

Unidrive M600-M70X, F300, H300, E200 & E300 Size 6 to Size 6 DC Bus Paralleling Installation Sheet

1 Safety information

WARNING **Stored charge**
The drive contains capacitors that remain charged to a potentially lethal voltage after the AC supply has been disconnected. If the drive has been energized, the AC supply must be isolated for at least ten minutes before work may continue. Refer to section 3.1 Safety information in the *User Guide*.

WARNING **Isolation device**
The AC / DC supply must be disconnected from the drive using an approved isolation device before any cover is removed from the drive or before any servicing work is performed.

WARNING **Follow the instructions**
The mechanical and electrical installation instructions must be adhered to. Any questions should be referred to the supplier of the equipment. It is the responsibility of the owner or user to ensure that the installation of the drive and any external option unit, and the way in which they are operated and maintained, comply with the requirements of the Health and Safety at Work Act in the United Kingdom or applicable legislation and regulations and codes of practice in the country in which the equipment is used.

1.1 Introduction

This document covers DC bus paralleling instructions for Unidrive M600/M70X, F300, H300, E200 & E300 size 6 drives. The Unidrive M terminal and enclosure design enables the DC bus of a number of drives to be connected together using a pre-formed busbar kit.

Table 1-1 DC bus paralleling kits

Part number	Description
3470-0063	Size 6 to size 6 DC bus paralleling kit




The following instructions describe the DC bus paralleling of two Unidrive M size 6 drives. Throughout this sheet, the drives are labelled 1 and 2 to aid identification. To increase the total number of drives connected to the DC bus, simply repeat the instructions given here.

Figure 1-1 DC Bus Paralleling of two size 6 drives



Contents of the kit bag for paralleling two Unidrive M size 6 drives (CT part number: 3470-0063).

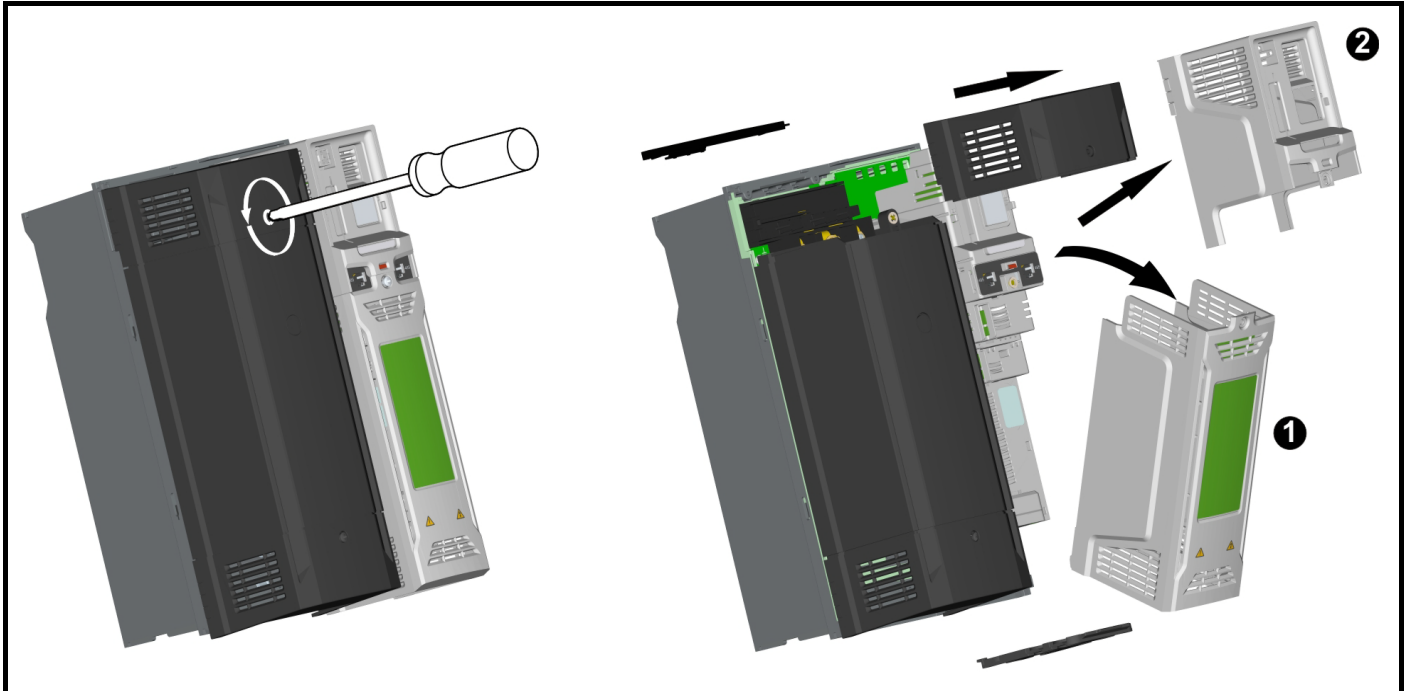
The following items are supplied in the kit bag:

