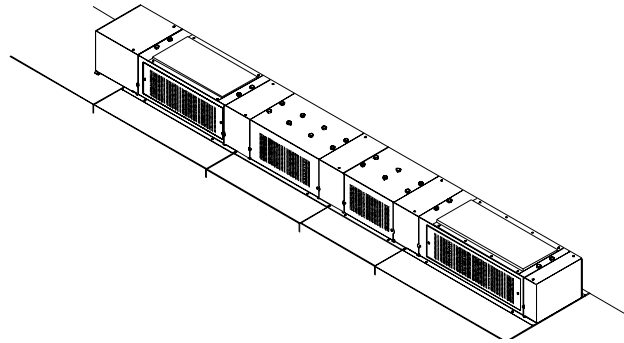




Overhead Bus for Bulletin 2300 MCCs

For Use in Parallel Bus Supply Configurations



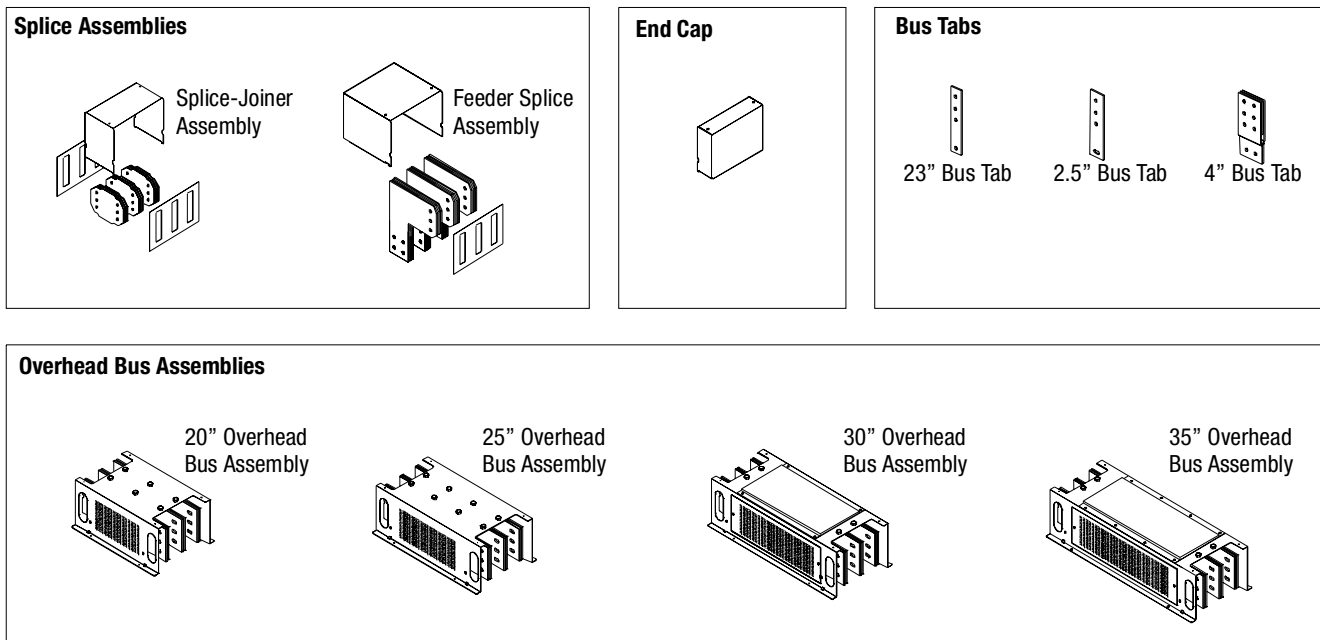
Contents

This document shows how to install overhead bus assemblies on to Bulletin 2300 Motor Control Centers (MCCs).

What This Kit Contains

This kit contains the necessary quantities of the following parts, as needed and called out on your *Certified Cabinet Outline Drawing* (often labeled as *DS-drawing number*) that is shipped with your drive system schematics. Refer to Figure 1 for part types that may be included in your kit.

