

INSTRUCTIONS INSTALLATION OF LOAD-SHARE TERMINALS FOR VLT[®] DRIVES

This instruction sheet is for the field installation of load-share terminals for the VLT series drives frames D1, D2, D3 and D4.

Kit Contents

- Bus Bars, terminals, insulator and mounting bracket, nuts
- Instruction Sheet 175R5637

Kit Part Numbers

D1/D3 Frames: 176F8456

D2/D4 Frames: 176F8455

Required Tools

- Metric socket set 7—19 mm
- Socket extensions
- Torx driver set T10—T40
- Torque Wrench, 6—170 in-lbs

Torque Requirements

- M5 nuts: torque to 2.3 N-M (20 in-lbs)
- M6 Nuts: torque to 35 N-M (35 in-lbs)
- T25 Torx screws: torque to 2.3 N-M (20 in-lbs)



Parts for D1 and D3 Frame (not including hardware)



Parts for D2 and D4 Frame (not including hardware)

WARNING

The frequency converter contains dangerous voltage. Disconnect power and follow lock-out/tag-out procedures before working on this equipment.

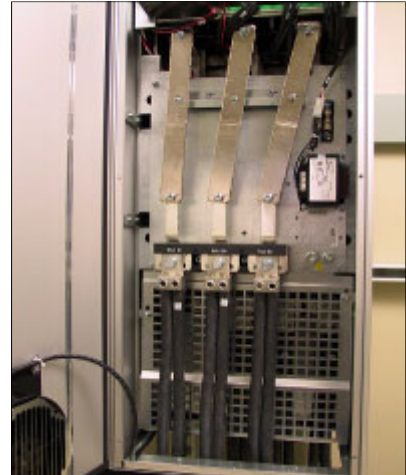
WARNING

Devices inside the frequency converter contain stored electrical energy. Wait a minimum of 20 minutes after disconnecting power before working on this equipment.

WARNING

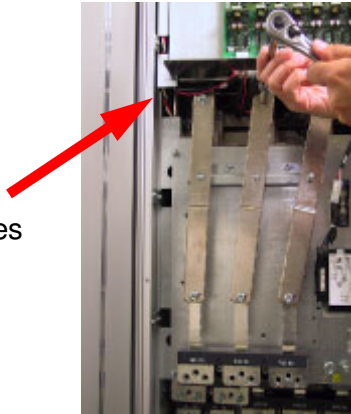
The input plate contains sharp edges. Use hand protection when removing and installing the input plate.

The photo to the right shows a D2 frame with the basic input plate. The wiring will vary depending on the installation. The photos shown in this instructions are for a D2 frame, however the instructions are applicable to any D-Frame VLT drive.

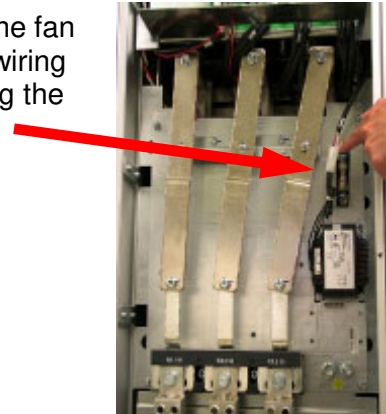


1. Disconnect power and verify that the incoming power to the VLT is off.
2. Disconnect the incoming power cables from the input terminals. In multi-conductor applications, loosen or remove cable clamps to allow the cables to be removed

Remove the three 13mm retaining nuts that connect the input plate to the input bus bars of the VLT. Exercise caution to avoid damaging control cables that are located near these connections.



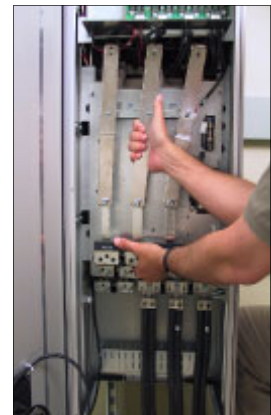
Disconnect the fan transformer wiring harness using the connector.



The input plate is attached to the VLT frame with five 10mm nuts. Remove these retaining nuts as shown. The input plate will be held in place by five studs that are attached to the VLT frame.

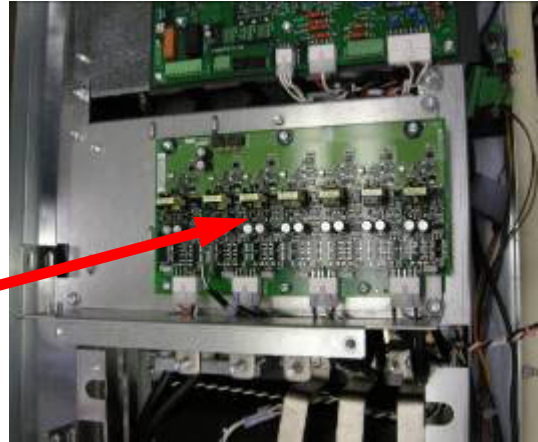


Remove the input plate as shown. Exercise caution not to damage control cables that are located near the top of the input bus bars.



