



# KIT CAPACITOR INVERTER SNUBBER

100417



**Installation and servicing of Danfoss Turbocor® compressors by qualified and product trained personnel only. Follow these instructions and sound refrigeration/electrical/servicing practices relating to installation, commissioning, maintenance and service.**

<p>Consult the appropriate Danfoss Turbocor Compressors Inc. (DTC) Service Manual on <a href="http://turbocor.danfoss.com">turbocor.danfoss.com</a> for detailed service instructions.</p>	<p><b>Never power compressor without covers in place and secured.</b></p> <p><b>Removing the mains input cover will expose you to a voltage hazard of up to 575V. Ensure the mains input power is off and locked out before removing cover.</b></p> <p><b>Before removing top cover, wait at least 20 minutes after isolating AC power to allow the high voltage capacitors to discharge.</b></p>	<p>Always wear appropriately rated safety equipment when working around equipment and/or components energized with high voltage.</p> <p><b>This equipment contains hazardous voltages that can cause serious injury or death.</b></p>	<p><b>Recover all refrigerant from compressor in accordance with local codes and ensure pressure is fully vented before the removal of refrigerant containing components.</b></p>
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1 - Introduction:

CAPACITOR INVERTER SNUBBER Removal and Installation Instructions.

2 - Removal Instructions:

1. Isolate compressor power as described in Section "Electrical Isolation of the Compressor" of the Service Manual (M-SV-001).
2. Release the four (4) captive screws that secure the Mains Input Cover and remove the cover.
3. Using an appropriately rated volt meter, confirm that the AC voltage is isolated.
4. Wait at least 20 minutes for the DC bus capacitors to discharge.

**DANGER:** Do NOT touch any components when removing the top cover. This is particularly true for compressors with CE covers because they are coated on the outside for the express purpose of being conductive

5. Release the nine (9) captive screws that secure the Top Cover and remove the cover, taking particular care not to touch ANY components underneath.
6. Using an appropriately rated volt meter, check the DC bus bars for voltage level. If the voltage is above 5VDC, wait five (5) minutes and recheck until 5VDC or below is achieved.
7. Disconnect 3 phase mains input wiring.

8. For F Series and later compressors, remove the Soft Start Temperature Harness. Refer to Figure 1 (Soft Start J9 Connector).

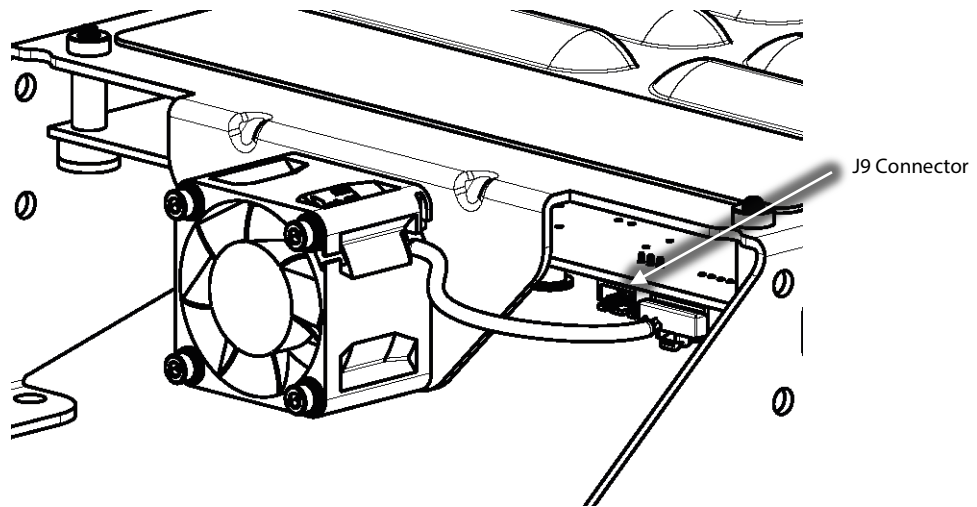


Figure 1 – Soft Start J9 Connector

9. Disconnect the Soft Start ground wire by removing the nuts and mains input ground wire from the ground post on the compressor housing at 3 phase connection point. Refer to Figure 2 (Ground Location).