	Item	Quantity
+DC busbar		x 1
-DC busbar		x 1
M4 Screws		x 4

1.2 Instructions for paralleling two Unidrive M size 6 drives

STEP 1 - Removing the terminal covers

Figure 1-2 Remove the AC and DC power terminal covers



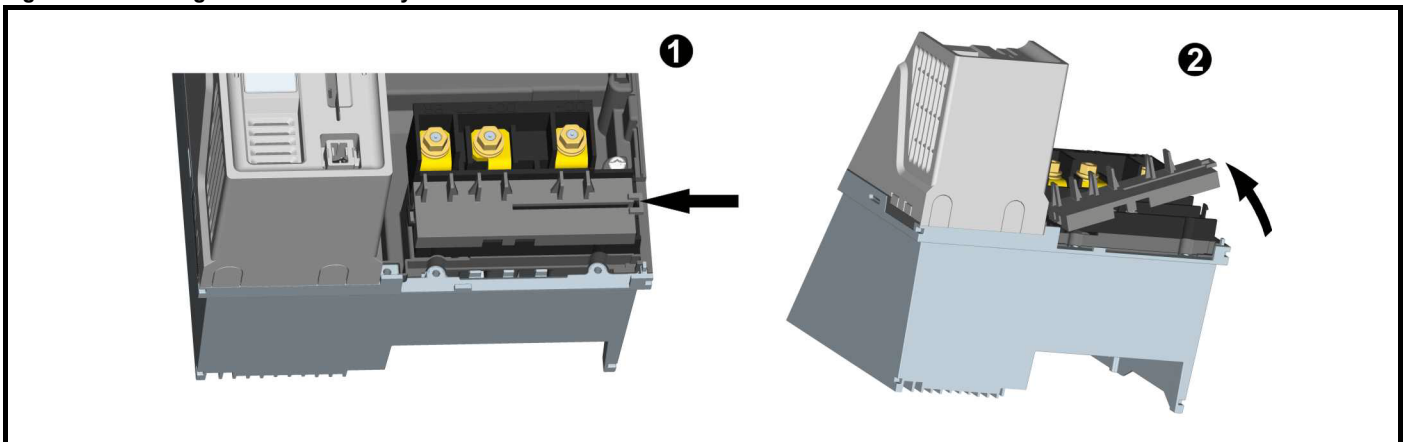
On drive 1 and 2, remove the terminal covers as shown in Figure 1-2 above.

The AC terminal cover (1), must be removed before the DC terminal cover (2) can be removed.

When replacing the terminal covers, the screws should be tightened to a maximum torque of 1 N m (9 lb in).

STEP 2 - Remove the DC connector

Figure 1-3 Gaining access to the 3-way DC connector



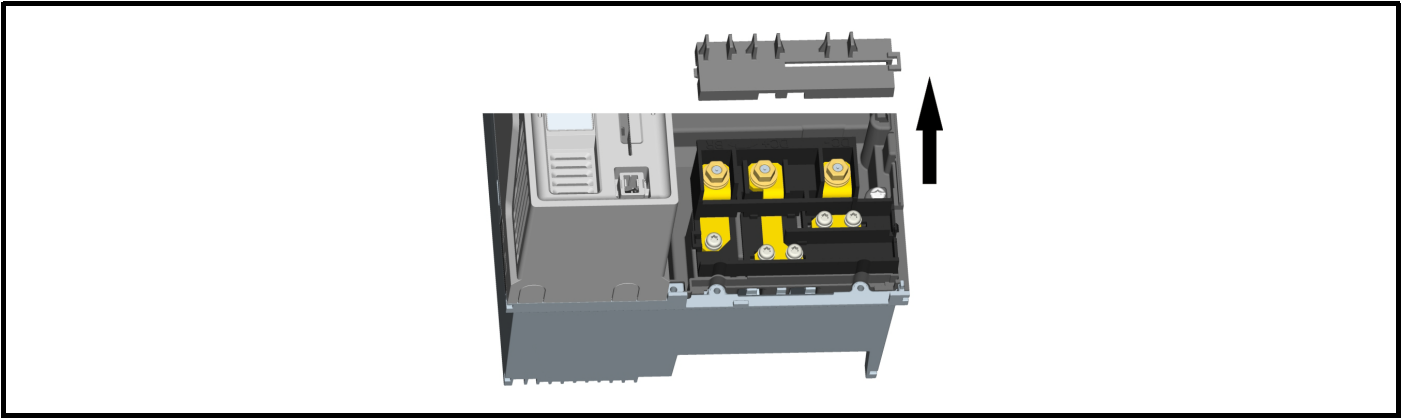
Remove the 3-way DC connector cover by releasing the plastic clip (1) as shown above, then lift the right hand side of the cover upwards (2).



