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# **FIPS Security Seal**

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## **Procedures for Brocade VDX 8770**

Supporting Brocade VDX 8770-8 and 8770-4

**BROCADE**

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## Documentation History

Title	Publication number	Summary of changes	Date
<i>Brocade 6546 16 Gbps FC Switch Module Hardware Reference Manual</i>	53-1003101-01	New document	March 2014

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# Preface

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## Document conventions

### Text formatting conventions

The following text formatting conventions may be used in the flow of the text to highlight specific words or phrases.

Format	Description
<b>bold text</b>	Identifies command names Identifies keywords and operands Identifies the names of user-manipulated GUI elements Identifies text to enter at the GUI
<i>italic text</i>	Identifies emphasis Identifies variables and modifiers Identifies paths and Internet addresses Identifies document titles
code	Identifies CLI output Identifies command syntax examples

### Command syntax conventions

The following text formatting conventions identify command syntax components.

Convention	Description
<b>bold text</b>	Identifies command names, keywords, and command options.
<i>italic text</i>	Identifies a variable.
value	In Fibre Channel products, a fixed value provided as input to a command option is printed in plain text, for example, <b>--show</b> WWN

Convention	Description
[ ]	Syntax components displayed within square brackets are optional. Default responses to system prompts are enclosed in square brackets.
{x y z}	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one. In Fibre Channel products, square brackets may be used instead for this purpose.
x y	A vertical bar separates mutually exclusive elements.
< >	Nonprinting characters, for example, passwords, are enclosed in angle brackets.
...	Repeat the previous element. For example, <b>member[member...]</b>
\	Indicates a "soft" line break in command examples. If a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash.
<i>italic text</i>	Identifies a variable.
<b>bold text</b>	Identifies command names, keywords, and command options.

## Notes, cautions, and warnings

The following notices and statements may be used in this document. They are listed below in order of increasing severity of potential hazards.

### NOTE

A note provides a tip, guidance, or advice, emphasizes important information, or provides a reference to related information.

### ATTENTION

An Attention statement indicates potential damage to hardware or data.



### CAUTION

A Caution statement alerts you to situations that can be potentially hazardous to you or cause damage to hardware, firmware, software, or data.



### DANGER

A Danger statement indicates conditions or situations that can be potentially lethal or extremely hazardous to you. Safety labels are also attached directly to products to warn of these conditions or situations

# Brocade resources

## Related publications

You can download additional publications supporting your product from the Brocade website at [www.brocade.com](http://www.brocade.com).

- Adapter documentation is available on the [Downloads and Documentation for Brocade Adapters](#) page. Select your platform and scroll down to the documentation section.
- For all other products, select the Brocade product to open the individual product page, click the Brocade product name or image to open the individual product page. The user manuals are available in the resources module at the bottom of the page under the Documentation category.

## Additional Brocade resources

To get up-to-the-minute information, go to [MyBrocade](#). You can register at no cost to obtain a user ID and password.

Release Notes are available on [MyBrocade](#) under Product Downloads.

White papers, online demonstrations, and data sheets are available through the [Brocade website](#).

# Getting technical help

For product support information and the latest information on contacting the Technical Assistance Center, go to <http://www.brocade.com/services-support/index.html>

## Contact Brocade Support 24x7

Use one of the following methods to contact the Brocade Technical Assistance Center.

Online	Telephone	Email
Preferred method of contact for non-urgent issues: <ul style="list-style-type: none"><li>• <a href="#">My Cases</a> through MyBrocade</li><li>• <a href="#">Software downloads</a> and licensing tools</li><li>• <a href="#">Knowledge Base</a></li></ul>	Required for Sev 1-Critical and Sev 2-High issues: <ul style="list-style-type: none"><li>• Continental US: 1-800-752-8061</li><li>• Europe, Middle East, Africa, and Asia Pacific: +800-AT FIBREE (+800 28 34 27 33)</li><li>• For areas unable to access toll free number: +1-408-333-6061</li><li>• <a href="#">Toll-free numbers</a> are available in many countries.</li></ul>	<a href="mailto:support@brocade.com">support@brocade.com</a>  Please include: <ul style="list-style-type: none"><li>• Problem summary</li><li>• Serial number</li><li>• Installation details</li><li>• Environment description</li></ul>

## Document feedback

Quality is our first concern at Brocade and we have made every effort to ensure the accuracy and completeness of this document. However, if you find an error or an omission, or you think that a topic needs further development, we want to hear from you. You can provide feedback in two ways:

- Through the online feedback form in the HTML documents posted on [www.brocade.com](http://www.brocade.com).
- By sending your feedback to [documentation@brocade.com](mailto:documentation@brocade.com).

