

Introduction

This Installation Guide applies to the Heatsink Filter Kit Option for the F7 Configured Drive line. The filter kit is mounted to the back of the F7C enclosure, providing additional protection to the exposed drive heatsink and fan assemblies. The kit can be field-installed to an F7 Configured Drive that is already mounted and in use. It has been designed for extremely dirty or dusty environments in which cooling fans and heatsink fins could easily become clogged. The kit contains a duct and a pair of filters, which can be removed and cleaned, increasing fan life and cooling efficiency. This guide is divided into three sections detailing the included parts, kit installation, and filter replacement.

WARNING

HAZARDOUS VOLTAGE CAN CAUSE SEVERE INJURY OR DEATH. LOCK ALL POWER SOURCES TO THE DRIVE IN THE “OFF” POSITION.

CAUTION

- To prevent physical damage to the Drive, Read these instructions thoroughly before installing.
- After installing the heatsink filter kit, ensure all screws are tightened.

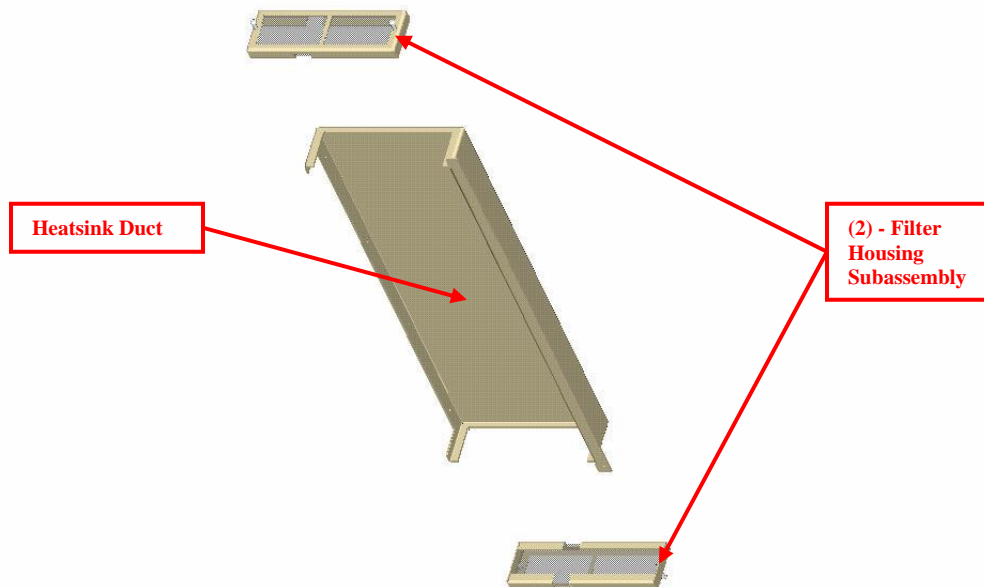


Figure 1 – Filter Kit, Exploded View

Heatsink Filter Kit Part Numbers

| Heatsink Filter Kit Part No. | Applicable Drive Models | | Parts Included | Qty |
|------------------------------|-------------------------|-----|--|------------------|
| | F7CT □□□□ | HP | | |
| UFL00003-1 | A003 | 3/4 | Heatsink Duct Filter Housing Subassembly Small Screws (#8-32 Phillips pan head) Large Screws (#10-32 Phillips pan head) | 1 2 2 4 |
| | A004 | 1 | | |
| | A006 | 2 | | |
| | A009 | 3 | | |
| | A015 | 5 | | |
| | B001 | 3/4 | | |
| | B002 | 1 | | |
| | B003 | 2 | | |
| | B004 | 3 | | |
| | B007 | 5 | | |
| UFL00003-2 | B011 | 7.5 | Heatsink Duct Filter Housing Subassembly Small Screws (#8-32 Phillips pan head) Large Screws (#10-32 Phillips pan head) | 1 2 2 4 |
| | A022 | 7.5 | | |
| | A028 | 10 | | |
| | B014 | 10 | | |
| UFL00003-3 | B021 | 15 | Heatsink Duct Filter Housing Subassembly Small Screws (#8-32 Phillips pan head) Large Screws (#10-32 Phillips pan head) | 1 2 2 4 |
| | A042 | 15 | | |
| | A054 | 20 | | |
| | B027 | 20 | | |
| | B034 | 25 | | |