Figure 1
Parts That May Be Included in Your Overhead Bus Splice Kit



Other Items Needed

Before you begin, be sure you have the following:

- Tools you will need to:
 - Loosen, tighten, and torque bolts to 45 lb-ft (61 N-m) and 25 lb-ft (34 N-m)
 - Remove and install hex screws
- Documentation:
 - Your *Certified Cabinet Outline Drawing* from your drive system schematics
 - Publication 2300-5.1, *Bulletin 2300 Family of Drive Systems Hardware - Installation Manual*

Safety Precautions

The following general precautions apply when working on drive system lineups:



ATTENTION: Only those familiar with the drive system, the products used in the system, and the associated machinery should plan or implement the installation, startup, and future maintenance of the system. Failure to comply can result in personal injury and/or equipment damage.

ATTENTION: Verify that all sources of AC and DC power are deenergized and locked out or tagged out in accordance with the requirements of ANSI/NFPA 70E, Part II.

ATTENTION: When servicing any unit, do not drop any nuts, bolts, washers, etc. inside the unit, as they may cause a short circuit on power up. If you do drop any hardware inside the unit, find and remove the hardware before powering up.

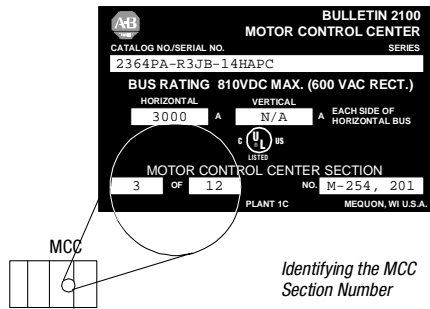
ATTENTION: The installer will be working with buswork for the AC input to the parallel configuration. There must not be any power applied to the feeder bay buswork during the overhead bus installation.

ATTENTION: Lift and move parts of the overhead bus according to OSHA regulations and your company's handling procedures. Weights are as follows:

20" Overhead Bus Assembly	78 lb (35 kg)
25" Overhead Bus Assembly	97 lb (44 kg)
30" Overhead Bus Assembly	116 lb (53 kg)
35" Overhead Bus Assembly	135 lb (61 kg)
Feeder-Splice Assembly	80 lb (36 kg)
Splice-Joiner Assembly	43 lb (20 kg)

Preliminary Steps

Before you begin the procedures in this document:

