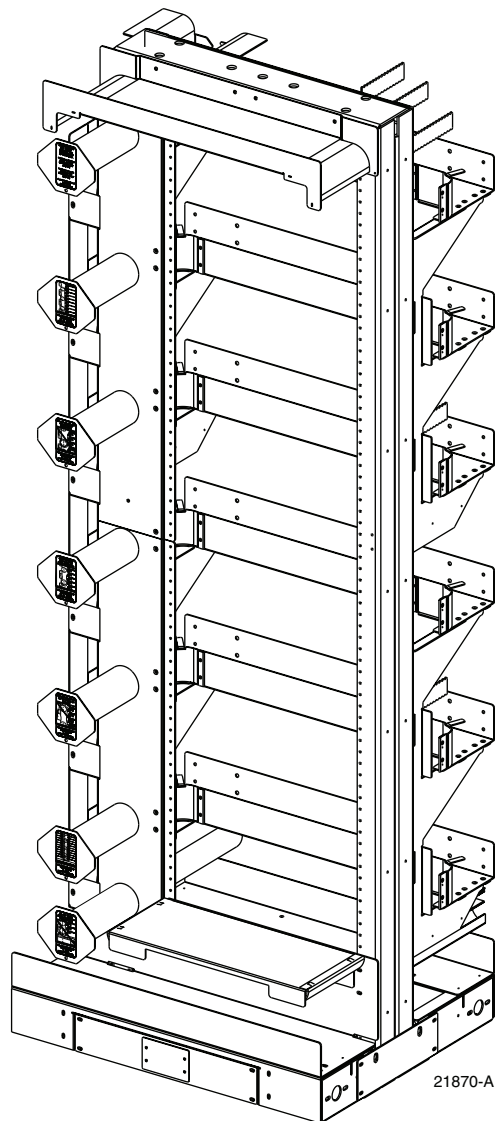




NG3™ High-Density Fiber Distribution Frame System Rack Installation Manual: Concrete Floor



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REVISION HISTORY

ISSUE	DATE	REASON FOR CHANGE
1	02/2003	Original
2	06/2003	Added brackets for securing two racks.
3	10/2007	Updated drawings as needed with redesigned rack assembly

LIST OF CHANGES

The technical changes incorporated into this issue are listed below.

PAGE	IDENTIFIER	DESCRIPTION OF CHANGE
4	Dwg 1	Updated existing drawing with redesigned rack assembly.
9-15	Dwgs 7-12	Updated existing drawing with redesigned rack assembly.
16	Dwg 1	Updated existing drawing with redesigned rack assembly.
17-18	Dwgs 1-2	Updated existing drawing with redesigned rack assembly.

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ABOUT THIS MANUAL

This manual provides complete instructions for installing an NG3 rack on a concrete floor, grounding the rack, and securing two racks.

RELATED PUBLICATIONS

Listed below are related manuals and their publication numbers. Copies of these publications can be ordered by contacting the ADC Technical Assistance Center at 1-800-366-3891 (in U.S.A. or Canada) or 952-917-3475 (outside U.S.A. and Canada).

Title/Description	ADCP Number
NG3 High-Density Fiber Distribution Frame System Installation Manual: Raised Floor	90-295
Provides pictorial instructions for installing an NG3 rack on a raised floor and grounding the rack.	
NG3 High-Density Fiber Distribution Frame System Patch Cord Routing Guide	90-296
Provides pictorial guidelines for routing patch cords on a lineup consisting of one or more NG3 frames. This manual consists of laminated cards that hang on the lineup.	
NG3 High-Density 72 Position Hinged Termination Panel User Manual	90-297
Provides installation and operation instructions for the NG3 termination panel.	
NG3 High-Density Fiber Distribution Frame System User Manual	90-298
Contains an NG3 system overview and information for planning and operating the system.	

ADMONISHMENTS

Important safety admonishments are used throughout this manual to warn of possible hazards to persons or equipment. An admonishment identifies a possible hazard and then explains what may happen if the hazard is not avoided. The admonishments — in the form of Dangers, Warnings, and Cautions — must be followed at all times. These warnings are flagged by use of the triangular alert icon (seen below), and are listed in descending order of severity of injury or damage and likelihood of occurrence.



Danger: *Danger is used to indicate the presence of a hazard that **will** cause severe personal injury, death, or substantial property damage if the hazard is not avoided.*



Warning: *Warning is used to indicate the presence of a hazard that **can** cause severe personal injury, death, or substantial property damage if the hazard is not avoided.*



Caution: *Caution is used to indicate the presence of a hazard that **will** or **can** cause minor personal injury or property damage if the hazard is not avoided.*

GENERAL SAFETY PRECAUTIONS



Danger: *Infrared radiation is invisible and can seriously damage the retina of the eye. Do not look into the ends of any optical fiber. Do not look directly into the optical adapters of the adapter packs. Exposure to invisible laser radiation may result. An optical power meter should be used to verify active fibers. A protective cap or hood **MUST** be immediately placed over any radiating adapter or optical fiber connector to avoid the potential of dangerous amounts of radiation exposure. This practice also prevents dirt particles from entering the adapter or connector.*

LIST OF ACRONYMS AND ABBREVIATIONS

The following acronyms are used in this manual:

FOT	Fiber Optic Terminal
IFC	Intra Facility Cable
NG3	New Generation High-Density Fiber Distribution Frame
OSP	Outside Plant

1 TOOLS AND MATERIALS REQUIRED

The tools and materials required for mounting the NG3 Frame System Rack on a concrete surface are specified in [Table 1](#), [Table 2](#), and [Table 3](#).