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STEP 3 Access to busbar connections

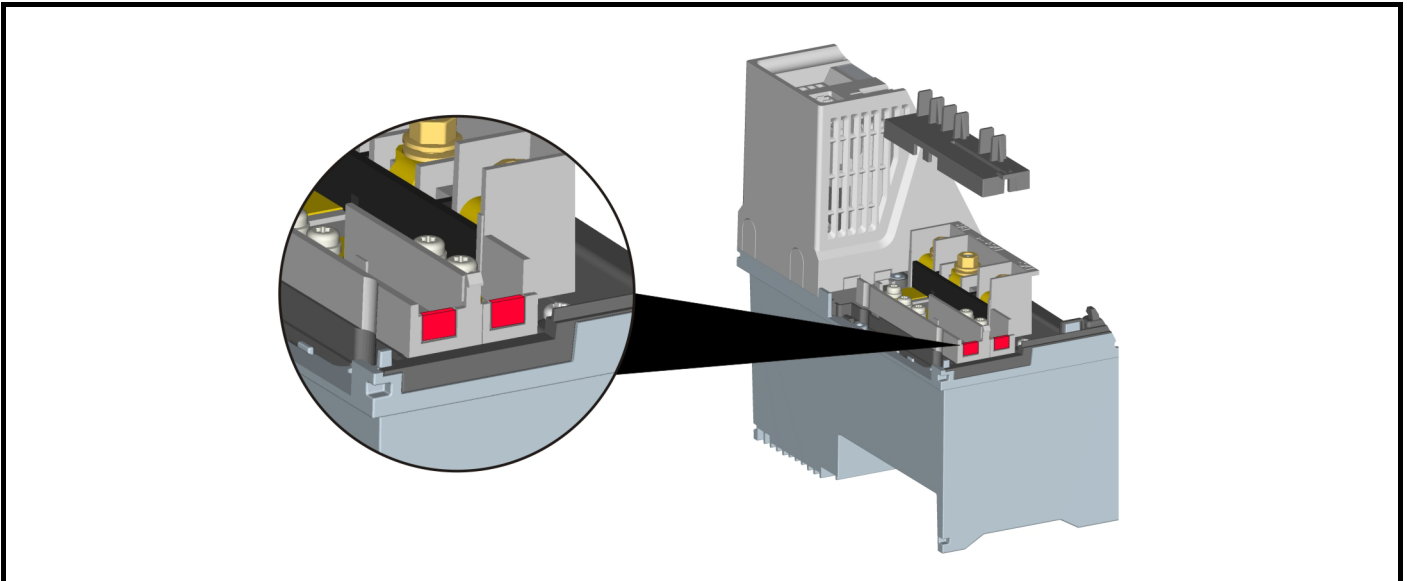
Figure 1-4 DC busbar terminal connections



Finally remove the cover to gain access to the 3-way DC connector.