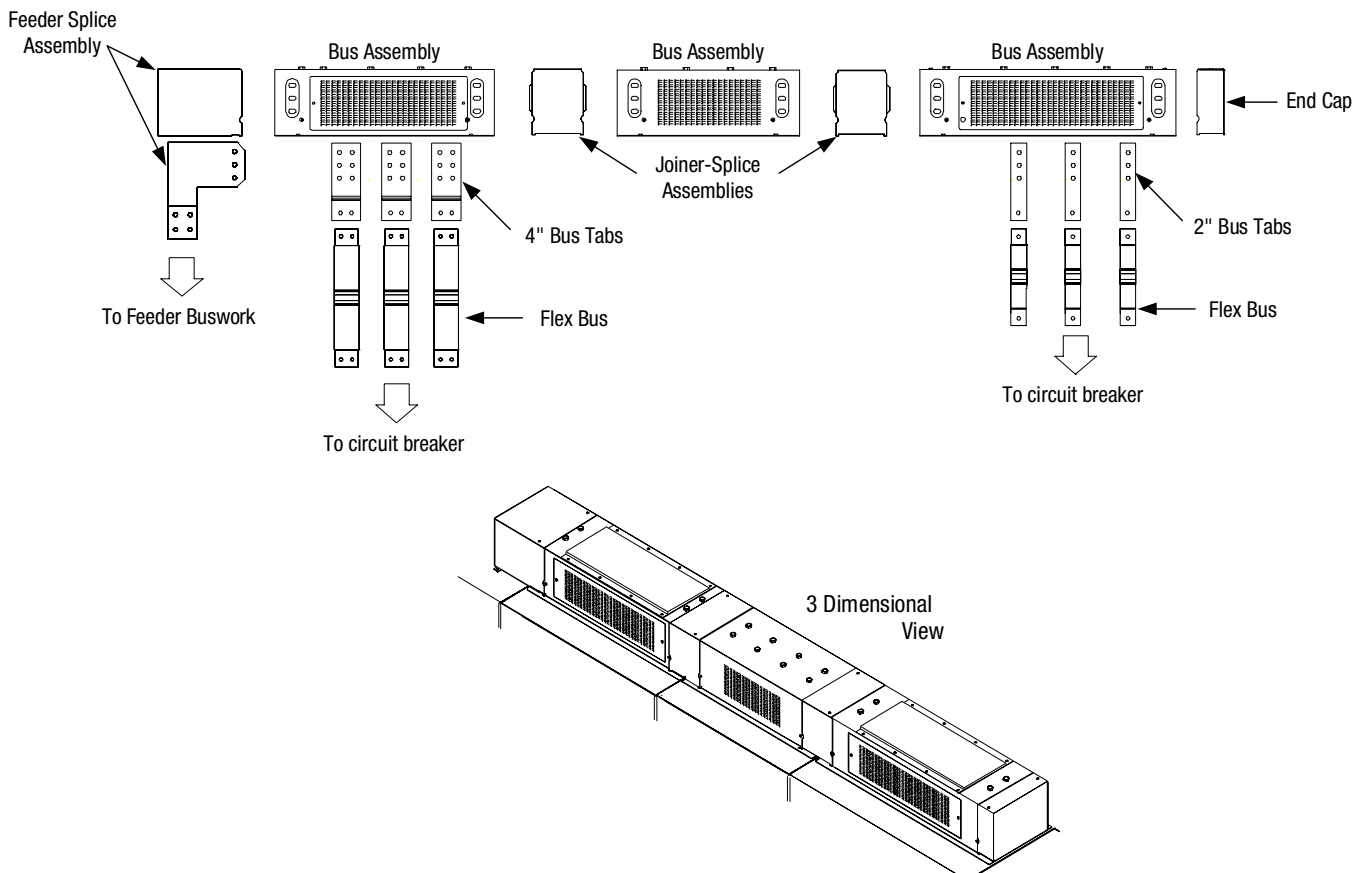


1. Verify that the individual shipping splits (MCC sections) are moved into their final resting place and lined up sequentially according to the section numbers located on the section data nameplate (see illustration on the left). This sequence corresponds with the sequence defined on your *Certified Cabinet Outline Drawing*.
2. Verify that the shipping splits have been bolted together and that the DC thru bus, control bus (if present), and TE/PE bus are spliced together per publication 2300-5.1, *Bulletin 2300 Family of Drive Systems Hardware - Installation Manual*.
3. Remove all lifting angles per publication 2300-5.1, *Bulletin 2300 Family of Drive Systems Hardware - Installation Manual*.

Installing the Overhead Bus

The figures in this publication (such as Figure 2) illustrate typical hardware arrangements and assembly processes. Since there are several possible overhead bus configurations, the figures are meant as a typical example. Be sure to perform all of the installation instructions in accordance with the *Certified Cabinet Outline Drawing* for your particular configuration.

