

# KIT Bus Bar Diode

100316.



**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 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</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:

Bus Bar Diode 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.

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

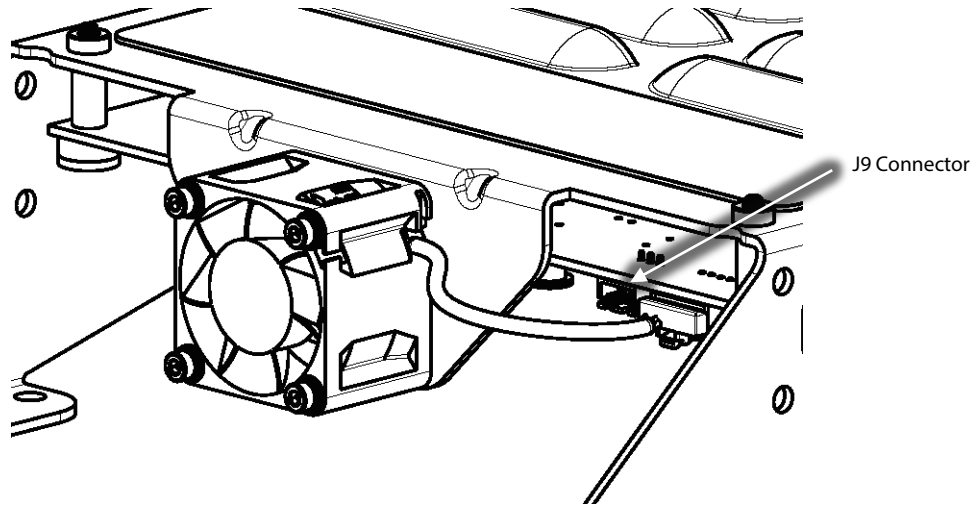


Figure 1 – Soft Start J9 Connector

- Remove the four (4) M5x15 fasteners that secure the Soft Start mounting bracket to the compressor. Refer to Figure 2 (Soft Start Mounting Screws).

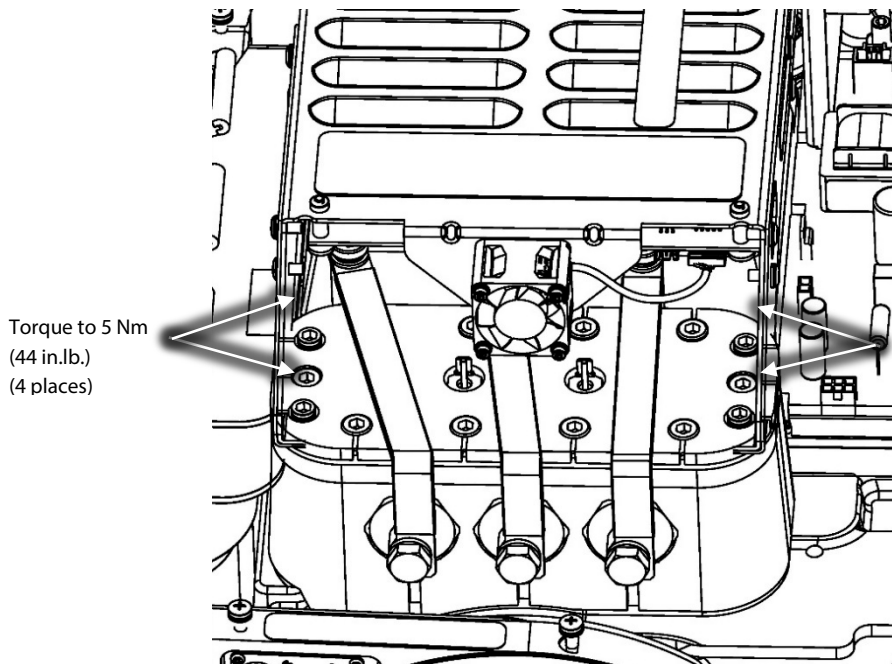


Figure 2 – Soft Start Mounting Screws

10. Lift the Soft Start and turn it over, placing it board-side up on the AC Bus Bars. Refer to Figure 3 (Soft Start Lift).