Provide the publication title, part number, and as much detail as possible, including the topic heading and page number if applicable, as well as your suggestions for improvement





# General Procedures for Applying Tamper-Evident Seals

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This document provides instructions for applying FIPS-compliant tamper-evident security seals to specific blades, switches, and enterprise platforms.



## CAUTION

**Wear a grounded ESD strap when handling a control or port blade. The chassis has a grounding connection above the power connectors.**

**Hold the port blade by the edges of the metal pan. Do not use the ejectors to hold a control or port blade.**

**Disassembling any part of a port blade voids the part warranty and regulatory certifications. There are no user-serviceable parts inside the port blade.**

Before you begin to apply tamper-evident seals, ensure that you have the following items:

- Electrostatic discharge (ESD) grounding strap (as recommended in the hardware manual).
- Tamper-Evident Seals Kit (part number XBR-000195ABC123).

Store the seals in a plastic bag in a cool, dry location between 15° and 20°C (60° and 70°F) and less than 50 percent relative humidity.

The effective life of seals is two years. After every two years, you should discard the old seals and replace with new seals.

## Seal application instructions

For all seal applications, comply with the following instructions.

1. The surface where you apply a tamper-evident seal must be clean and dry. Use ethyl alcohol to clean the surface at each sealing location. Prior to applying a new seal to an area that shows seal residue, use consumer-strength adhesive remover to remove the residue. Then use ethyl alcohol to clean off any residual adhesive remover before applying a new seal.
2. Do not use bare fingers to handle the labels. Slowly peel the backing from each seal, taking care not to touch the adhesive.
3. Use very firm pressure across the entire seal surface to ensure maximum adhesion.
4. Allow a minimum of 24 hours for the adhesive to cure. Tamper evidence might not be apparent until the adhesive cures.

## Tamper evidence information

When a tamper-evident seal is removed from the surface to which it has been applied, several tamper indications are apparent:

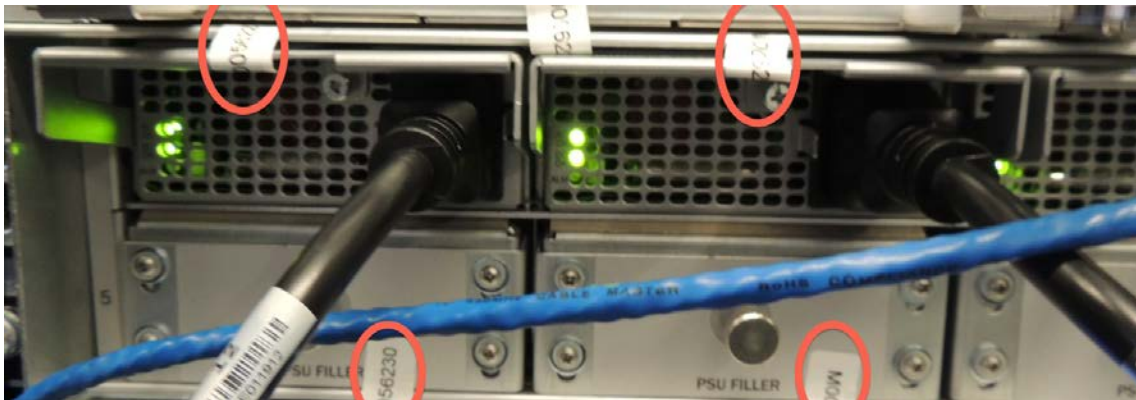
- The seal that has been removed shows a checkerboard destruct pattern.
- The graphics printed within the seal are uniquely split between the removed seal and the residue left on the surface. The residue is visible under ultraviolet light.