Table 1. Tools Required

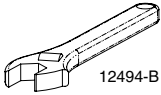
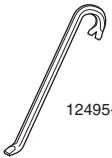

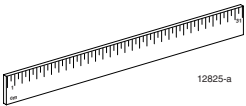
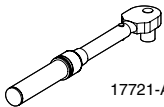
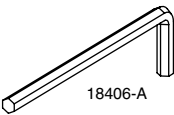
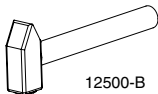
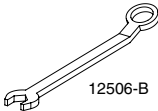
TOOL	PICTURE
Adjustable wrenches (2) 0.25 to 1 inch (8 to 25.4 mm)	 <p>12494-B</p>
Crow bar	 <p>12495-B</p>
Drill with metal and concrete drill bits 0.25 to 1 inch (8 to 25.4 mm)	 <p>12496-B</p>
Ruler or tape measure	 <p>12825-a</p>
Torque wrench 19.9 ft.-lbs. (27 Nm)	 <p>17721-A</p>
Allen wrench (5/16-inch) Note: Used for leveling rack	 <p>18406-A</p>
Hammer	 <p>12500-B</p>
Set of combination open-end/box-end wrenches 0.25 to 1 inch (8 to 25.4 mm)	 <p>12506-B</p>

Table 1. Tools Required, continued

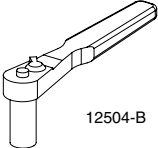
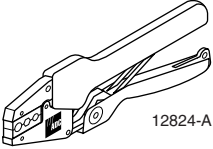
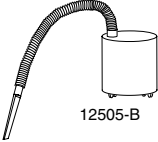
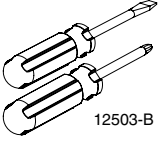
TOOL	PICTURE
Set of sockets 0.25 to 1 inch (8 to 25.4 mm)	 <p>12504-B</p>
Crimping tool 0.25 to 0.3 inches (6.35 to 7.62 mm) Note: Used for grounding rack	 <p>12824-A</p>
Vacuum	 <p>12505-B</p>
Flat tip (-) and Phillips (+) screwdrivers (#1, #2, and #3)	 <p>12503-B</p>

Table 2. Ground Wire Kit Components (Accessory)



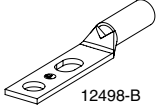
ITEM	DESCRIPTION/PICTURE
Ground cable (13 ft.)	#6 AWG (4.1 mm) solid copper wire
Nylon cable clamps (8)	 <p>18413-A</p>
12-24 x 0.5 inch screws	 <p>18414-A</p>
2-hole copper compression lug (1) with 0.75-inch hole spacing. Note: Accommodates #6 AWG wire	 <p>12498-B</p>

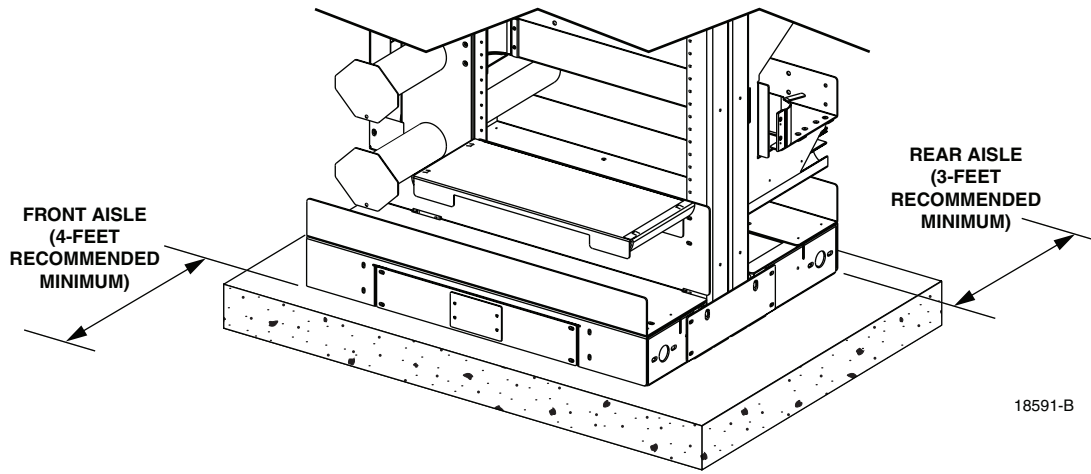
Table 3. Fasteners Shipped with Rack

PART	PICTURE
Anchor bolt assembly (4)	<p>STUD</p> <p>NOTE: ONE PIECE</p> <p>TORQUE LIMITING HEX NUT</p> <p>FLAT WASHER</p> <p>METAL SLEEVE</p> <p>EXPANDABLE CONE</p> <p>TOP FLANGE (SHEARS OFF)</p> <p>TORQUE NUT</p> <p>PLASTIC COVER</p> <p>NYLON SPACER 18008-B</p>
Hold-down washer (4)	<p>21899-A</p>

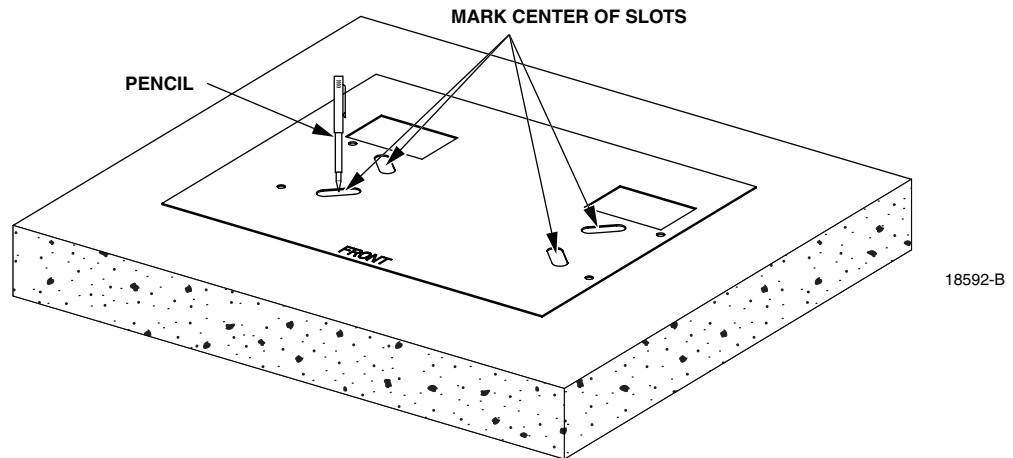
2 MOUNTING THE RACK ON A CONCRETE SURFACE

To mount the rack on a concrete surface, follow the instructions in drawings 1 through 12.