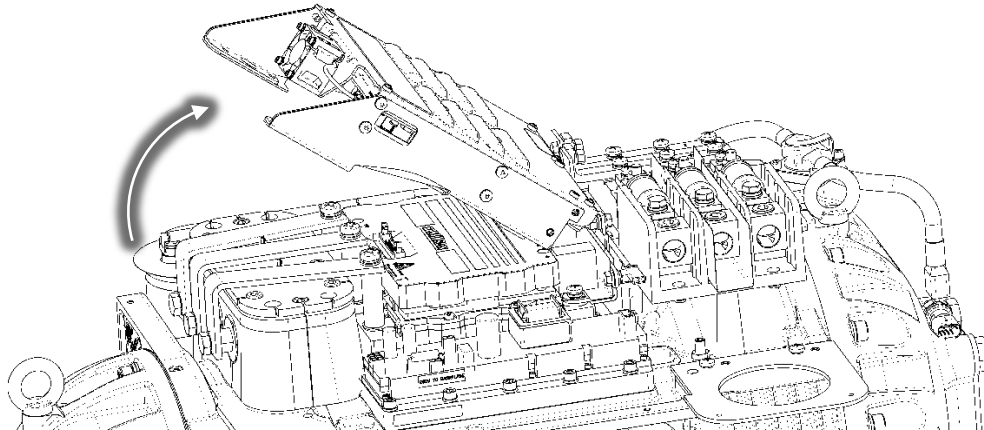


Figure 3 – Soft Start Lift

11. Unplug the cable connectors from the Soft Start board. Refer to Figure 4 (Soft Start Harness Removal).

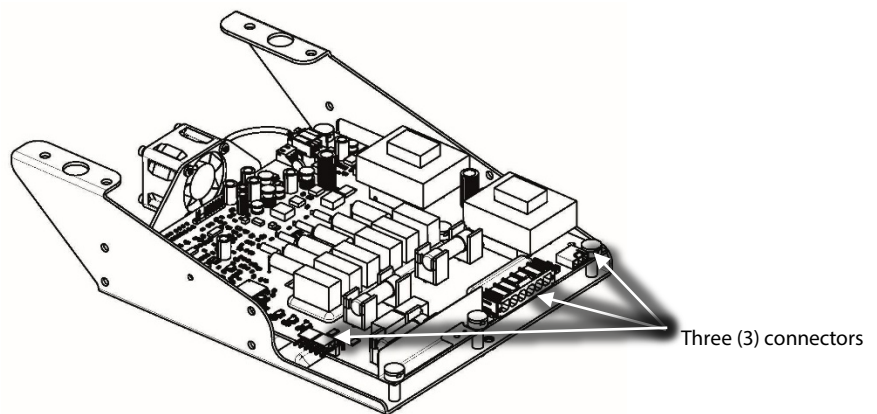


Figure 4 – Soft Start Harness Removal

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

13. Remove the DC Bus Bars from the SCRs. Refer to Figure 5 (DC Bus Bar Removal).

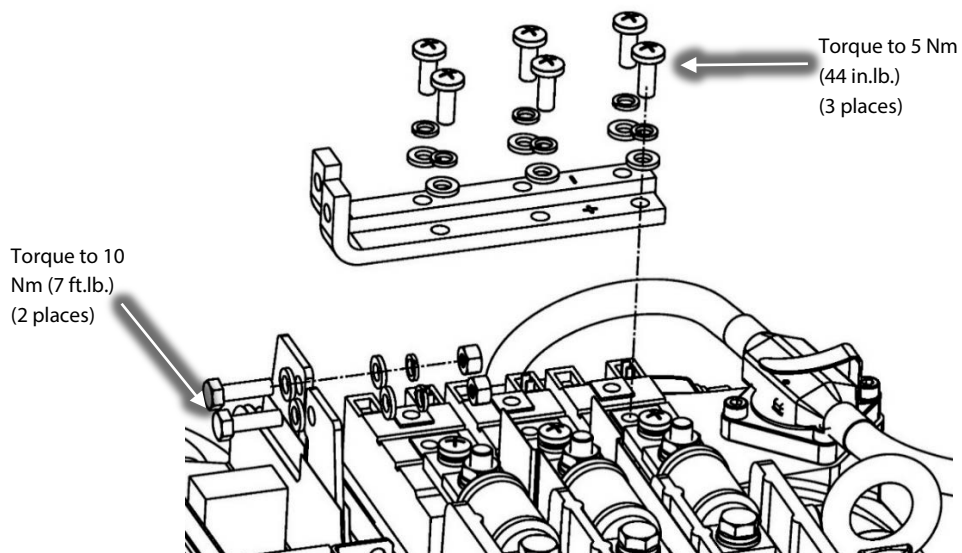


Figure 5 – DC Bus Bar Removal

3 - Installation Instructions:

1. Orientate the new Diode Bus Bars to correspond with the correct DC Bus assembly markings (with "+" and "-" with "-").
2. Loosely install the DC Bus Bars to the SCRs. Refer to Figure 5 (DC Bus Bar Removal).
3. Loosely install DC Bus Bars to the DC Bus Assembly. Refer to Figure 5 (DC Bus Bar Removal).
4. Torque all fasteners to the DC Bus Bars to specification.
5. Reconnect all wiring harnesses to the Soft Start.
6. Place the Soft Start into mounting position, secure to the compressor, and torque to specification.
7. Reconnect the Soft Start Temperature Harness. Refer to Figure 2 (Soft Start J9 Connector).
8. Reroute and connect the Soft Start ground wire to the ground post on the compressor housing at 3 phase connection point and torque to specification.