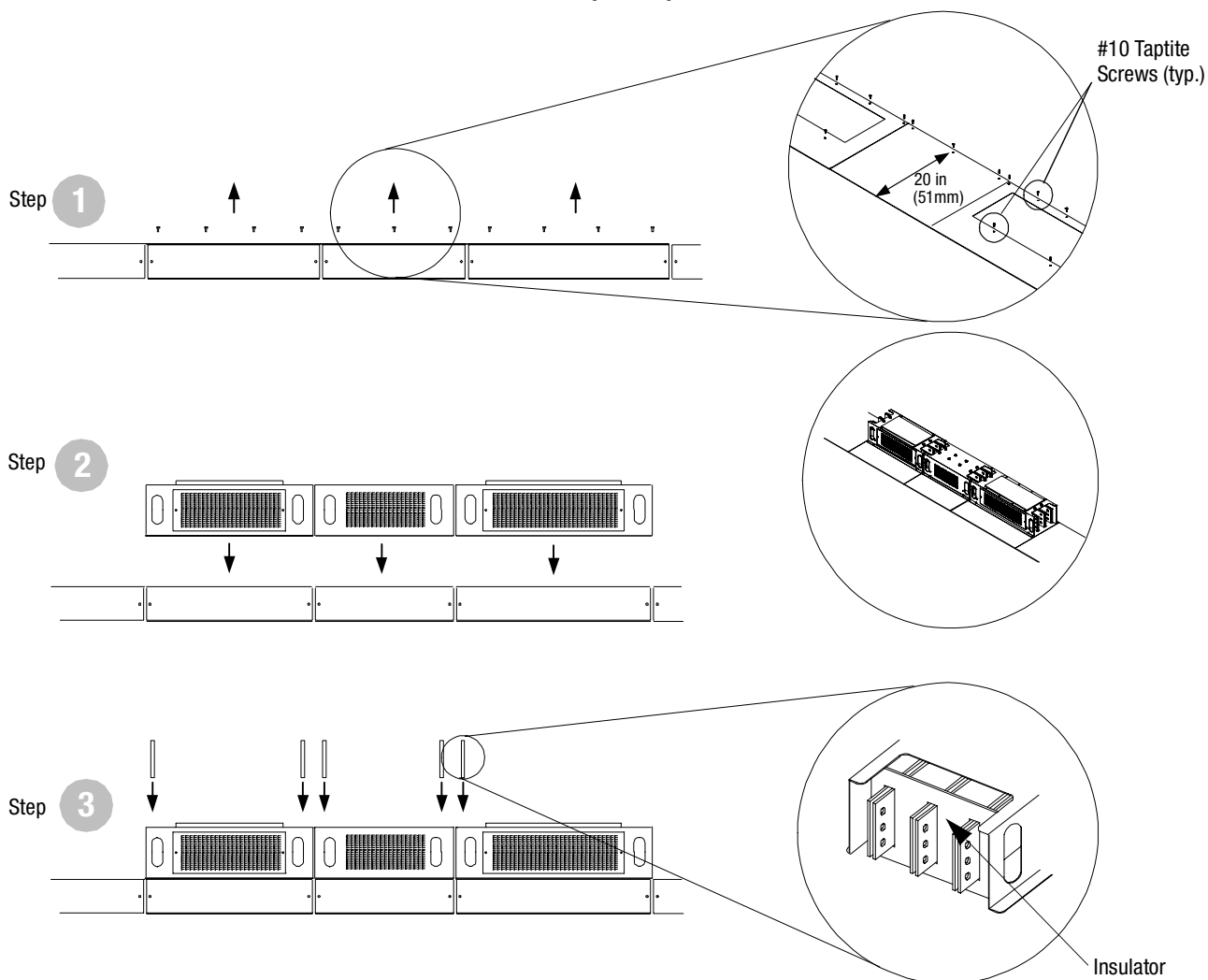
**Figure 2
Overhead Bus Arrangement—Example**

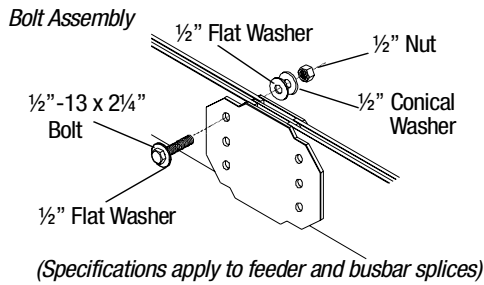


Note: Verify that there is sufficient working space above and around the MCCs. If not, install the bus tabs and splices before placing the bus assemblies on the MCC sections.

1. Remove the bus assembly mounting screws from the MCCs as shown in Figure 3, Step 1. These screws will be used in step 7 to mount the bus assemblies to the MCCs.
2. With the *Certified Cabinet Outline Drawing* as a guide, place all of the assemblies onto the MCC sections (as shown in Figure 3, Step 2). Align the mounting holes in the rear of the MCC. Do not fasten the assemblies to the MCCs at this time.
3. Place an insulator over each set of 3-phase busbars to be spliced, including the busbars to be spliced to the feeder (see Figure 3, Step 3).