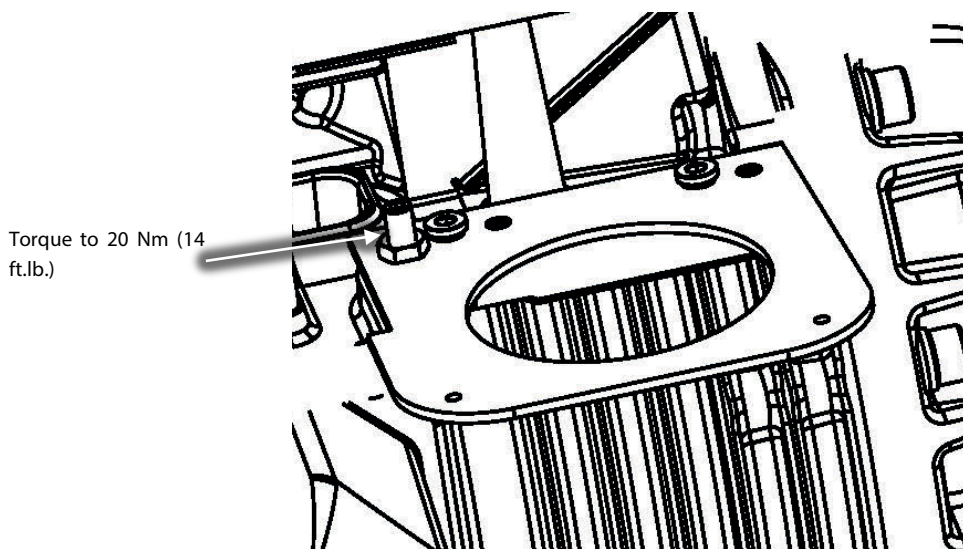


Figure 2 – Ground Location

10. Remove the M5x15 fasteners that secure the Soft Start mounting bracket to the compressor. Refer to Figure 3 (Soft Start Mounting Screws).

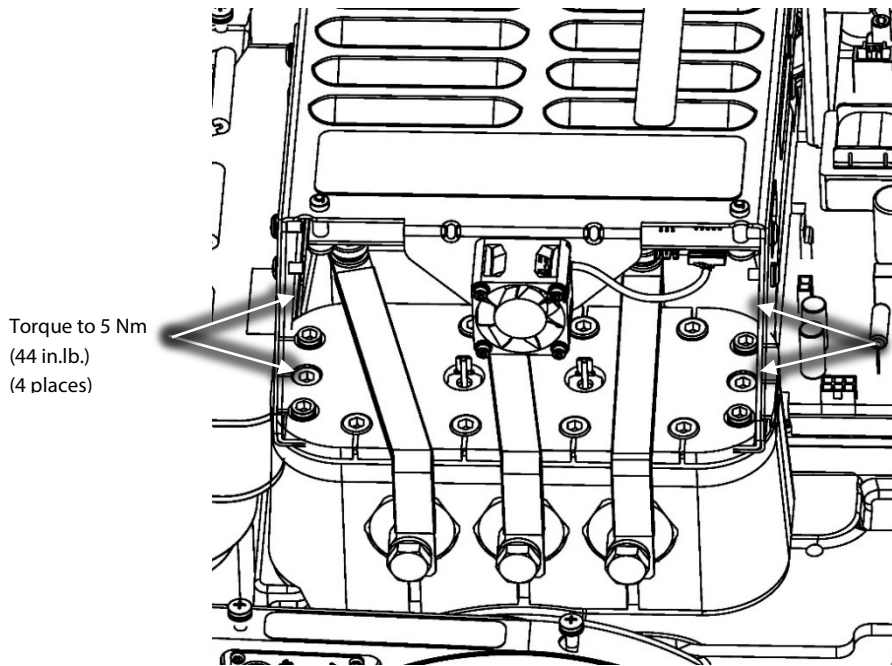


Figure 3 – Soft Start Mounting Screws

11. Lift the Soft Start and turn it over, placing it board-side up on the AC Bus Bars. Refer to Figure 4 (Soft Start Lift).