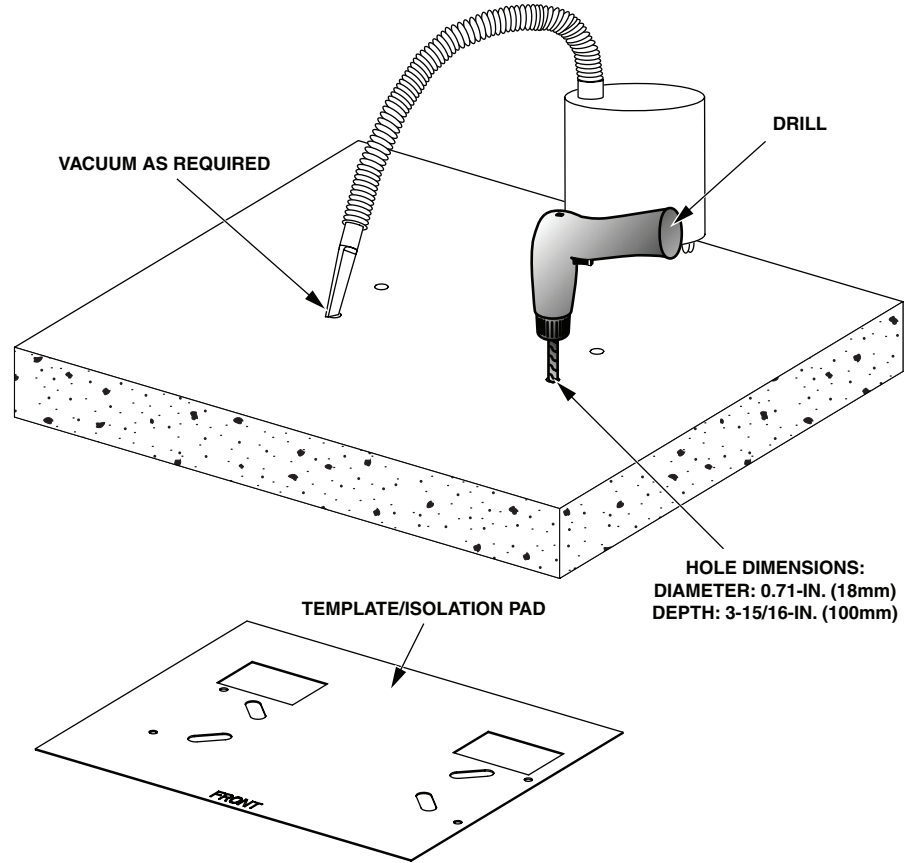
- 1 Determine rack location.



- 2 Place template/isolation pad on concrete floor location and mark concrete.

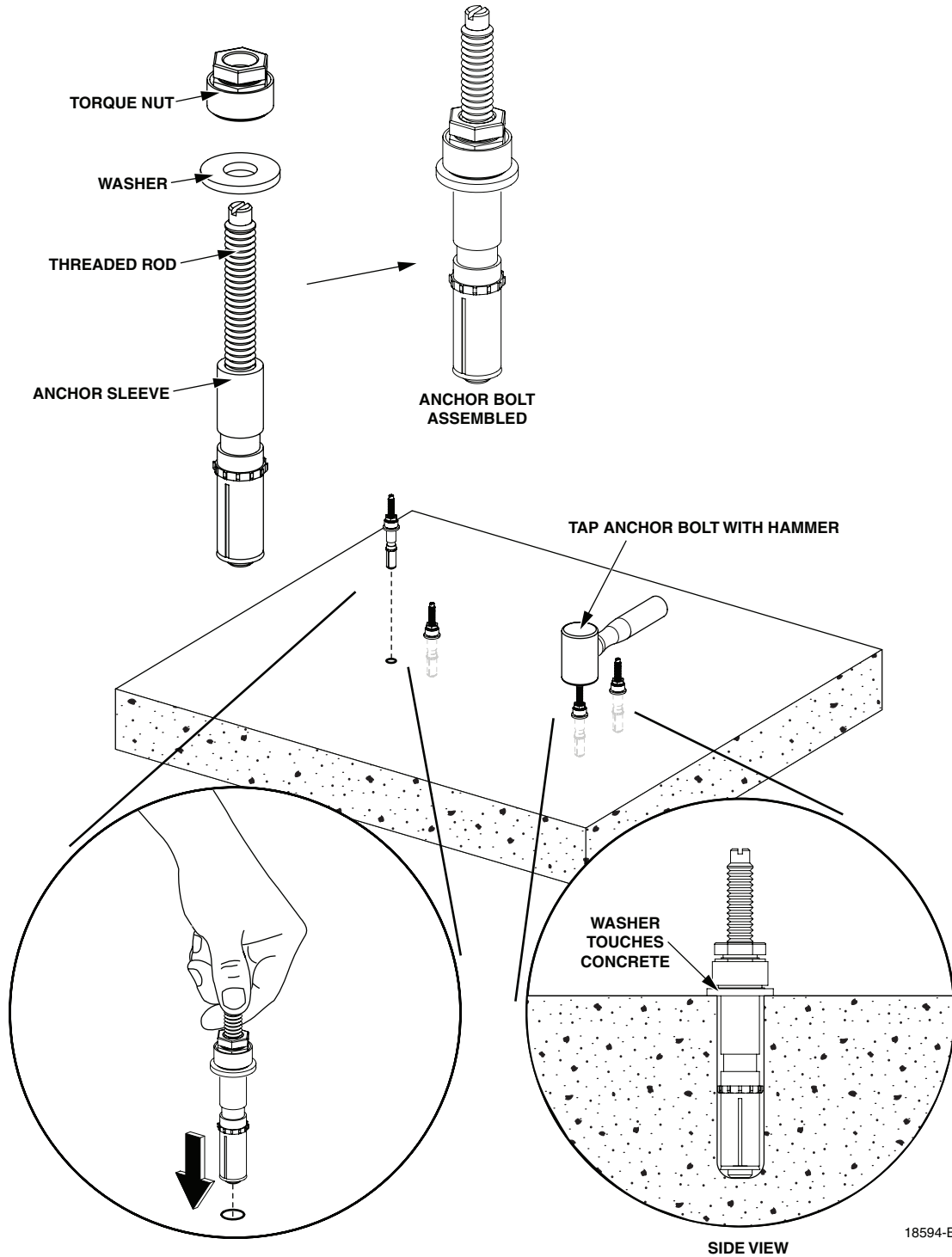


- 3 Set template/isolation pad aside and drill holes in concrete.



