with the front frame (3) facing down. See [Figure 1](#).
2. Install the new dress cover, matching the grill (8) on the bottom of the dress cover to the bottom of the analyzer.
3. Fit the leading edge of the dress cover completely into the slot (9) on the back of the front frame assembly.
4. Replace the rear frame assembly (6) using the four screws (5) to fasten the rear frame to the analyzer. Tighten them to 21 inch-pounds.
5. Position the handle with the hubs over the keyholes on the dress cover and the handle pointed toward the rear of the analyzer. Rotate the handle a few degrees in each direction until the handle locks into place.
6. This concludes the installation of the Dress Cover Kit, E4401-60266.

Dress Cover Hardware Kit, E4401-60244

Qty	Description	Part Number
2	Retainer (backing plate)	E4401-20221
3	Washer	3050-2122
2	C-clip	0510-0962
2	Bolt, 1/4-20 by 0.375"	3030-1211
1	Installation Note	E4401-90276

Tools Required

T-15 TORX screwdriver

C-Clip removal tool (Can be purchased at local hardware or auto parts store.)

5/32-inch Allen (hex) wrench

Torque Settings

To avoid potential RFI leakage, tighten screws to the following torque limits:

Item	Torque in Inch-Pounds
M4 T-15 TORX screws	21
1/4-20 shoulder bolt	70

Procedure

WARNING Before you disassemble the instrument, turn the power switch to Standby and unplug the instrument. Failure to unplug the instrument can result in personal injury.

CAUTION Electrostatic discharge (ESD) can damage or destroy electronic components. All work on electronic assemblies should be performed at a static-safe workstation. Refer to the documentation that pertains to your instrument for information about static-safe workstations and ordering static-safe accessories.

Summary

If you received this kit, you are able to upgrade your existing dress cover to use the new ergonomic handle. The new handle is NOT included in this kit. The ergonomic handle assembly is part number E4401-60245.

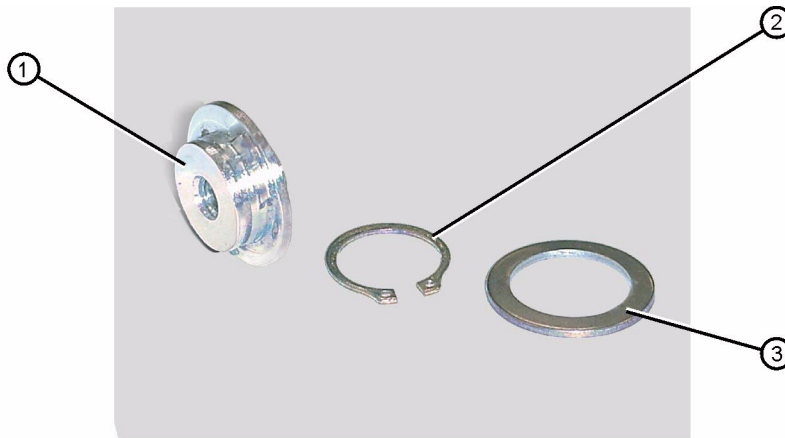
Handle and Dress Cover Removal

1. Referring to [Figure 1](#), disconnect the analyzer from ac power (1).
2. Remove any adapters or cables connected to the front panel (2).
3. Carefully place the analyzer on the work surface with the front frame (3) facing down.
4. Position the handle (4) to the rear of the analyzer (handle facing straight up).
5. Pull outward on the handle's hubs. Rotate the handle a few degrees in each direction as you pull outward to release the handle.
6. Remove the four screws (5) that hold the rear frame (6) and dress cover (7) in place.
7. Remove the rear frame (6).
8. Pull the dress cover (7) off towards the rear of the analyzer.

Dress Cover Hardware Installation

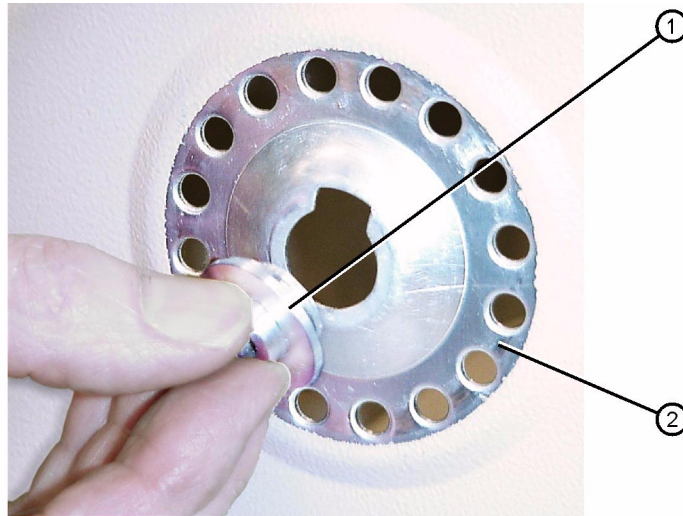
You will need to install the retainer (1), the washer (3), and the C-clip (2) on each side of the dress cover before replacing the cover. See [Figure 4](#).

Figure 4 Hardware to be Installed in the Dress Cover



jj75b

Figure 5 **Inserting the Retainer into the Hub**



jl72b

1. Insert a retainer (1) into one of the handle hubs (2) from the outside of the cover. See [Figure 5](#).
2. Place a washer (3) over the retainer (1) on the inside of the cover.
3. Using a C-clip removal tool, install the C-clip (2) to secure the retainer (1) and the washer (3).
4. Repeat steps 1 through 3 on the other side of the cover.