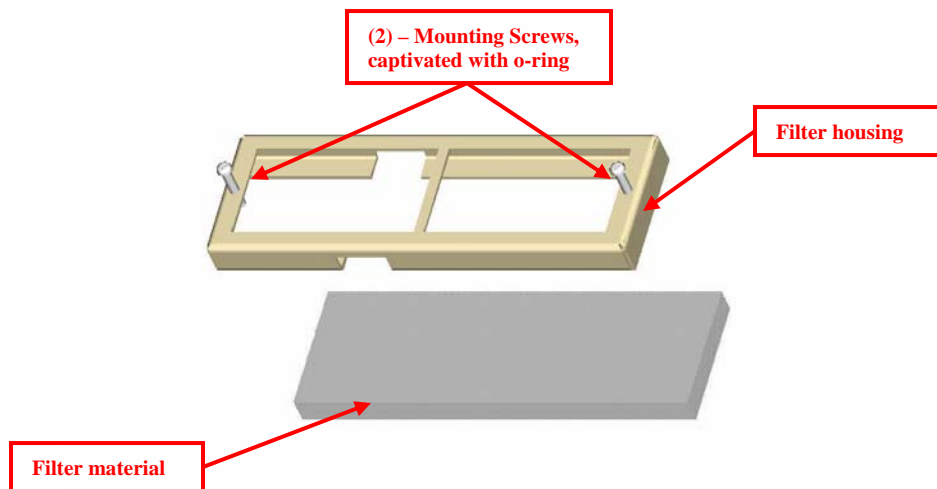


Figure 2 – Filter Housing Subassembly, Exploded View

Heatsink Filter Kit Installation

- (1) Turn OFF the power supply to the Drive by completely removing power to the enclosure. Wait 5 minutes for capacitor discharge.
- (2) Unpack and verify the contents of the heatsink filter kit.

Refer to Figures 3a and 3b – Removal of mounting screws

- (3) Open enclosure using (2) quarter turn latches on door of enclosure
- (4) Locate the screws that attach the enclosure to the back panel. Three screws exist at the top of the enclosure (Figure 3a), and three at the bottom of the enclosure (Figure 3b). Remove only the center screw from both the top and bottom of the enclosure, as shown below. These screws will no longer be used once the heatsink filter kit is installed.

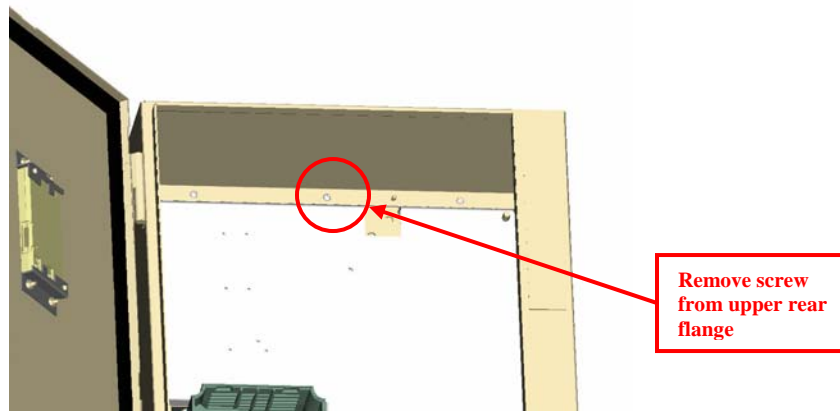


Figure 3a – Upper screw Removal (Step 4)

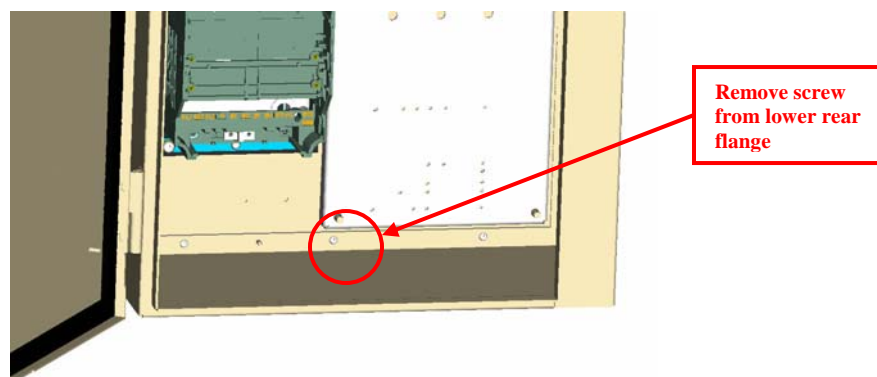


Figure 3b – Lower screw Removal (Step 4)