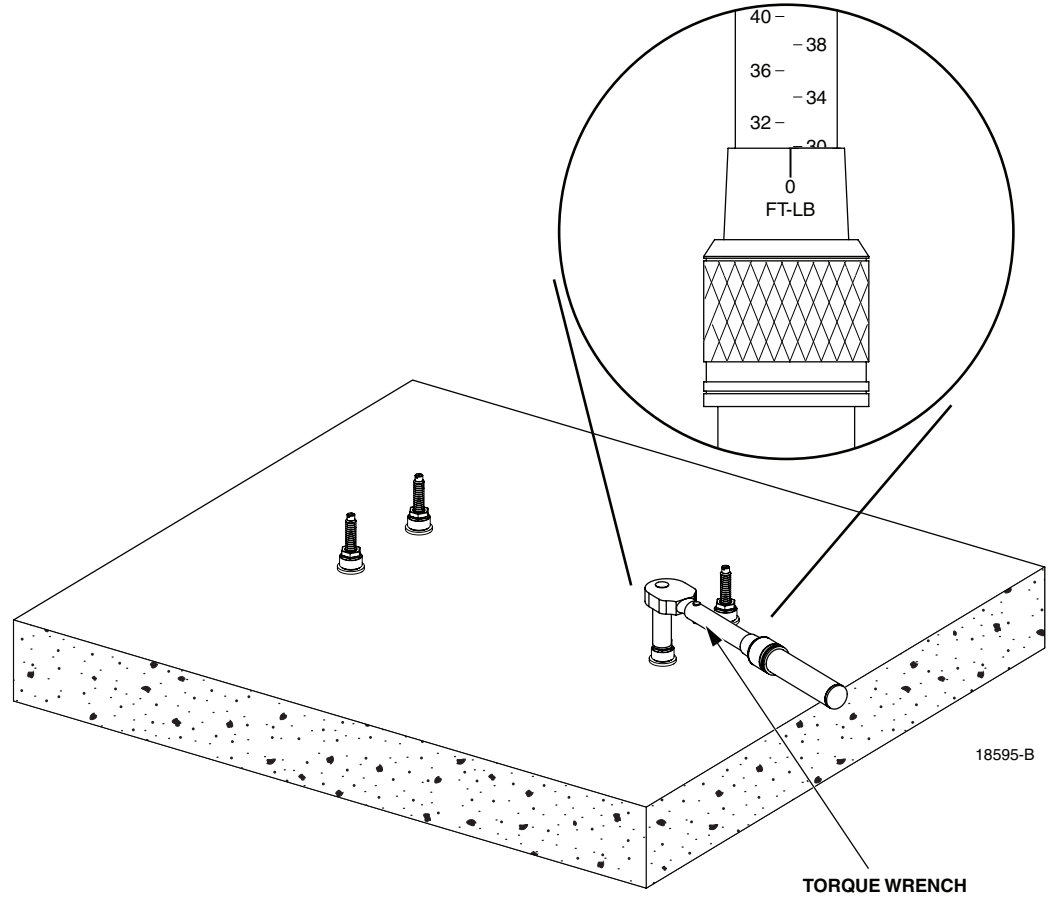
18593-B

- 4** Thread the washer and torque nut onto the threaded rod. (Note: The washer should touch the top of the anchor sleeve.) Insert the anchor bolt assembly into the hole. Tap the anchor bolt assembly with a hammer until the washer touches the concrete.