**Figure 3 Brocade VDX 8770-8 port-side seal locations**

5. The Brocade VDX 8770-8 accepts both AC and DC Power Supply Units. Figure 6 demonstrates how to attach a tamper label if a DC Power Supply Unit is used. The total number of tamper labels will be the same for AC and DC Power Supply Units.
  - a. Apply one (1) seal to each location shown in Figure 4, which demonstrates the bottom left portion of the port-side of the VDX 8770-8. This step requires four (4) seals total.
  - b. Apply one (1) seal to each location shown in Figure 5, which demonstrates the seal locations on the bottom right portion of the port-side of the VDX 8770-8. This step requires four (4) seals total.



**Figure 4. Seal locations on the port-side of the VDX 8770-8.**



**Figure 5. Seal locations on the port-side of the VDX 8770-8**

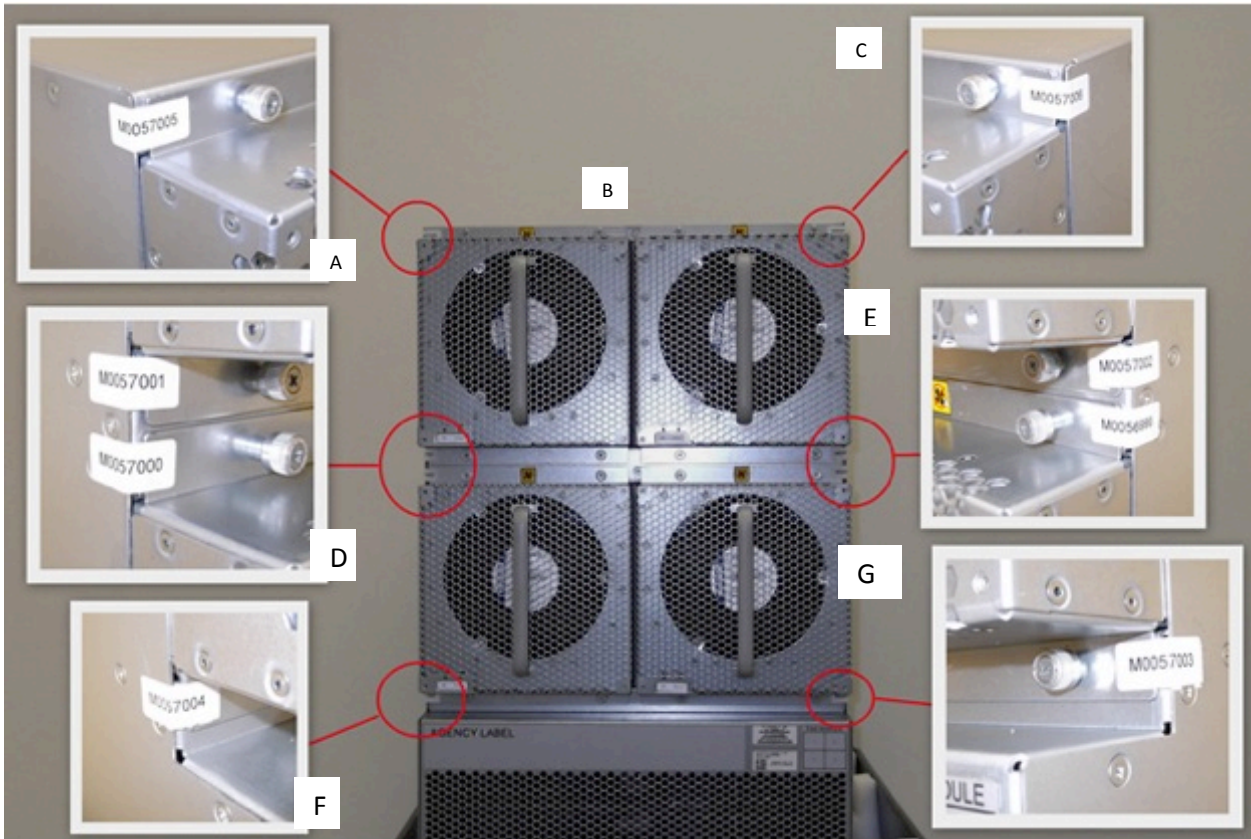


**Figure 6. Label placement example for DC Power Supply Units**

## **Brocade VDX 8770-8 non-port-side tamper-evident seal application**

Eight (8) sealing labels are required to complete the tamper-evident sealing requirements on the non-port side of the Brocade VDX 8770-8. All fan slots must be filled with a fan FRU or fan FRU filler panel to maintain adequate cooling.