Refer to Figure 4 – Duct installation

- (5) Retrieve the duct from the heatsink filter kit. The duct is the large sheetmetal piece to which the filter housings mount.
- (6) Orient the duct as shown in Figure 4, so that the (4) holes in the side of the duct will align with the (4) holes in the side of the enclosure's mounting leg, and the (2) clinch nuts align with the (2) holes which screws were removed from.
- (7) Slide the duct behind the enclosure such that it surrounds the exposed drive heatsink. It is possible to install this duct from either the top or the bottom while the enclosure is mounted to a wall.

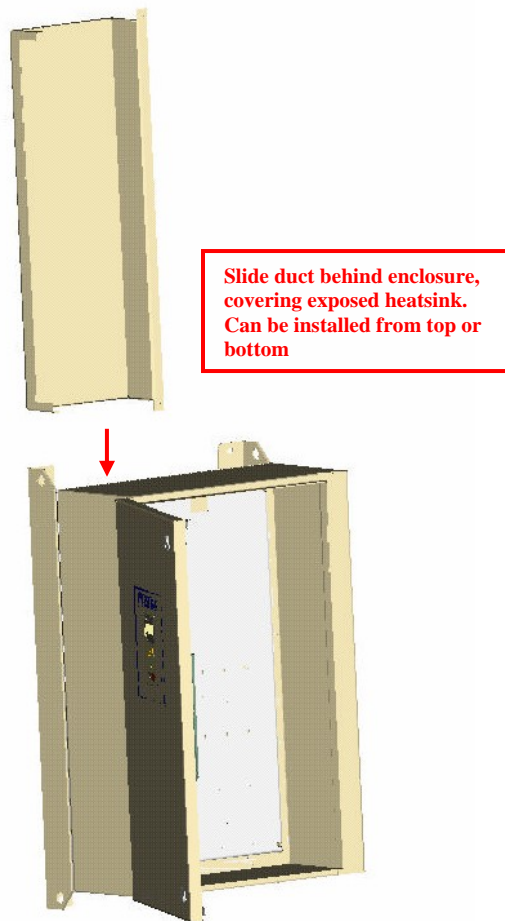


Figure 4 – Duct Installation

Refer to Figure 5 – Securing the duct

- (8) Using the (4) #10-32 screws provided, attach the duct to the enclosure's mounting leg. Do not completely tighten these screws.
- (9) Using the (2) #8-32 screws provided, attach the duct to the enclosure through the available back panel holes where screws were removed from earlier (see Step 4).
- (10) Tighten all #8-32 screws to 18 in.lb., and all #10-32 screws to 30 in.lb.