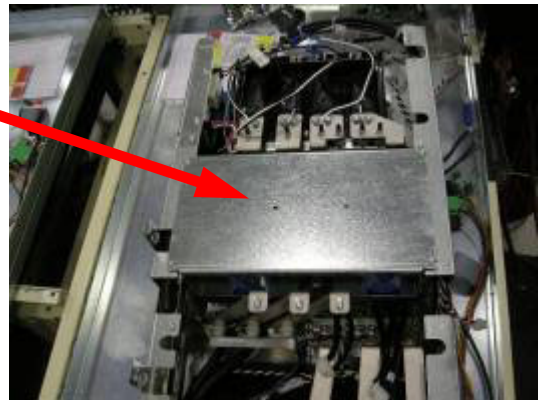
Note: The upper load-share terminals on the D1/D3 frame drives are located behind the capacitor bank. The gate-drive board and capacitor bank must be removed to gain access to the upper load share terminals.

For D1/D3 Frames: Remove the gate-drive board mounting plate (and the gate drive board) by removing the four electrical connectors from the board and the four nuts that are securing the mounting plate. The circuit board does not need to be removed from the mounting plate. It is recommended that the electrical connectors are marked accordingly to ensure that the connectors are re-connected to the proper receptacle.

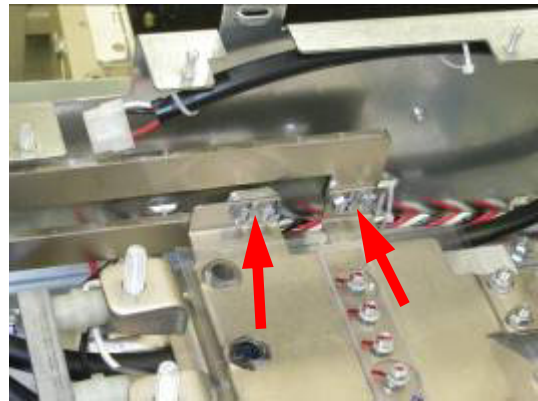


For D1/D3 Frames: Remove the capacitor bank to gain access to the upper load-share terminals.

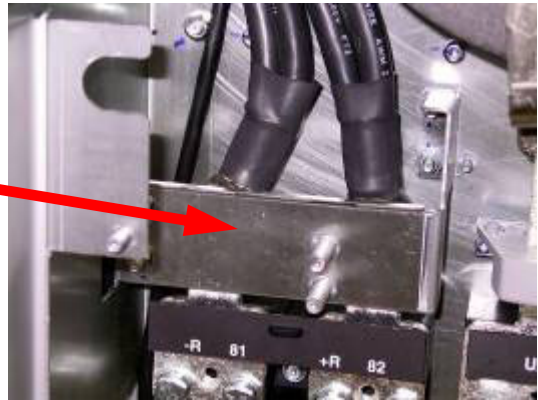
WARNING
The capacitors contain stored electrical energy. Wait a minimum of 20 minutes after disconnecting power before working on this equipment.



Location of upper load-share terminals for D1/D3 frame.



Install load-share terminal mounting bracket. Mounting studs for the installation of this bracket are installed in the VLT at the factory. (The photo shows a VLT with brake terminals already installed.)



Install load-share terminal on the terminal mounting bracket.



Install load-share terminals on the insulator mounting bracket. The terminals are fixed with two nuts, each located on the top of the terminal.



Install negative-pole load-share bus bar (shown is D2/D4 Frame).



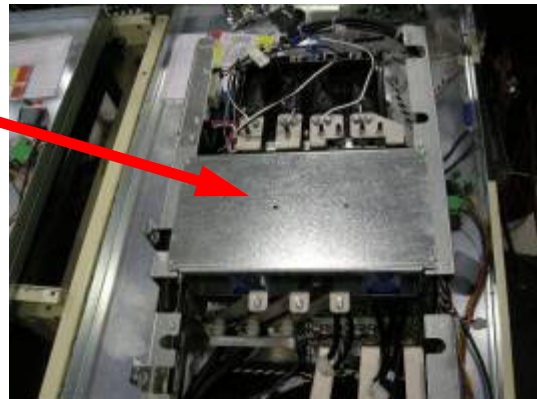
Install positive-pole load-share bus bar (shown is D2/D4 Frame).



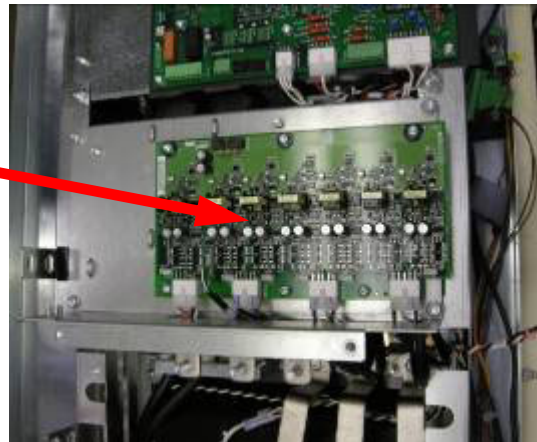
Finished installation of load-share bus bars with labels installed on the terminals.



For D1/D3 Frames: Re-install the capacitor bank.



For D1/D3 Frames: Re-install the gate-drive board. Take care to connect each connector to the proper receptacle.



Re-install input plate on the VLT. (Input plate shown contains disconnect and fuses)



Static Test Procedures

After installation of the load-share terminals is complete, perform static test procedures per Section 5.1 of the Danfoss Drives Service Manual (Part Number 175R0987).