Figure 3
Installation Example—Steps 1 - 3



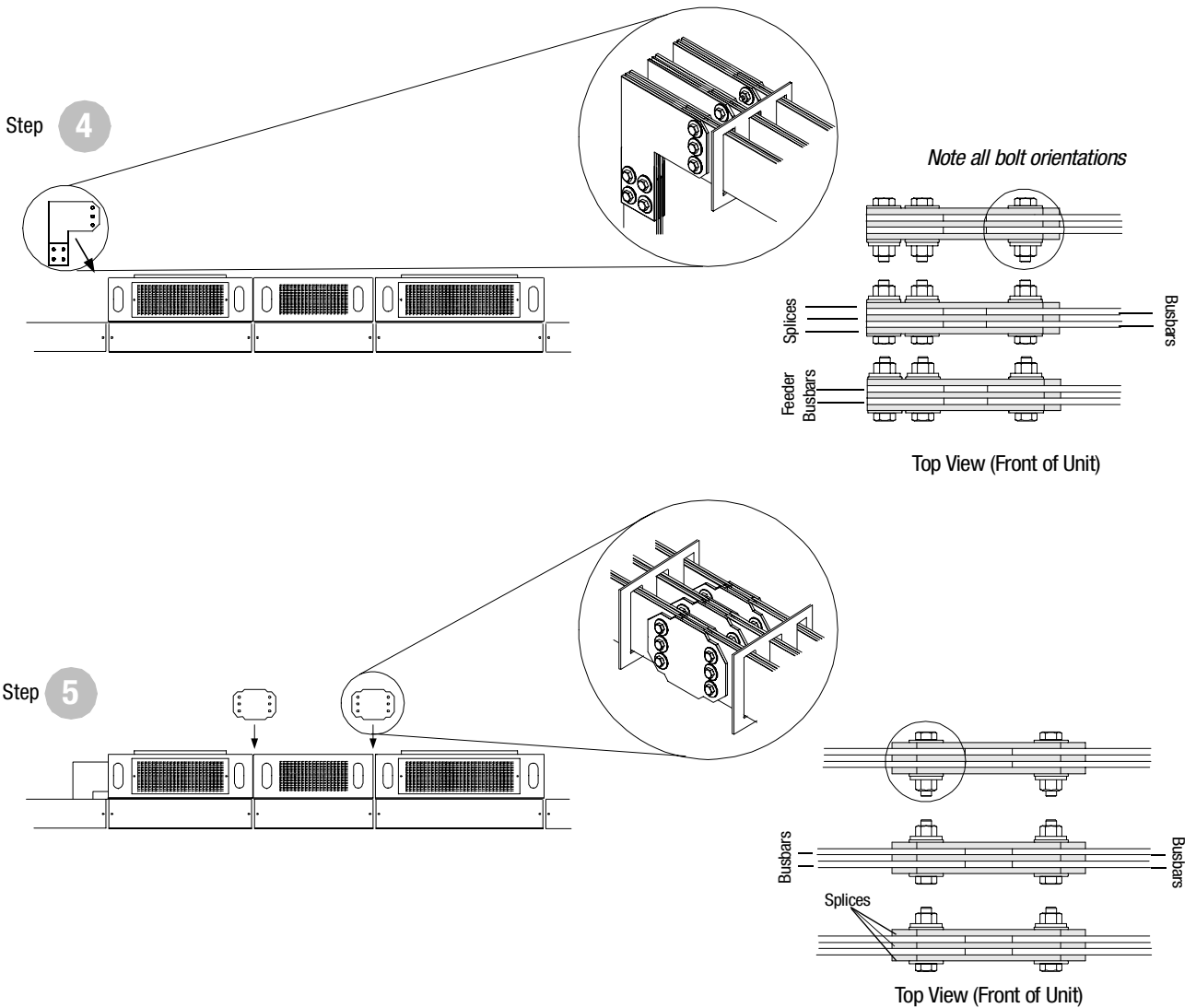


4. Install the feeder splice (see the bolt orientation in Figure 4, Step 4). The cupped surface of all conical washers should face the busbar surface. Hand tighten the bolt assemblies at this time.

Note: The illustration on the left shows the bolt assembly used for feeder and busbar splices. Use only the specified hardware.

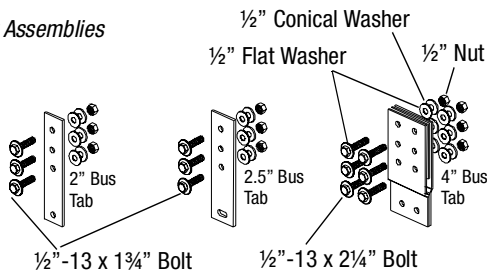
5. Install the bus splices between the bus assemblies (note the bolt orientation in Figure 4, Step 5). Hand tighten the bolt assemblies at this time.

