Bulletin | Danfoss Turbocor Compressors

Customer Notification

B-CN-438-EN REV A

January 19, 2026

SUBJECT: Component Failure Replacement

Purpose

The purpose of this bulletin is to provide direction for field repairs when addressing an electrical discharge event due to a drive component failure on the top side of the compressor. The table below outlines recommended component replacements (horizontal rows), based on the initial component failure type (vertical columns). Please note that this table is not exhaustive, therefore a thorough visual inspection and component-level verification, as outlined in the service manual, are required to assess each event individually.

NOTE: All actions should be taken to replace failed field-serviceable components and return the compressor to service, rather than replacing the entire compressor. Warranty consideration for all replacements is at the discretion of Danfoss Turbocor®.

Please use the table below as a reference for component replacement associated with top-side electrical discharge events.

		Failure type (In the event of an electrical discharge)					
		Soft Start	Inverter	DC-DC	Snubbers	SCRs	DC Capacitor Assy
Parts to replace	**Soft Start**	☑	☑	*	☑	☒	*
	Inverter	*	☑	*	☑	☒	*
	DC-DC	*	*	☑	*	☒	☒
	Snubbers	☒	☑	☒	☑	☒	☑
	SCRs	☒	☒	☒	☒	☑	☒
	Harnesses	*	*	*	*	*	*
	DC Capacitor Assy	☒	☒	☒	☒	☒	☑

☑ Replace

☒ Keep

* May also require replacement if the parts are damaged, fail validation, or if carbon debris cannot be removed.

Action Required

Visual inspections and verification requirements:

Prior to inspections and verifications, please follow the lock out/tag out procedures in Section **1.8 Electrical Isolation** of the TT/TG Series Service Manual.

The table below will identify the **section name** (in bold text) in the service manual that should be referenced when performing the action.

Component	Inspection/Action	Corrective Action
Compressor Covers	• Visually inspect all compressor covers for cracks or breakage	If cover is cracked or broken, replace cover
Relief Membrane	• Remove and visually inspect Relief Membrane for damage - Refer to the **Relief Membrane** section	Replace if damaged
Incoming 3-phase mains cables	• Visually check condition of incoming 3-phase mains cables, cable insulation, terminals, and connections • Ohm out each phase from disconnect to 3-phase Main Voltage Terminal Block	If incoming 3-Phase Mains Cable have physical damage or fail verification, replace cable(s)
Incoming 3-phase main input fuses	• Visually inspect fuses for damage - Check for slag or indications of heat on TTS230 and TTS300 compressors • Perform verification for Terminal Block Fuse - Refer to the **Verification of Terminal Block Fuse** section	If Incoming 3-Phase Mains Fuses have physical damage or fail verifications, replace fuses
Input Mains Bus Bars	• Remove and Visually inspect Input Mains Bus Bars - Refer to the **Input Mains Bus Bars** section	Replace if damaged
Soft Start	• Remove and visually inspect Soft Start for damage, slag, or arc flash damage • Perform Soft Start verifications - Refer to the **Soft Start** section	Replace Soft Start if physically damaged or fails verifications

Harnesses	• Disconnect and visually inspect ALL top-side cable harnesses and sleeves for damage, slag or excessive heat • Visually inspect all connection plugs • Refer to the following sections: - **Compressor Controller Cable Harness**, **Soft Start SCR Gate Cable** - **Soft Start AC/DC Harness** - **Inverter Cable Harness** - **DC-DC Supply Cable Harness**	Replace any harness with physical damage or failed verifications
Silicone-Controlled Rectifier (SCR)	• Remove and visually inspect SCRs for any physical damage, slag, or excessive heat • Perform verifications - Refer to the **SCR Verification** section	Replace SCRs if any physical damage is found or fails verifications
SCR DC Bus Bars (TTS300/TGS230)	• Remove and visually inspect SCR DC Bus Bars for any physical damage, slag, or excessive heat	Replace SCR DC Bus Bars if damaged
Snubber Capacitors	• Remove and visually inspect Snubber Capacitors for any physical damage, slag, or excessive heat • Perform verifications - Refer to the **Snubber Capacitor Verification** section	Replace Snubber Capacitors if damage is found or fails verifications
High Voltage DC-DC Converter	• Remove and visually inspect High Voltage DC-DC Converter for any physical damage, slag, or excessive heat • Perform verifications - Refer to the **DC-DC Converter Verification** section	Replace the High Voltage DC-DC Converter if damage is found or fails verifications
DC Capacitor Bus Bar Assembly	• Remove and visually inspect the DC Capacitors and Bus Bar Assembly for any physical damage, slag, or excessive heat - Refer to the **DC Bus Voltage Verification** section	Replace the DC Capacitors and Bus Bar Assembly if damage is found or fails verifications

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Inverter	• Visually inspect the Inverter for any physical damage, slag, or excessive heat • Perform verifications - Refer to the **Inverter Verification** section	Replace the Inverter if damage is found or fails verifications
Motor Bus Bars	• Remove and visually inspect the Motor Bus Bars for any physical damage, slag, or excessive heat	Replace the Motor Bus Bars if damage is found
Motor Verification	• Perform Motor verification procedures - Refer to the **Motor Verification** section	If motor fails verification, compressor will need to be replaced

Use of the TT/TG Series Service Manual and the TT/TG Series Spare Parts Guide can be used to assist in troubleshooting and spare part identification. Both manuals can be found at www.turbocoroem.com.

Need Assistance

For further questions, please contact your Key Account Manager or our Product Support group at turbocor.ps.na@danfoss.com or turbocor.ps.eu@danfoss.com for inquiries within Europe.

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