9. Reconnect 3-phase mains input wiring.
10. Place the Capacitor Cover over the capacitors and secure it with the long screw (M5x20) and flat washer in the position number three (3), shown in the Figure 6 (Capacitor Cover Installation). Use the five (5) remaining screws and flat washers to secure the cover. Fasten according to the sequences. Perform the sequence twice.

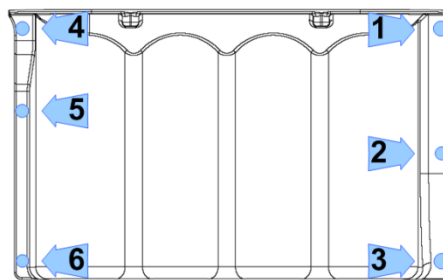


Figure 6 – Capacitor Cover Installation

11. Place the Top Cover on the compressor and fasten according to sequence. Follow the sequence twice and for the first pass, only fasten screw to half way down to allow for adjustments. Place the Mains Input Cover. Place the side of the Mains Input Cover first, then the side of Top Cover. Complete the tightening sequence for the Top Cover and the Mains Input Cover as shown in Figure 7 (Top Covers Installation).

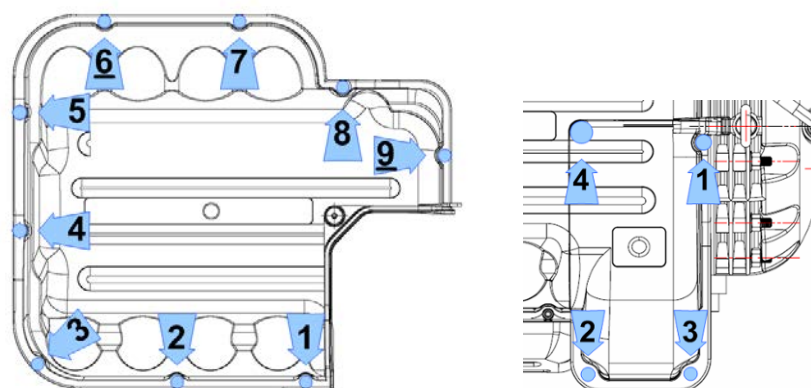








Figure 7 – Top Covers Installation

12. Reconnect Power to compressor.

4 - Kit Contents

QTY	Part(s) Description	Picture(s)
1	DIODE BUS BAR (SET)	
8	WASHER M6 SPLIT LOCK 902809	
10	WASHER M6 FLAT	
6	SCREW M6x16 SOCKET HEAD CAP	
2	NUT M6 HEX	
2	SCREW M6x20 HEX HEAD CAP	



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