



TT Series Spare Part Kit

# SNUBBER CAPACITOR

100417 & 100417-2



**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 LLC Service Manual on <a href="http://www.turbocoroem.com">www.turbocoroem.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 853VDC. 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

SNUBBER CAPACITOR replacement.

This kit contains the Snubber Capacitors and the associated hardware.

**Please refer to our Service Manual for the replacement instructions.**

We have made the **TT Series Service Manual** available to anyone. To access the manual, you may scan the applicable QR code below or you may go to our DTC website at [www.turbocoroem.com](http://www.turbocoroem.com). At the bottom of the page there is a Section named "Categories" that includes various menus including one for Manuals.

Refer to the applicable QR code below to download the TT Series Service Manual.

**English**



**Chinese**



## 2 - Electrical Isolation

Before servicing the Compressor, isolate the compressor power by completing the following steps:

### ... DANGER! ...

- This equipment contains hazardous voltages that can cause serious injury or death. Only qualified and trained personnel should work on Danfoss LLC equipment.
- Always wear appropriately-rated safety equipment when working around equipment and/or components energized with high voltage.
- Removing the Mains Input Cover will expose the technician to a high voltage hazard of up to 853VDC. Ensure the Mains Input power is turned off and locked out before removing the Mains Input Cover.

1. Turn off the Mains Input power to the compressor.
2. Lock Out/Tag Out (LOTO) the mains disconnect to ensure no accidental or unauthorized reapplication of the Mains Input power can occur.

### NOTE

The Mains Input fast-acting fuses are installed in the power panel for all compressor models except the TTS300/TGS230.

3. Remove the Mains Input Cover only.
4. Using an appropriately-rated voltage meter, confirm the absence of AC voltage.

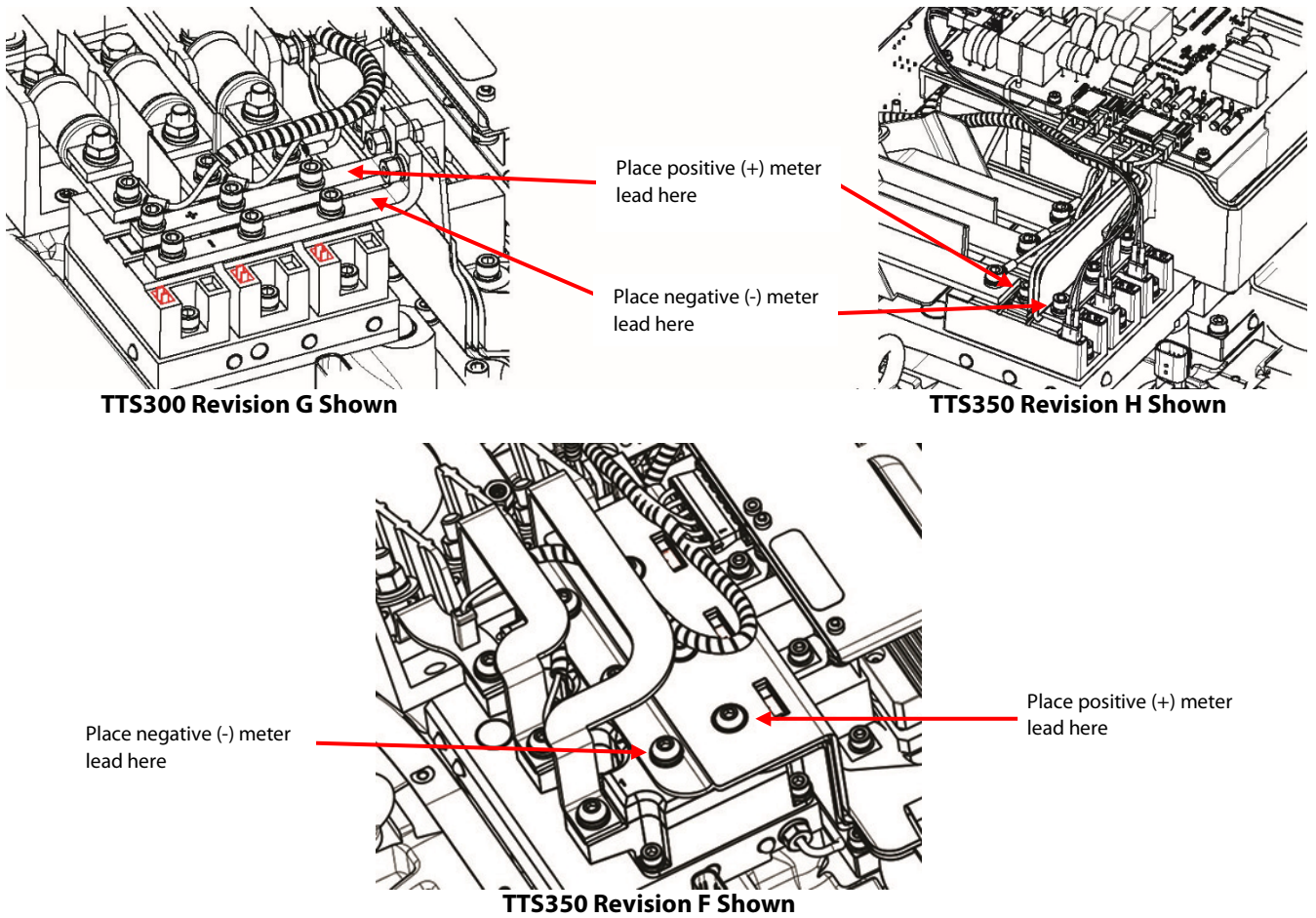
### ... DANGER! ...