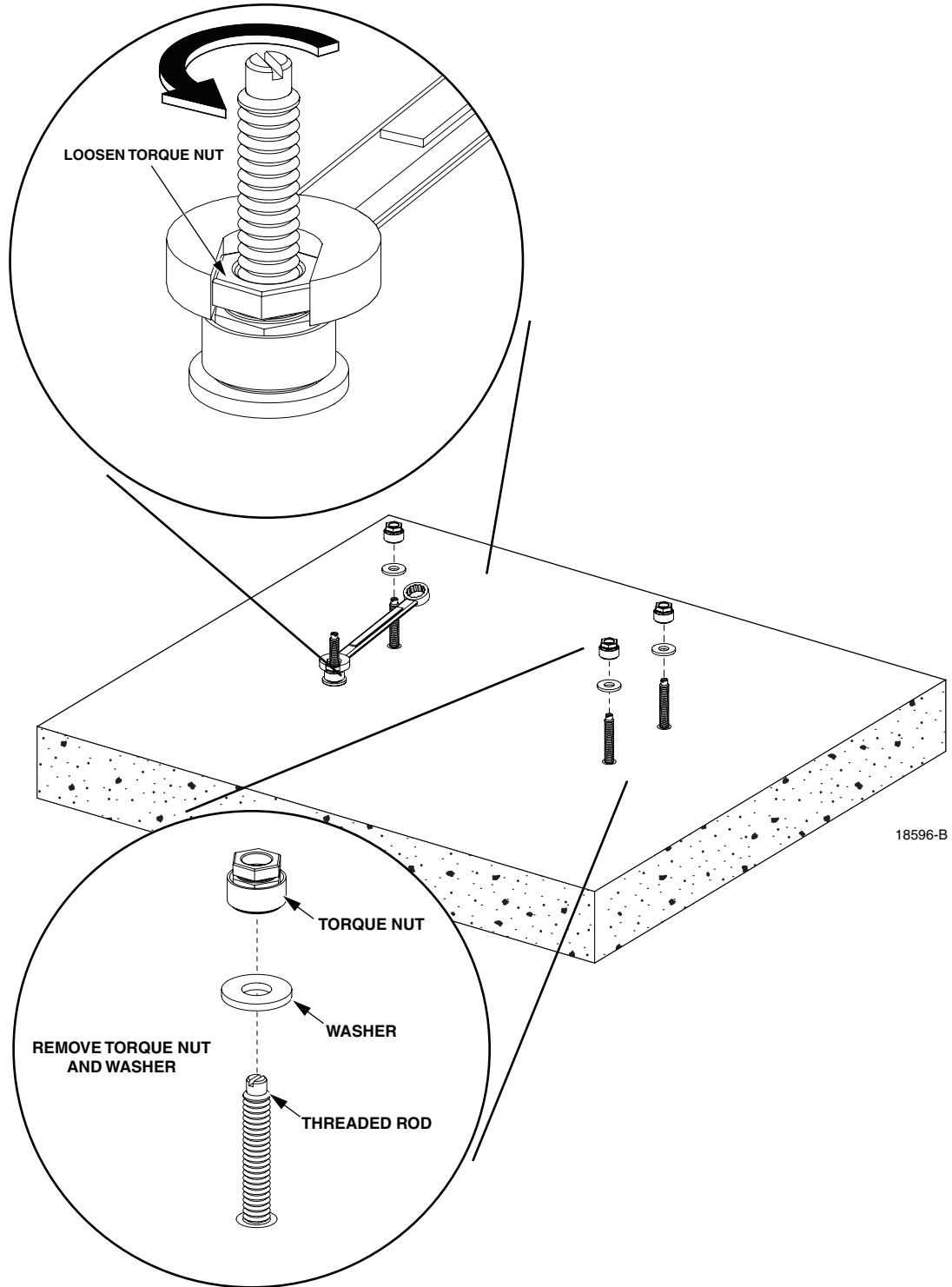


18594-B

- 5** Pre-torque the anchor bolt to approximately 30 ft-lbs (41 Nm)



- 6** Loosen the torque nut several turns, then remove the torque nut and washer.



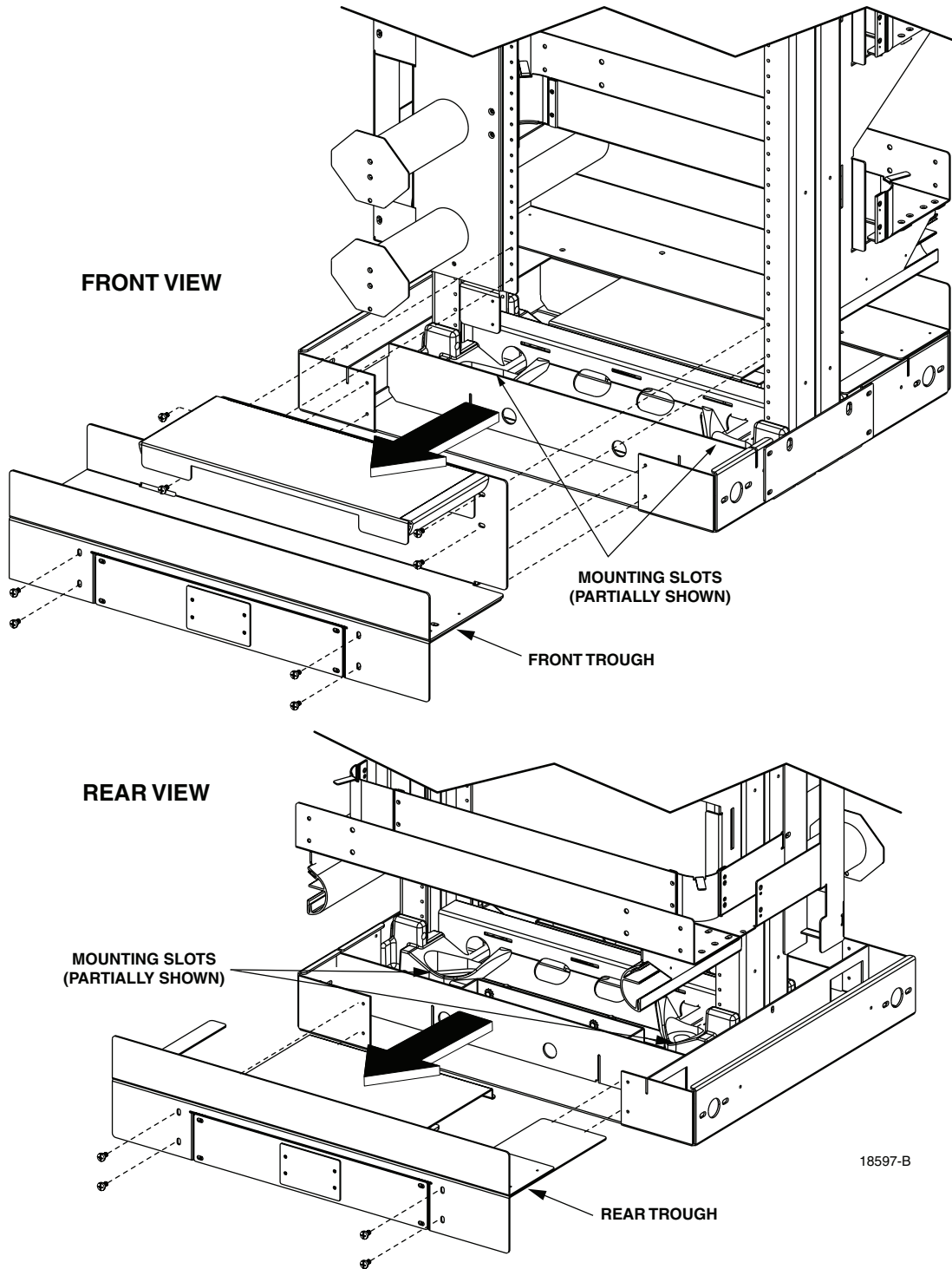


CAUTION: An NG3 rack weighs approximately 300 lbs (136 kg). Do not attempt to lift or move the rack without using appropriate lifting equipment.