Apply two (2) seals to each fan FRU or fan FRU filler panel installed in the non-port side of the Brocade VDX 8770-8. Eight (8) seals are required to complete this step. See Figure 7 for details on how to position each seal.



**Figure 7 Brocade VDX 8770-8 non-port-side seal locations**

# Applying Tamper-Evident Seals on the Brocade VDX 8770-4

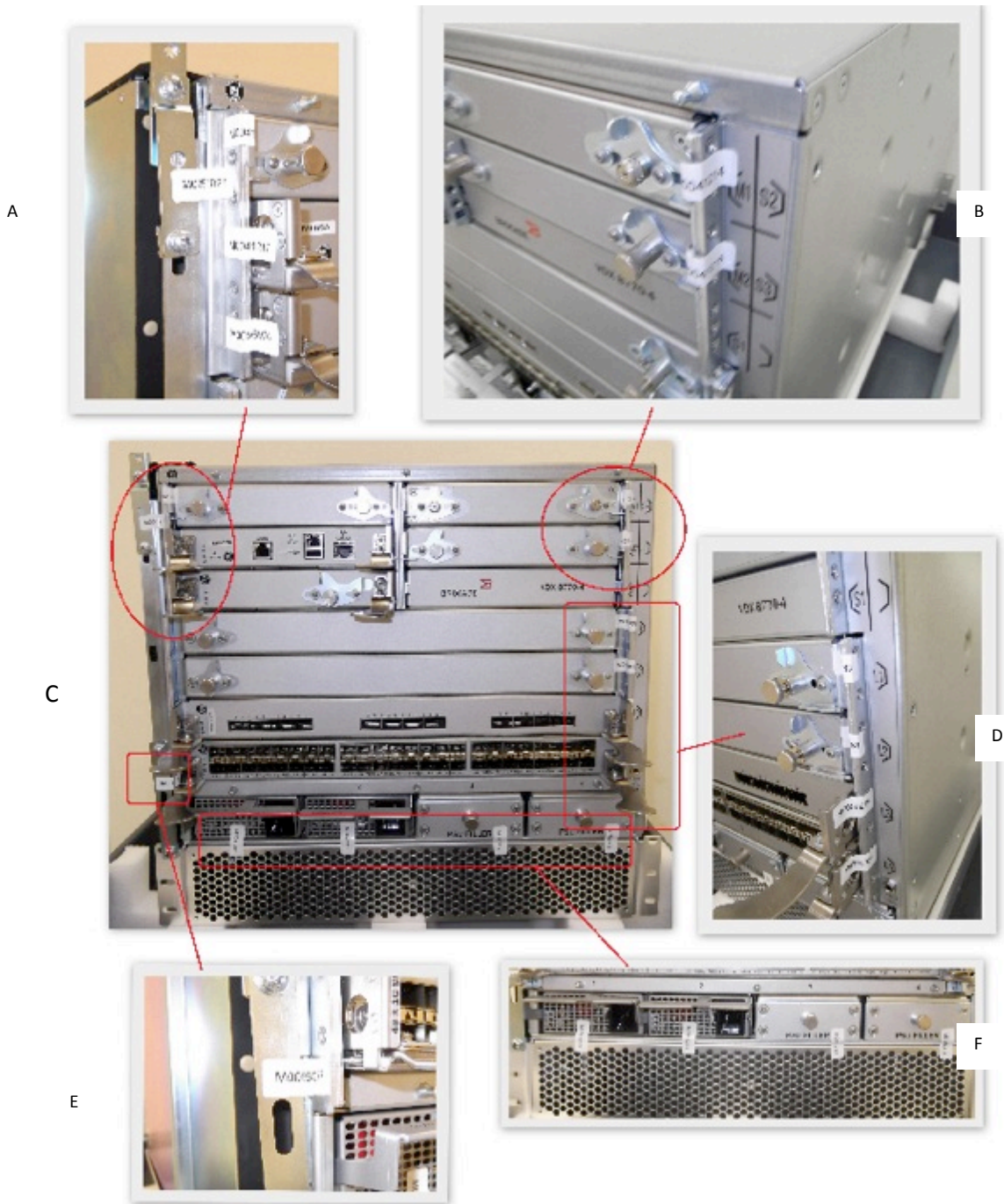
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Twenty-three (23) sealing labels are required to complete the tamper-evident sealing requirements on the Brocade VDX 8770-4.