STEP 4 - Break out the tabs on Drive 2

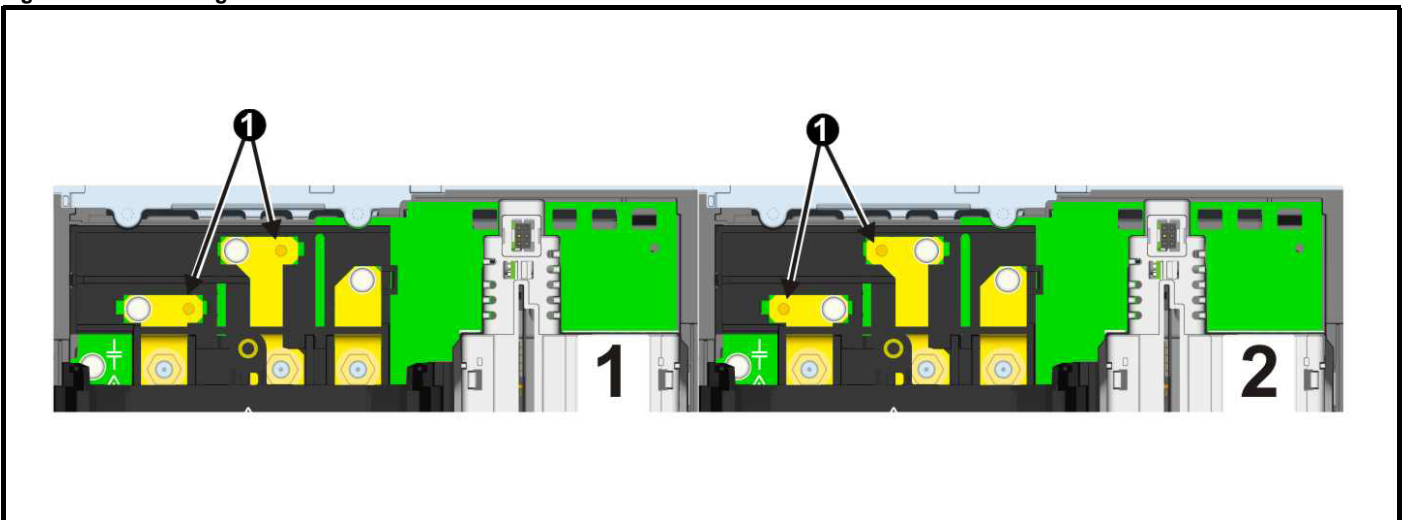
Remove the tabs (1) on drive 2 using long nose pliers which will allow the fitting of the DC busbars.



Remove the breakout tabs on the DC barrier by inserting a screwdriver under the tabs and lifting upwards (1). This will provide access to the threaded mounting holes for the busbars.

STEP 5 - Drive 2

Figure 1-5 Removing the DC terminal block screws



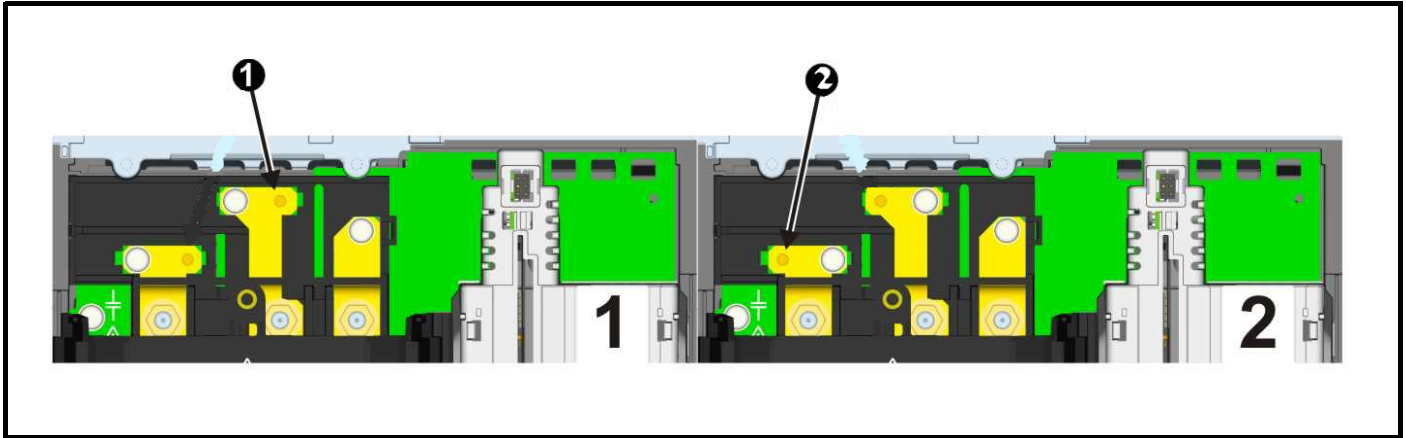
Remove the four M4 screws from the terminal block as shown in Figure 1-5.