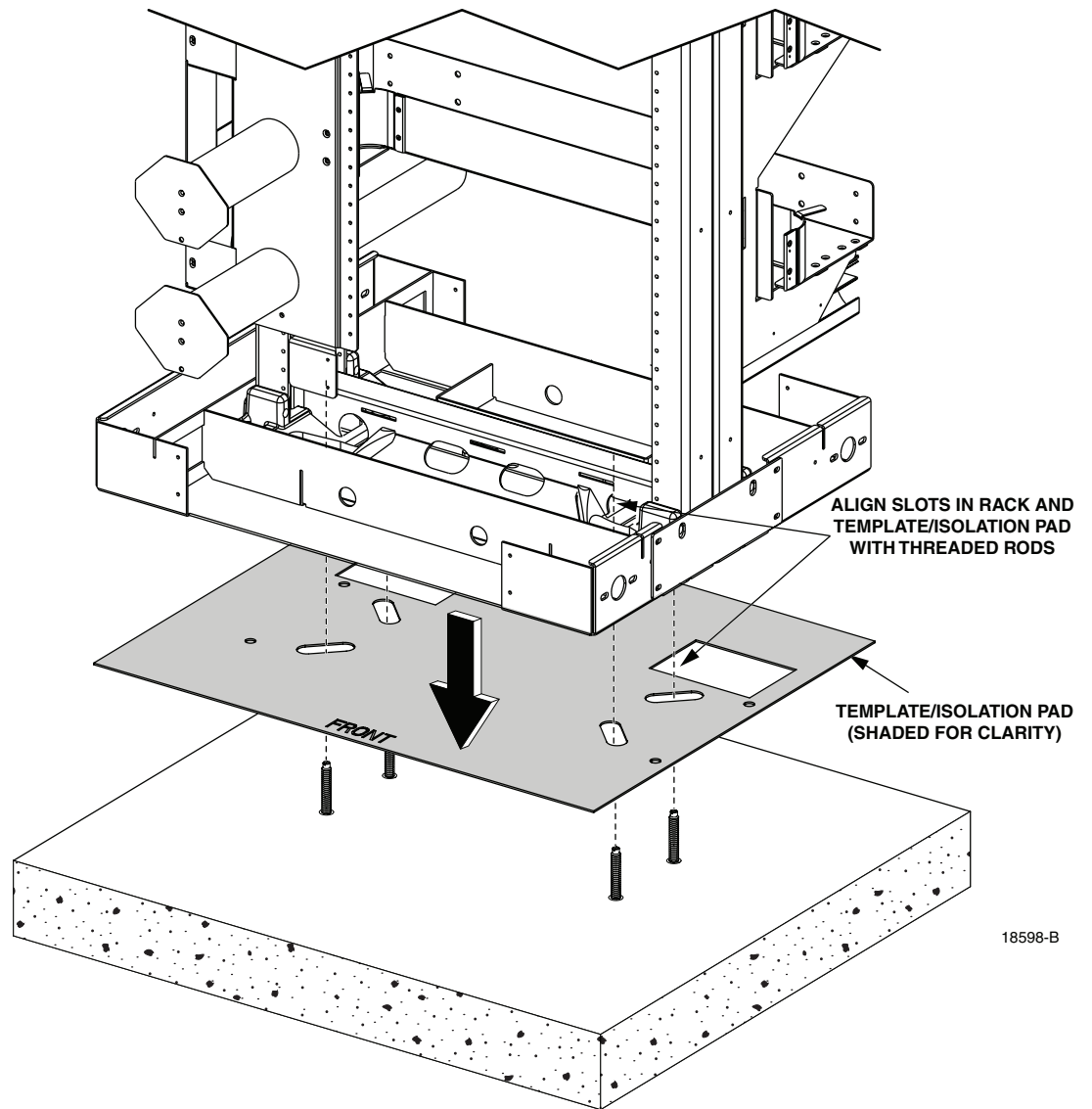


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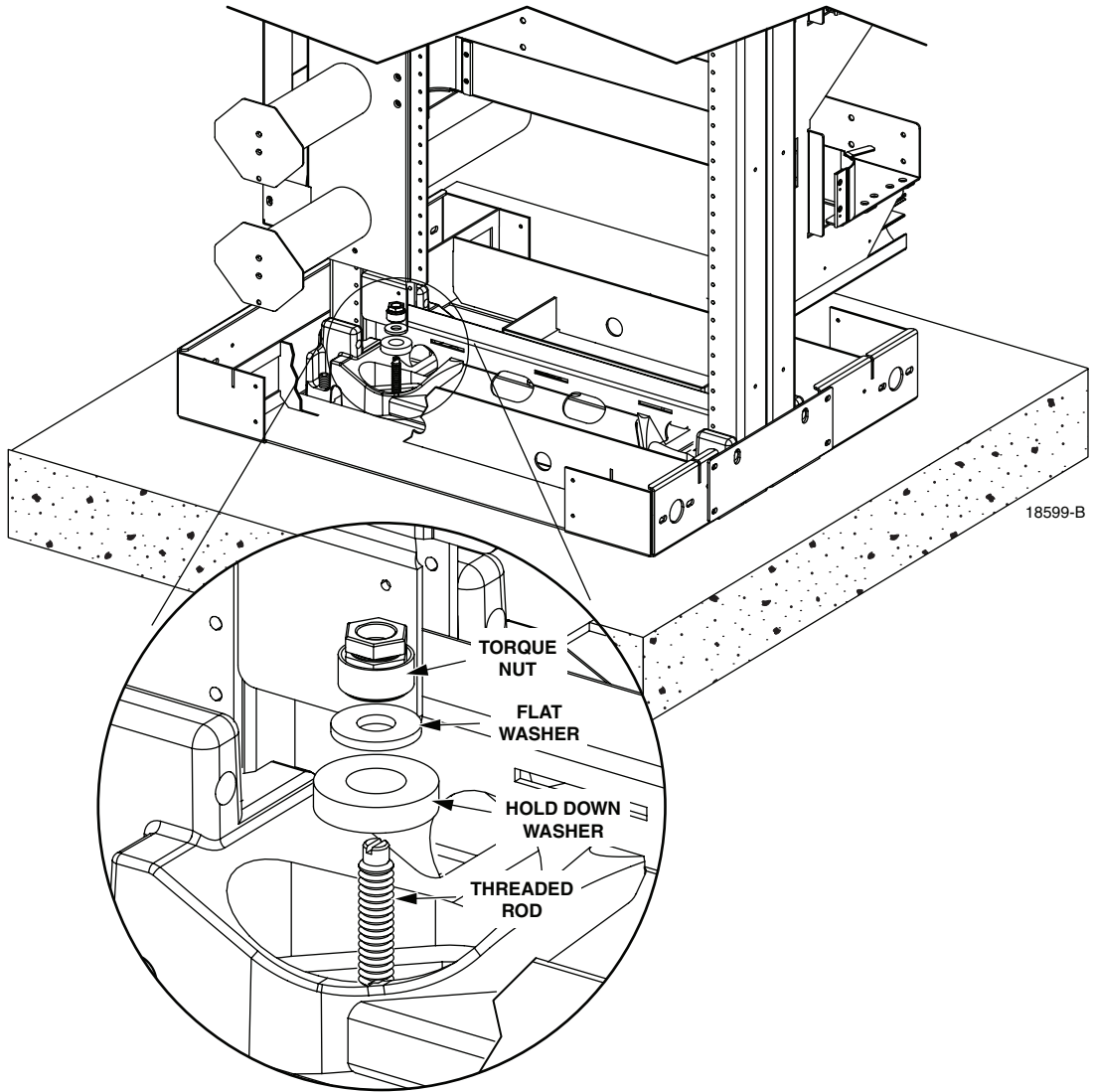
- 7 Remove front and rear troughs to access mounting slots.