## Brocade VDX 8770-4 port-side tamper-evident seal application

Fifteen (15) sealing labels are required to complete the tamper-evident sealing requirements on the port side of the Brocade VDX 8770-4. Unused slots must be filled with the appropriate module or filler panel to maintain adequate cooling.

1. Apply one (1) seal to each Switch Fabric Module (SFM) or filler panel installed in SFM slots S1, S2, and S3. Three (3) seals are required to complete this step. See Figure 8A and 8C for details on how to position each seal.
2. Apply one (1) seal to each Management Module (MM) or filler panel installed in MM slots M1 and M2. Two (2) seals are required to complete this step. See Figure 8A and 8C for details on how to position each seal.
3. Apply one (1) seal to each blade or filler panel installed in line card slots L1 through L4. Four (4) seals are required to complete this step. See Figure 8C, 8D, and 8E for details on how to position each seal.
4. The Brocade VDX 8770-4 accepts both AC and DC Power Supply Units. For AC configurations, complete step 4a. For DC configurations, complete step 4b.
  - a. For a Brocade VDX 8770-4 with AC Power Supply Units, apply one (1) seal to each AC PSU or PSU filler panel installed in PSU slots P1 through P4. For this example, AC PSUs are installed in slots P1 and P2. PSU filler panels are installed in slots P3 and P4. Four (4) seals are required to complete this step. See Figure 8C and 8F for details on how to position each seal.
  - b. For a Brocade VDX 8770-4 with DC Power Supply Units, apply one (1) seal to each DC PSU or PSU filler panel installed in PSU slots P1 through P4. For this example, a DC PSU is installed in slot P1. A PSU filler panel is installed in slot P2. Four (4) seals are required to complete this step. See Figure 9 for details on how to position each seal.
5. Apply one (1) seal on each FIPS bracket. The upper left FIPS bracket is shown in Figure 8A and 8C. The lower left FIPS bracket is shown in Figure 8E and 8C. Two (2) seals are required to complete this step. See Figure 8A, 8C, and 8E for details on how to position each seal.