Figure 4
Installation Example—Steps 4 - 5



6. For each input bay that is to be supplied by the overhead bus:

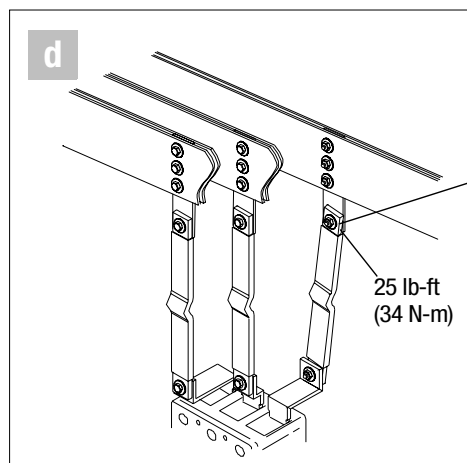
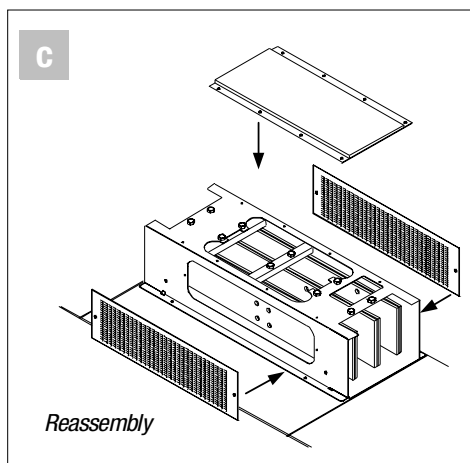
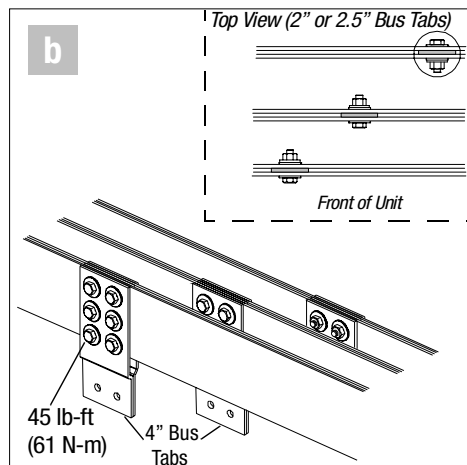
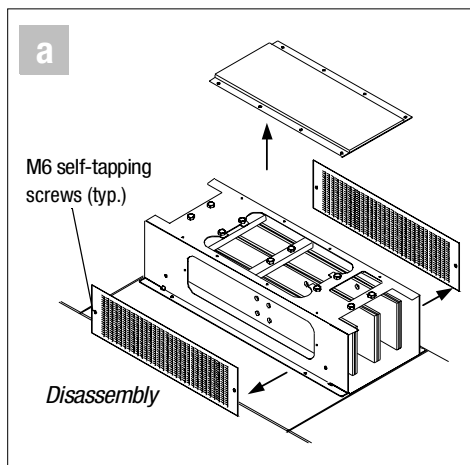
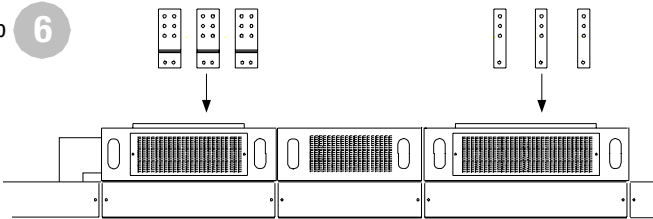
Bolt Assemblies



- Remove the top cover and side covers of the bus assembly to access the busbars (as shown in Figure 5, Step 6a).
- Install bus tabs for each busbar (use only the hardware specified in the bolt assembly illustration on the left). The bus tabs should be sized according to the *Certified Cabinet Outline Drawing*. Torque to 45 lb-ft (61 N-m).
- Replace the top cover and side covers to the bus assembly.
- Open the bay door and connect the flex buses to the bus tabs. Torque to 25 lb-ft (34 N-m).