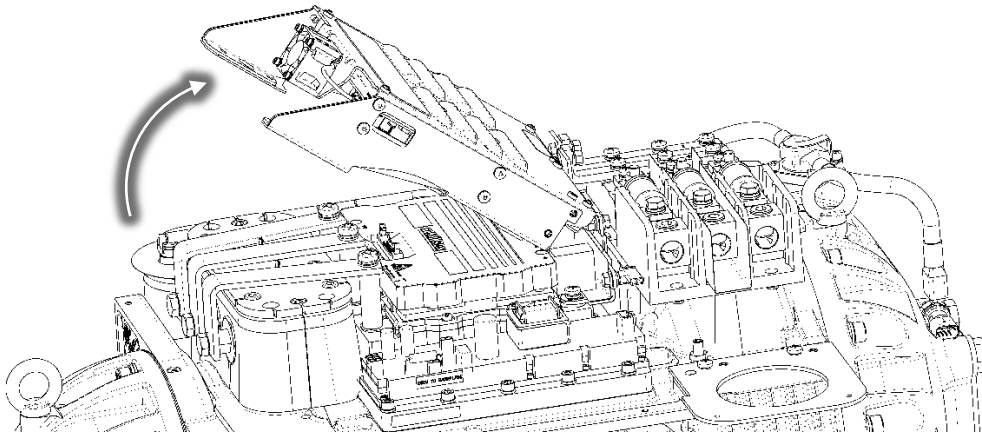


Figure 4 – Soft Start Lift

12. Unplug the cable connectors from the Soft Start board. Refer to Figure 5 (Soft Start Harness Removal).

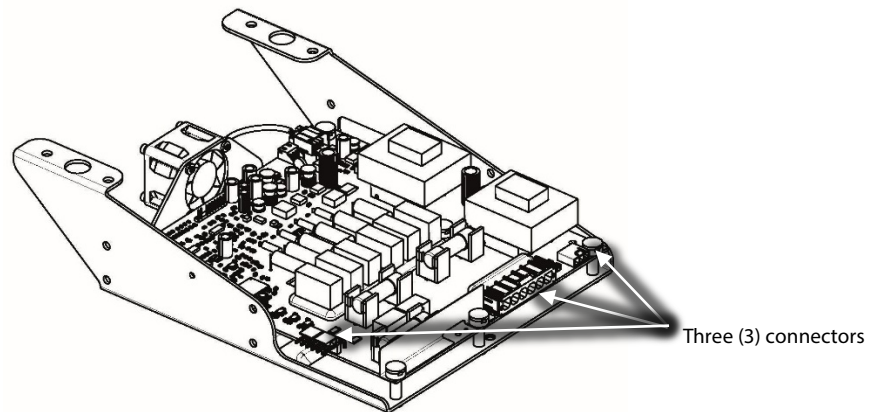


Figure 5 – Soft Start Harness Removal

13. Lift away the Soft Start assembly and place it in a safe location.

14. Remove the six (6) screws that secure the three (3) capacitors to the bus bars and IGBT. Refer to Figure 6 (Snubber Capacitor Removal).

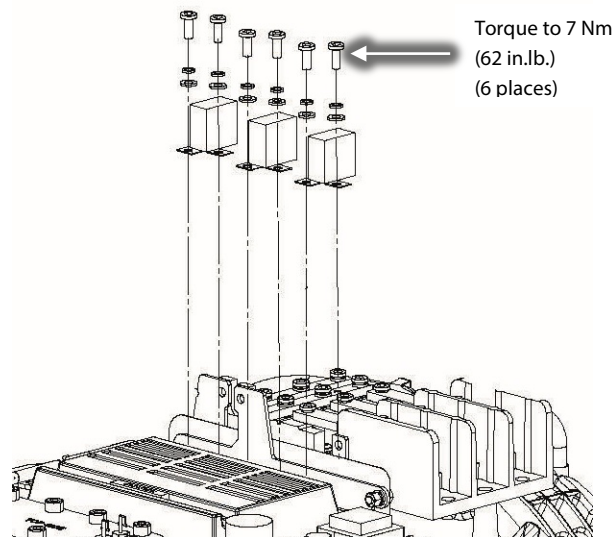


Figure 6 – Snubber Capacitor Removal

15. Remove the three (3) IGBT snubber capacitors.

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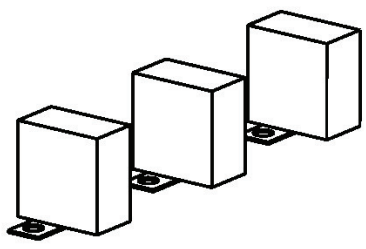

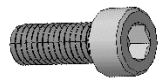

### 3 - Installation Instruction:

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1. Inspect the contact surface and remove any residue or contamination from the contact surface between capacitor and bus bar assembly.
2. Place the new capacitors and secure them with the new screws, lock washers, and flat washers.
3. Starting at the capacitor side, torque the screws to specification.
4. Reverse Steps 1-13 of the removal procedure and start the compressor.

4 - Kit Contents

Kit numbers	Compressor models
100417	ALL TT & TG MODELS

QTY	Part(s) Description	Picture(s)
3	CAPACITOR, IGBT SNUBBER, 0.47 $\mu$ f 1000 VDC	
6	WASHER M6 SPLIT LOCK	
6	SCREW M6x16 SOCKET HEAD CAP	
6	WASHER M6 FLAT	

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