**Figure 8 Brocade VDX 8770-4 port-side seal locations**

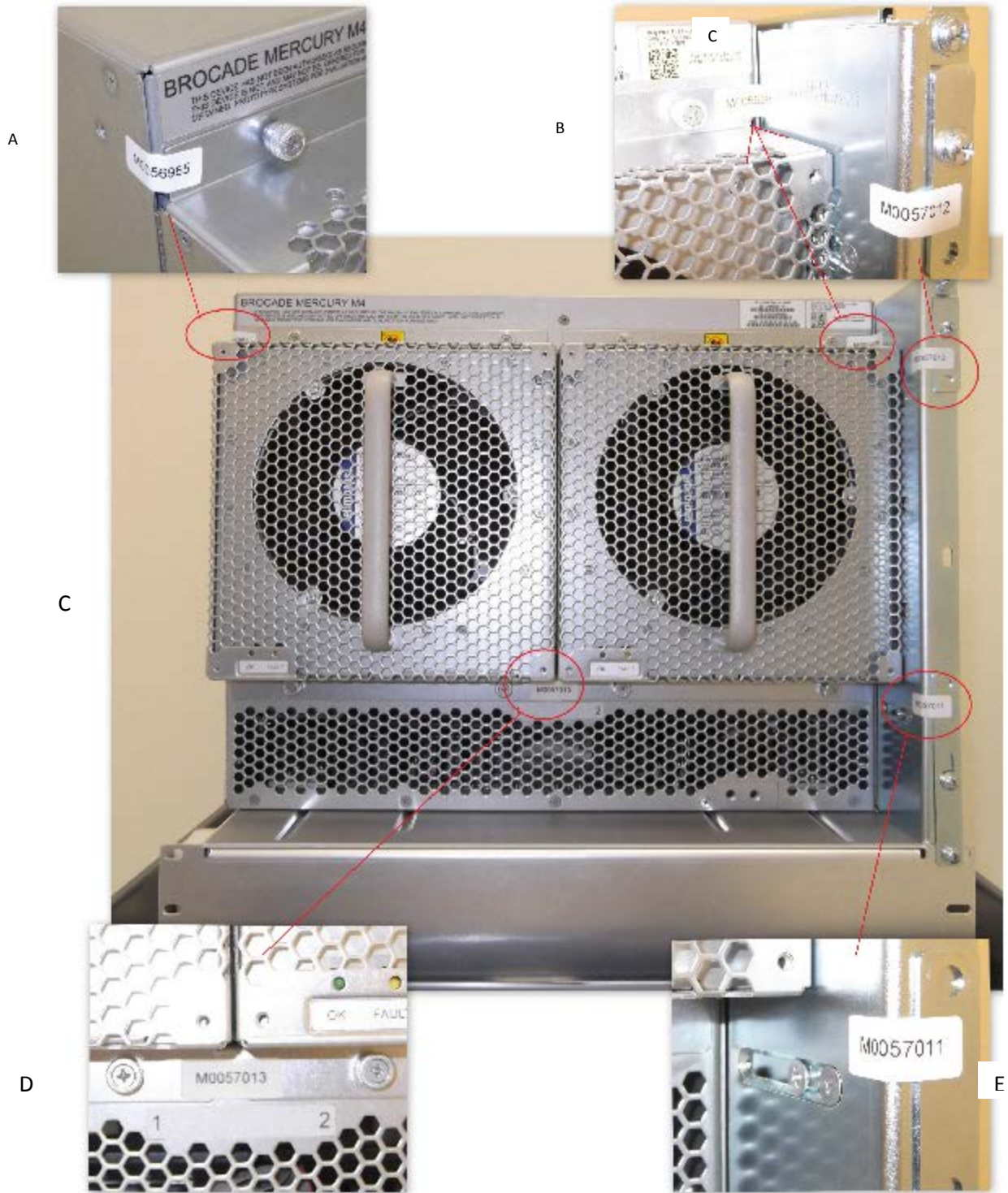




## Brocade VDX 8770-4 non-port-side tamper-evident seal application

Five (5) sealing labels are required to complete the tamper-evident sealing requirements on the non-port side of the Brocade VDX 8770-4. All fan slots must be filled with a fan FRU or fan FRU filler panel to maintain adequate cooling.

1. Apply one (1) seal to each fan FRU or fan FRU filler panel installed in the non-port side of the Brocade VDX 8770-4. For the fan FRU on the left, the seal wraps from the flange on the fan FRU or filler panel around the outside corner of the chassis. For the fan FRU on the right, the seal wraps from the flange on the fan FRU or filler panel around the inside corner of the chassis. Two (2) seals are required to complete this step. See Figure 10A, 10B, and 10C for details on how to position each seal.
2. Apply one (1) seal that bridges the gap between the fan FRU positions installed in the non-port side of the Brocade VDX 8770-4. One (1) seal is required to complete this step. See Figure 10C and 10D for details on how to position each seal.
3. Apply one (1) seal on each FIPS bracket. The upper right FIPS bracket is shown in Figure 10B and 10C. The lower right FIPS bracket is shown in Figure 10C and 10E. Two (2) seals are required to complete this step. See Figure 10B, 10C, and 10E for details on how to position each seal.



**Figure 10 Brocade VDX 8770-4 non-port-side seal locations**

## Brocade VDX 8770-4 air duct tamper-evident seal application

Three (3) sealing labels are required to complete the tamper-evident sealing requirements on the Brocade VDX 8770-4 air duct. The air duct is secured to the left of the port side of the chassis.

Apply three (3) seals to the rubber flap that touches the top of the Brocade VDX 8770-4. Position each seal so that approximately half of each seal adheres to the rubber flap and half of each seal adheres to the top of the chassis. Three (3) seals are required to complete this step. See Figure 11 for details on how to position each seal.



**Figure 11 Brocade VDX 8770-4 air duct-side seal locations**