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STEP 6 - Drive 1 and 2

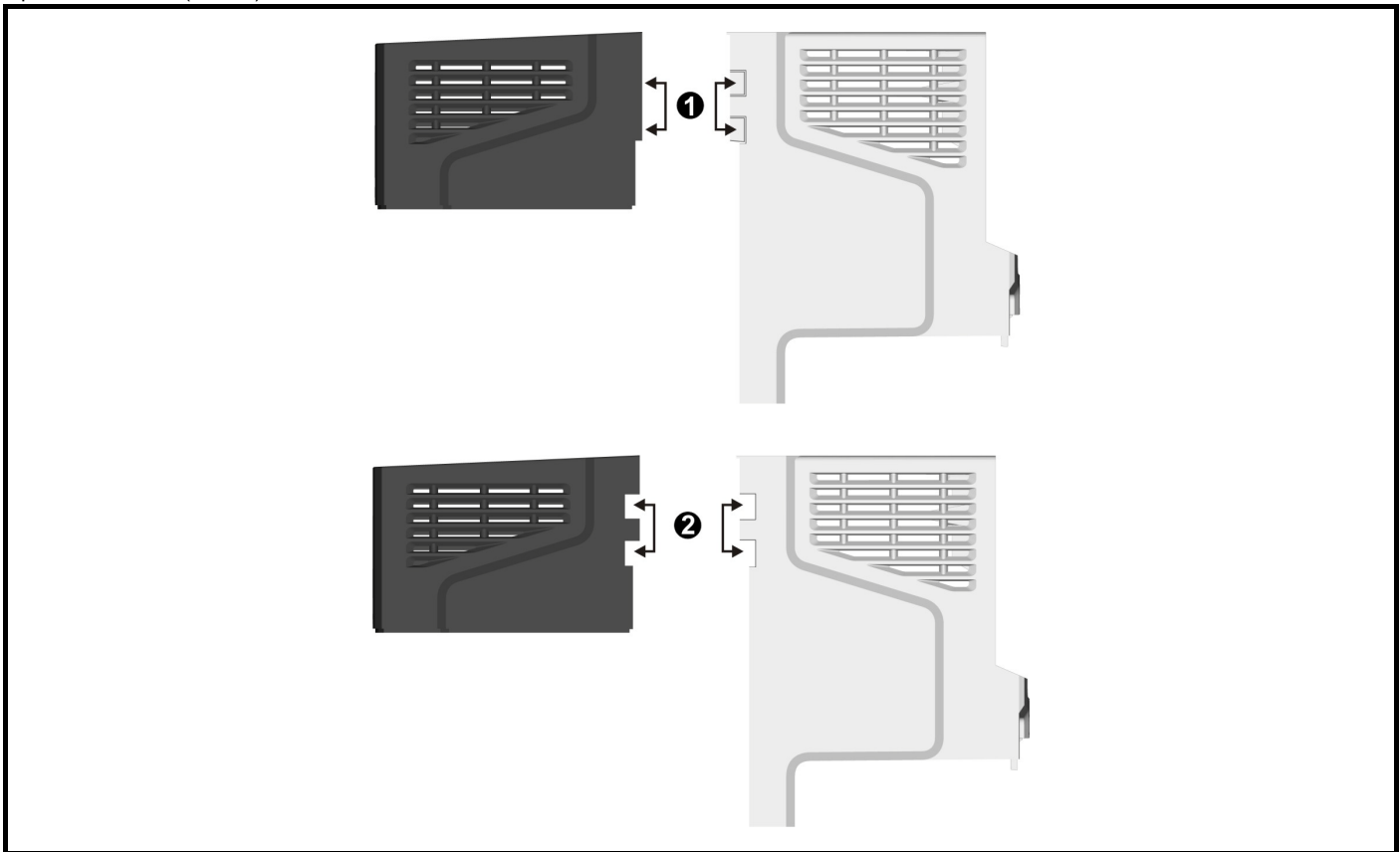
Figure 1-6 Installing the DC Busbars



Insert the +DC (1) and the -DC (2) busbars between the drives. Slide the busbars underneath the control pod housing, and align with the mounting holes on the DC terminals. Use the four M4 screws (3) included in the kit to secure the DC busbars. Tighten the screws with a maximum torque of 2 N m (18 lb in).