Do not touch any components when removing the Mains Input Cover.

5. If AC voltage is not present, reinstall the Mains Input cover and wait at least 20 minutes before removing either the Mains Input or Top Side Cover. If AC voltage still exists, go back to Step 2 to determine why the compressor voltage is not isolated.
6. Remove the Top Cover, taking particular care not to touch ANY components underneath.
7. Using an appropriately-rated voltage meter, check the DC Bus Bars for DC voltage level. If the voltage is above 30 volts direct current (VDC), wait five (5) minutes and recheck until voltage is below 30 VDC. Refer to Figure 1 - DC Bus Voltage Test Points.

### ... CAUTION ...

Even at low voltages, caution should be used around the capacitors to avoid quick discharge events, which can lead to reduced reliability.

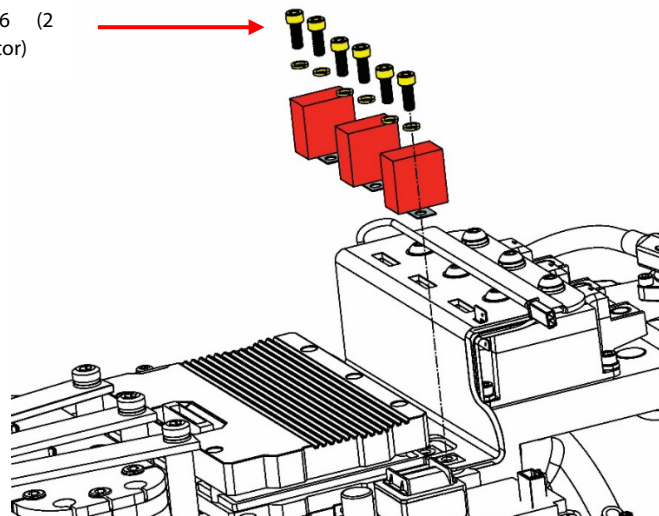


**Figure 1 - DC Bus Voltage Test Points**

**3 - SNUBBER CAPACITOR Removal Instructions**

1. Isolate the compressor power as described above.
2. Remove the Soft Start.
3. Remove the Snubber Capacitors. Refer to Figure 2 – Snubber Capacitor Removal below.

Snubber Capacitor  
Fastener, M6x16 (2  
places per capacitor)



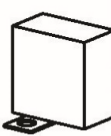

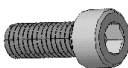

**Figure 2 – Snubber Capacitor Removal**

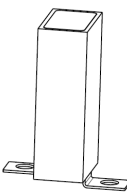

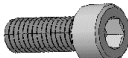

4 - SNUBBER CAPACITOR Installation Instructions

1. Loosely install the Snubber Capacitors to the Inverter noting the leg orientation.
2. Starting from the Snubber Capacitor closest to the DC Bus Capacitors, torque the short leg of the Snubber Capacitor first, then the longer leg second. Torque to 7Nm (62 in.lb).
3. Repeat for the remaining 2 (two) Snubber Capacitors, middle Snubber Capacitor first, then ending with the Snubber Capacitor closest to the DC-DC.
4. Install the Soft Start.
5. Install the top covers.
6. Return the compressor to normal operation.

5 - Kit Contents

**Note:** Any part numbers included in the kit contents are internal part numbers only. Please refer to our Spare Parts Manuals for any kit part numbers.

Kit numbers		Compressor models
100417		All revision G and earlier compressors
QTY	Part(s) Description	Picture(s)
3	CAPACITOR, IGBT SNUBBER, 0.47 µf 1000 VDC	
6	WASHER, M6, SPLIT LOCK - 902809	
6	SCREW, M6x16, SOCKET HEAD CAP - 902818	
6	WASHER, M6, FLAT - 902804	

Kit numbers		Compressor models
100417-2		All revision H compressors
QTY	Part(s) Description	Picture(s)
3	CAPACITOR, IGBT SNUBBER, 0.47 µf 1000 VDC	
6	WASHER, M6, SPLIT LOCK - 902809	
6	SCREW, M6x16, SOCKET HEAD CAP - 902818	
6	WASHER, M6, FLAT - 902804	



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6 - List of Changes

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Revision	Date	Description of Change
Q	10/5/2023	Added kit 100417-2 and removed kit 100417-1. Added detailed electrical isolation information. Updated the Introduction section to match our new webpage layout.

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