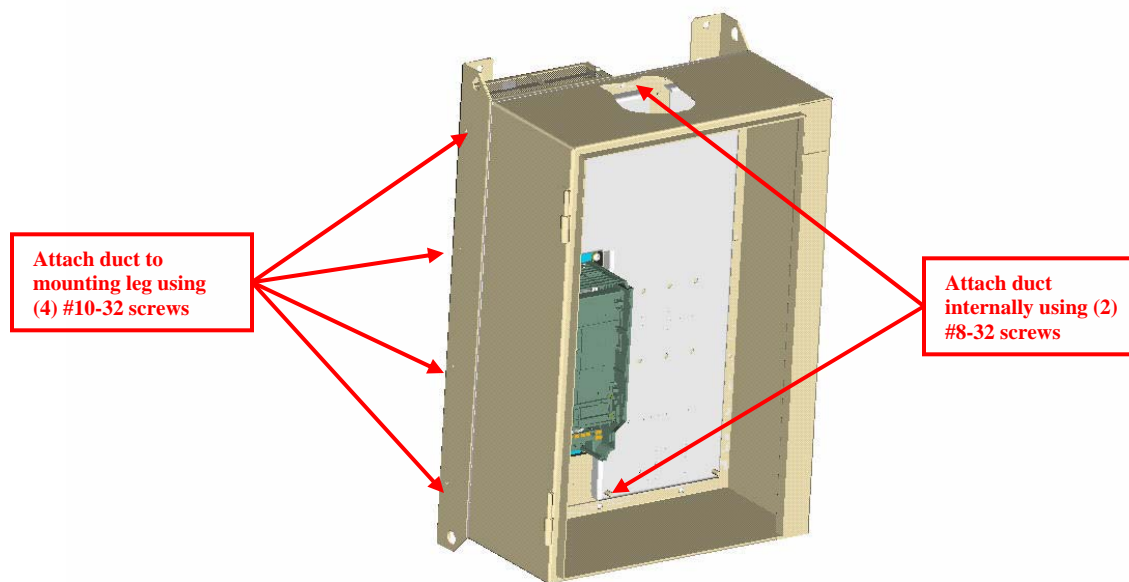


Figure 5 – Securing the Duct (Cutaway shown for detail)

Refer to Figure 6 – Filter housing assembly

- (11) Mount top filter housing to filter duct using the (2) captivated screws provided with each housing. The housing has a clearance slot that must be properly aligned with the exposed screw on the back of the enclosure. Repeat process for the bottom filter housing.

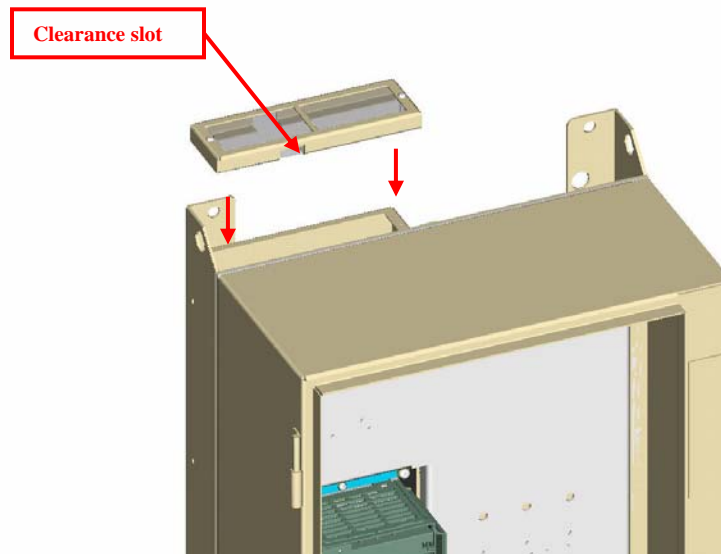


Figure 6 – Top filter housing assembly

IMPORTANT

- Never exceed the rated torque specifications when tightening screws.
 - **18 lb•in (2.03 N•m)** for #8-32 screws
 - **30 lb•in (3.39 N•m)** for #10-32 screws
- Partially insert and torque all screws prior to tightening to the rated torque specification.
- Tighten the screws in a cross like pattern to prevent damage to the threads.

Filter Replacement

Replacement filters can be ordered from Yaskawa Electric America using the following part numbers:

| Heatsink Filter Kit Part No. | Applicable Drive Models | | Replacement Filter Part No. |
|---------------------------------|-------------------------|-----|--------------------------------|
| | F7CT □□□□ | HP | |
| UFL00003-1 | A003 | 3/4 | UFL00002-1 |
| | A004 | 1 | |
| | A006 | 2 | |
| | A009 | 3 | |
| | A015 | 5 | |
| | B001 | 3/4 | |
| | B002 | 1 | |
| | B003 | 2 | |
| | B004 | 3 | |
| | B007 | 5 | |
| | B011 | 7.5 | |
| UFL00003-2 | A022 | 7.5 | UFL00002-2 |
| | A028 | 10 | |
| | B014 | 10 | |
| | B021 | 15 | |
| UFL00003-3 | A042 | 15 | UFL00002-3 |
| | A054 | 20 | |
| | B027 | 20 | |
| | B034 | 25 | |

- (1) Loosen the (2) screws provided with each housing. Note that these screws are captivated and should not be completely removed from the housing. Remove filter housing from filter duct.
- (2) Remove filter material from metal filter housing. Replace with new filter material according to *Replacement Filter Part No.* table provided above.
- (3) Reattach filter housing to filter duct using the (2) captivated screws provided with each housing. The housing has a clearance slot that must be properly aligned with the exposed screw on the back of the enclosure. See Figure 6 for diagram.