Replace Dress Cover and Handle

1. Carefully place the spectrum analyzer on the work surface with the front frame (3) facing down. See [Figure 1](#).
2. Install the dress cover, matching the grill (8) on the bottom of the dress cover to the bottom of the analyzer.
3. Fit the leading edge of the dress cover completely into the slot (9) on the back of the front frame assembly.
4. Replace the rear frame assembly (6) using the four screws (5) to fasten the rear frame to the analyzer. Tighten them to 21 inch-pounds.
5. Position the new ergo handle with the hubs over the retainer assemblies on the dress cover. Rotate the handle a few degrees in each direction until the handle locks into place.
6. Secure the handle using a 1/4-20 shoulder bolt (supplied in this kit) on each side. Tighten each bolt to 70 inch-pounds of torque.
7. This concludes the installation of the Dress Cover Hardware Kit, E4401-60244.

Handle Assembly Kit, E4401-60246

Qty	Description	Part Number
1	Handle Assembly	E4401-60025
1	Dress Cover Hardware Kit ^a	E4401-60244
2	Shoulder Bolt, 1/4-20	3030-1211

a. Includes installation note E4401-90276

Tools Required

T-15 TORX screwdriver

C-Clip removal tool (Can be purchased at local hardware or auto parts store.)

5/32-inch Allen (hex) wrench

Torque Settings

To avoid potential RFI leakage, tighten screws to the following torque limits:

Item	Torque in Inch-Pounds
M4 T-15 TORX screws	21
1/4-20 shoulder bolt	70

Procedure

WARNING Before you disassemble the instrument, turn the power switch to Standby and unplug the instrument. Failure to unplug the instrument can result in personal injury.

CAUTION Electrostatic discharge (ESD) can damage or destroy electronic components. All work on electronic assemblies should be performed at a static-safe workstation. Refer to the documentation that pertains to your instrument for information about static-safe workstations and ordering static-safe accessories.

Summary

If you received this kit, you are able to upgrade your existing dress cover to use the new ergo handle. The new handle is included in this kit.

Handle and Dress Cover Removal

1. Referring to [Figure 1](#), disconnect the analyzer from ac power (1).
2. Remove any adapters or cables connected to the front panel (2).
3. Carefully place the analyzer on the work surface with the front frame (3) facing down.
4. Position the handle (4) to the rear of the analyzer (handle facing straight up).
5. Pull outward on the handle's hubs. Rotate the handle a few degrees in each direction as you pull outward to release the handle.
6. Remove the four screws (5) that hold the rear frame (6) and dress cover (7) in place.
7. Remove the rear frame (6).
8. Pull the dress cover (7) off towards the rear of the analyzer.

Dress Cover Hardware Installation

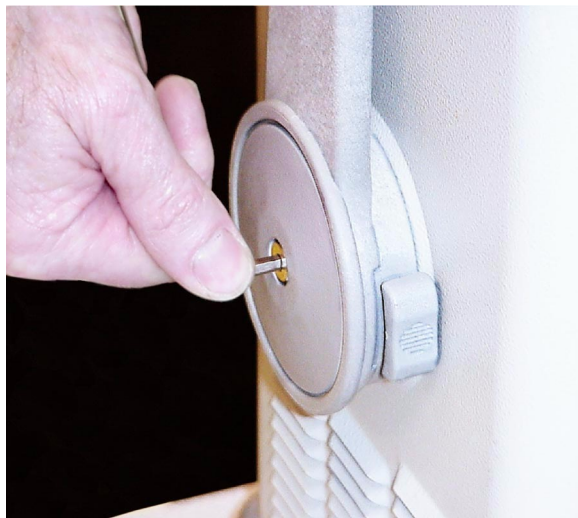
You will need to install the retainer (1), the washer (3), and the C-clip (2) on each side of the dress cover before replacing the cover. See [Figure 4](#).

1. Insert a retainer (1) into one of the handle holes in the cover from the outside of the cover. See [Figure 5](#).
2. Place a washer (3) over the retainer (1) on the inside of the cover.
3. Using a C-clip removal tool, install the C-clip (2) to secure the retainer (1) and the washer (3).
4. Repeat steps 1 through 3 on the other side of the cover.

Replace Dress Cover and Handle

1. Carefully place the spectrum analyzer on the work surface with the front frame (3) facing down. See [Figure 1](#).
2. Install the dress cover, matching the grill (8) on the bottom of the dress cover to the bottom of the analyzer.
3. Fit the leading edge of the dress cover completely into the slot (9) on the back of the front frame assembly.
4. Replace the rear frame assembly (6) using the four screws (5) to fasten the rear frame to the analyzer. Tighten them to 21 inch-pounds.
5. Position the new ergo handle with the hubs over the retainer assemblies on the dress cover and the handle pointed toward the rear of the analyzer. Rotate the handle a few degrees in each direction until the handle locks into place.
6. Secure the handle using a 1/4-20 shoulder bolt (supplied in this kit) on each side. Tighten each bolt to 70 inch-pounds of torque. See [Figure 6](#).
7. This concludes the installation of the Handle Assembly Kit, E4401-60246.

Figure 6 Securing the Handle



jj76b