STEP 7 - Removing the break out tabs

Use long nose pliers to remove the tabs in the terminal covers. Remove the two breakout tabs (1) on the right hand side of the DC terminal cover (drive 1). Remove the two breakout tabs (2) on the left hand side of the DC terminal cover (drive 1). Remove the two tabs (3) on the right side of the top left hand cover (drive 1).

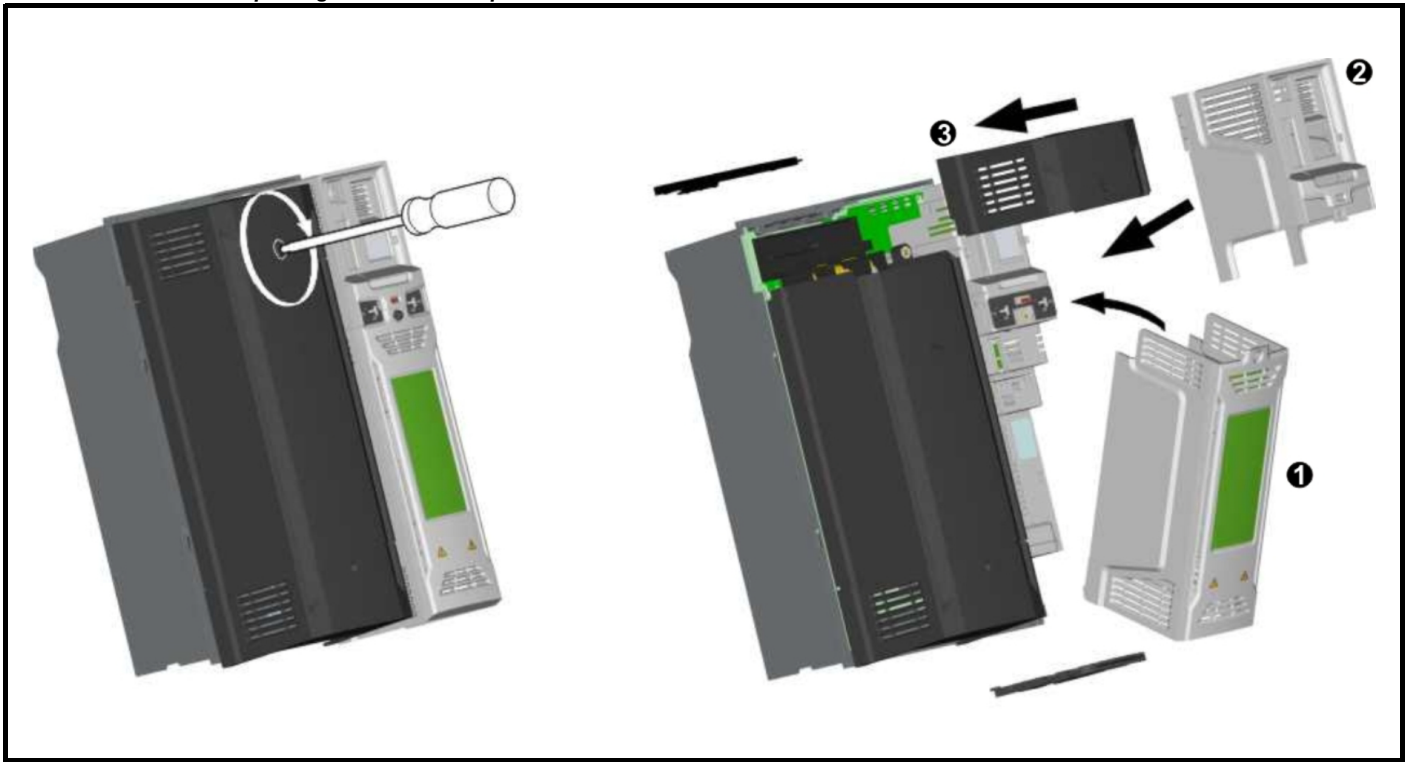


Using long nose pliers, break off the two pairs of breakout tabs on the top left hand cover (drive 2) as shown in (1). This allows the installation of the two busbars between the two drives when the covers are replaced (2).

DO NOT break off the tabs on the outer sides of the covers, as this is not a requirement when installing the busbars.



STEP 8 - Drive 1 and 2 replacing the DC and AC power covers



- Replace the DC terminal cover (2)
 - Replace the AC terminal cover (1) and secure using the screw provided
 - Replace the top left hand cover (3) and secure using the screw provided
- When replacing terminal covers, the maximum torque required is 1 N m (9 lb in).



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