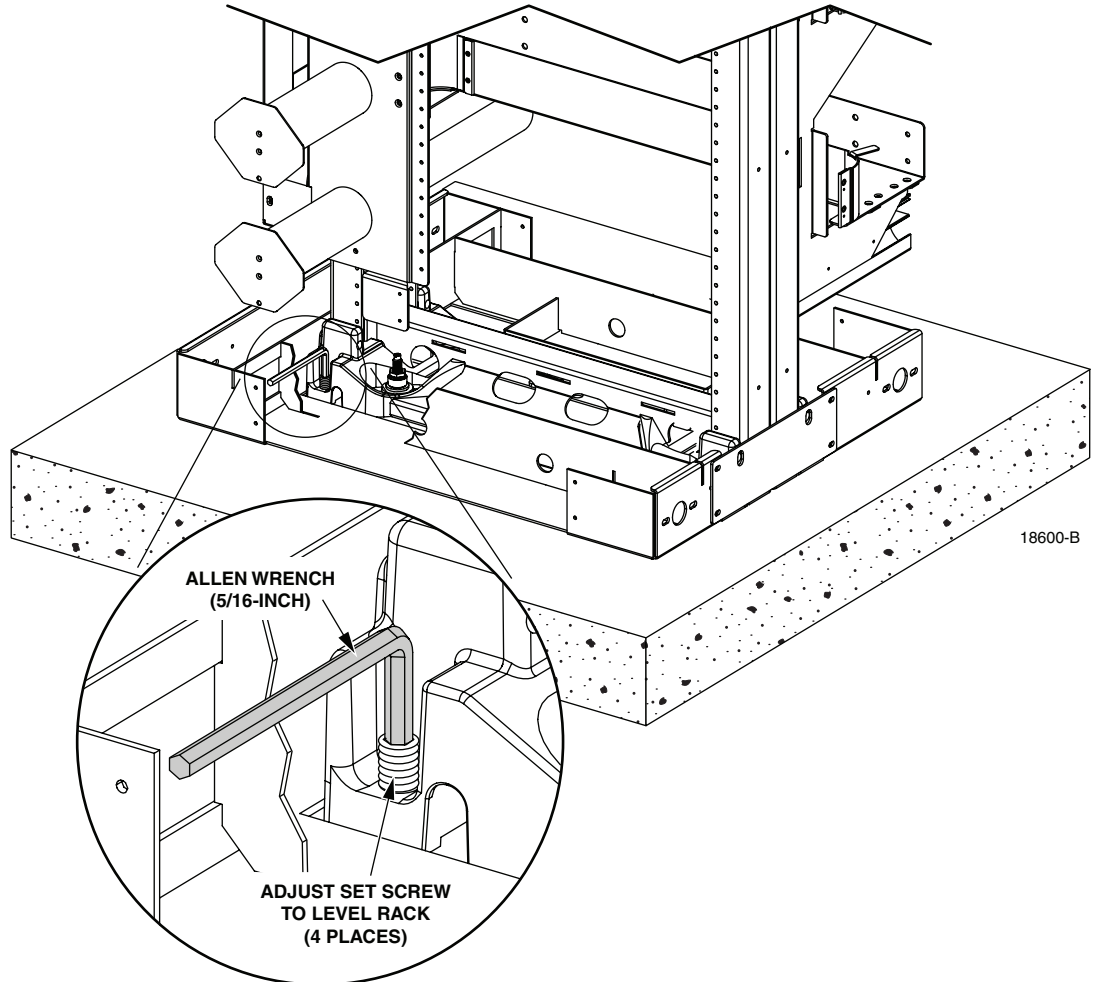
8 Position template/isolation pad and rack on concrete.