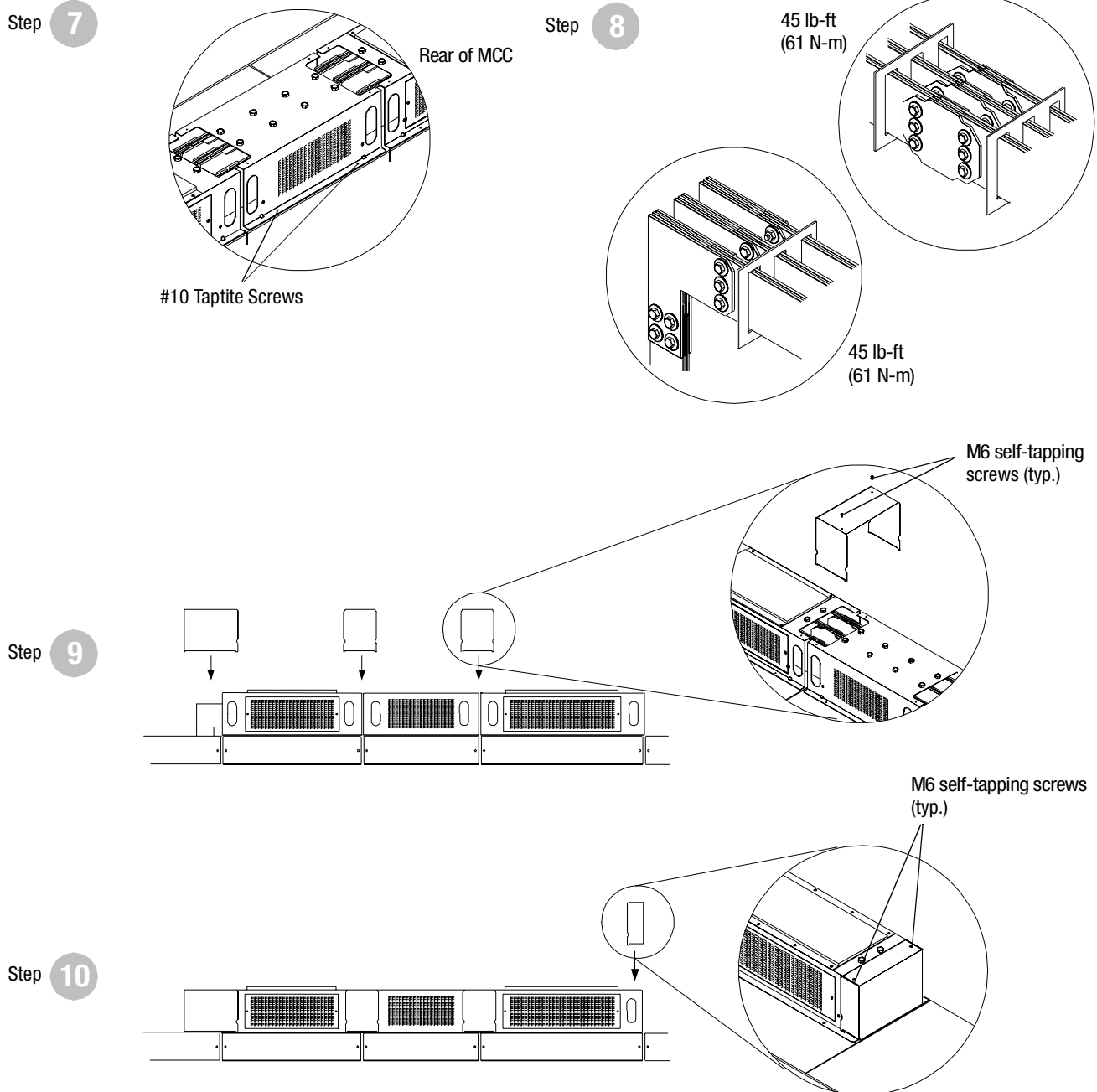
Figure 5
Installation Example—Steps 6a - 6d

Step 6



7. Mount the bus assemblies to the MCCs as shown in Figure 6 (use the taptite hardware that was previously removed in step 1). Tighten the screws.
8. Torque the feeder and bus splices to 45 lb-ft (61 N-m).
9. Install the joiner enclosures for the bus splices and feeder splice (as shown in Figure 6). Tighten the screws.
10. Install the end cap (see Figure 6). Tighten the screws.

Figure 6
Installation Example—Steps 7 - 10



Concluding Steps

Verify that all the items have been installed properly, and that all the connections are secure. Check for loose parts, debris, or tools within the MCCs, then close and secure all the MCC doors.

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