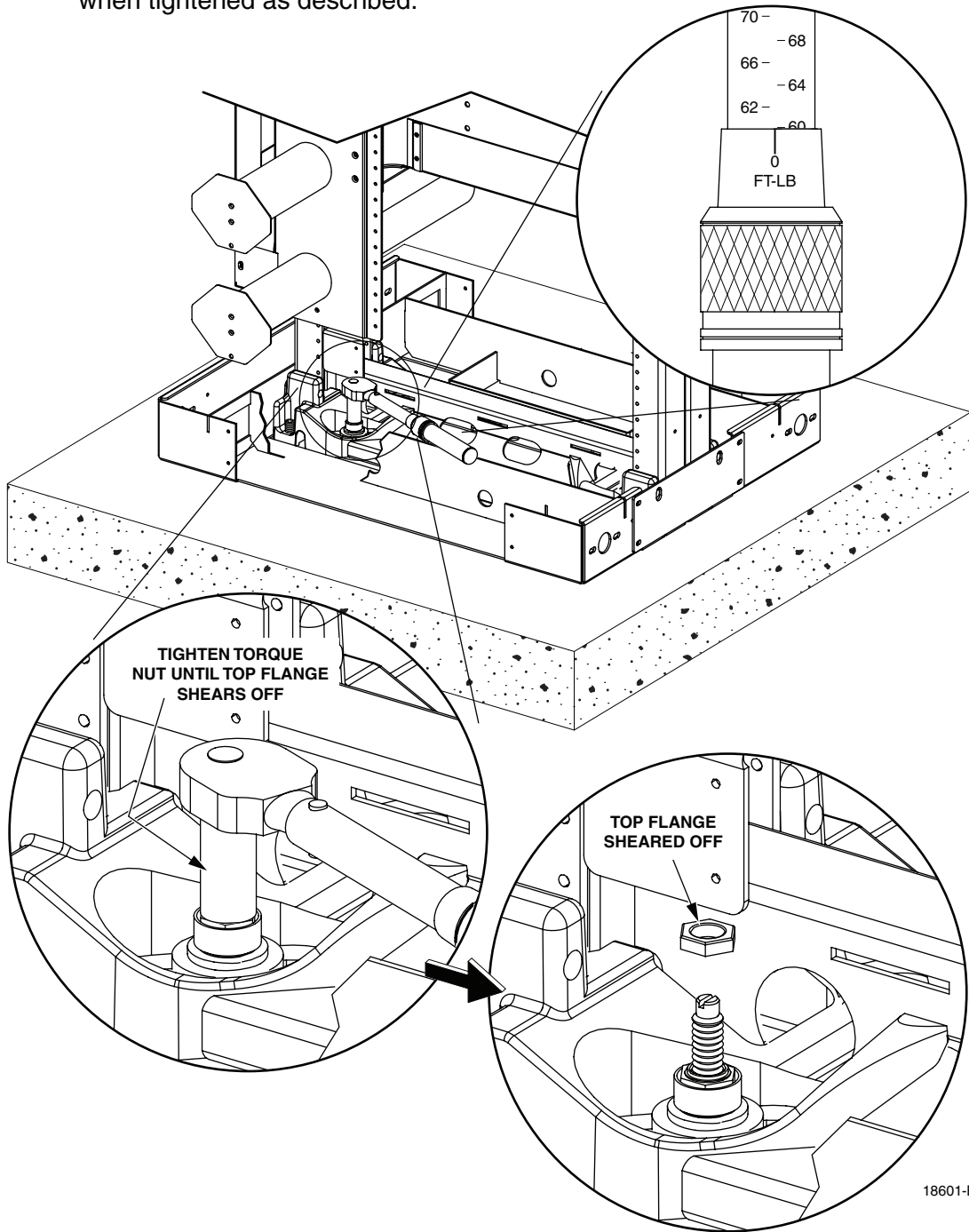
- 9 Assemble hardware onto threaded rods (four places) but do not tighten fully.



- 10** Using 5/16 Allen wrench, adjust set screws (4) to level rack.

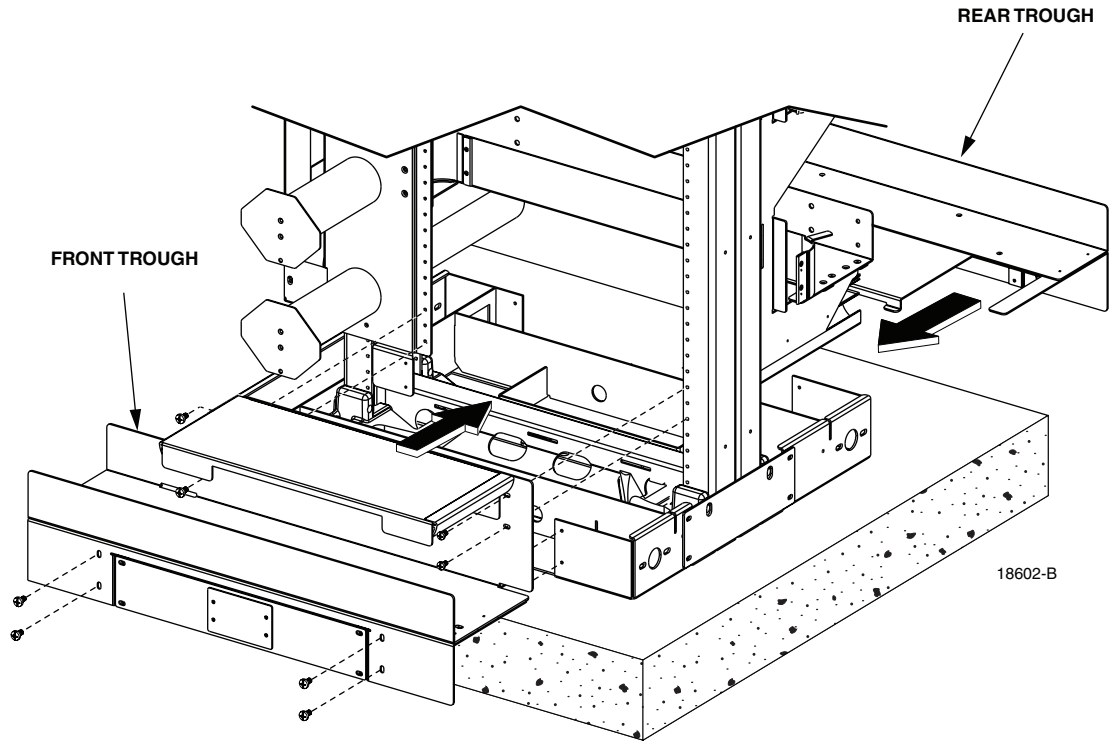


- 11** Tighten torque nut until top flange shears off (4 places).
Note: The torque nut will be correctly set at 60 ft.-lbs. (81 Nm) when tightened as described.



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12 Re-install front and rear troughs.



3 GROUNDING THE RACK

To ground the rack, follow the instructions in drawing 1.

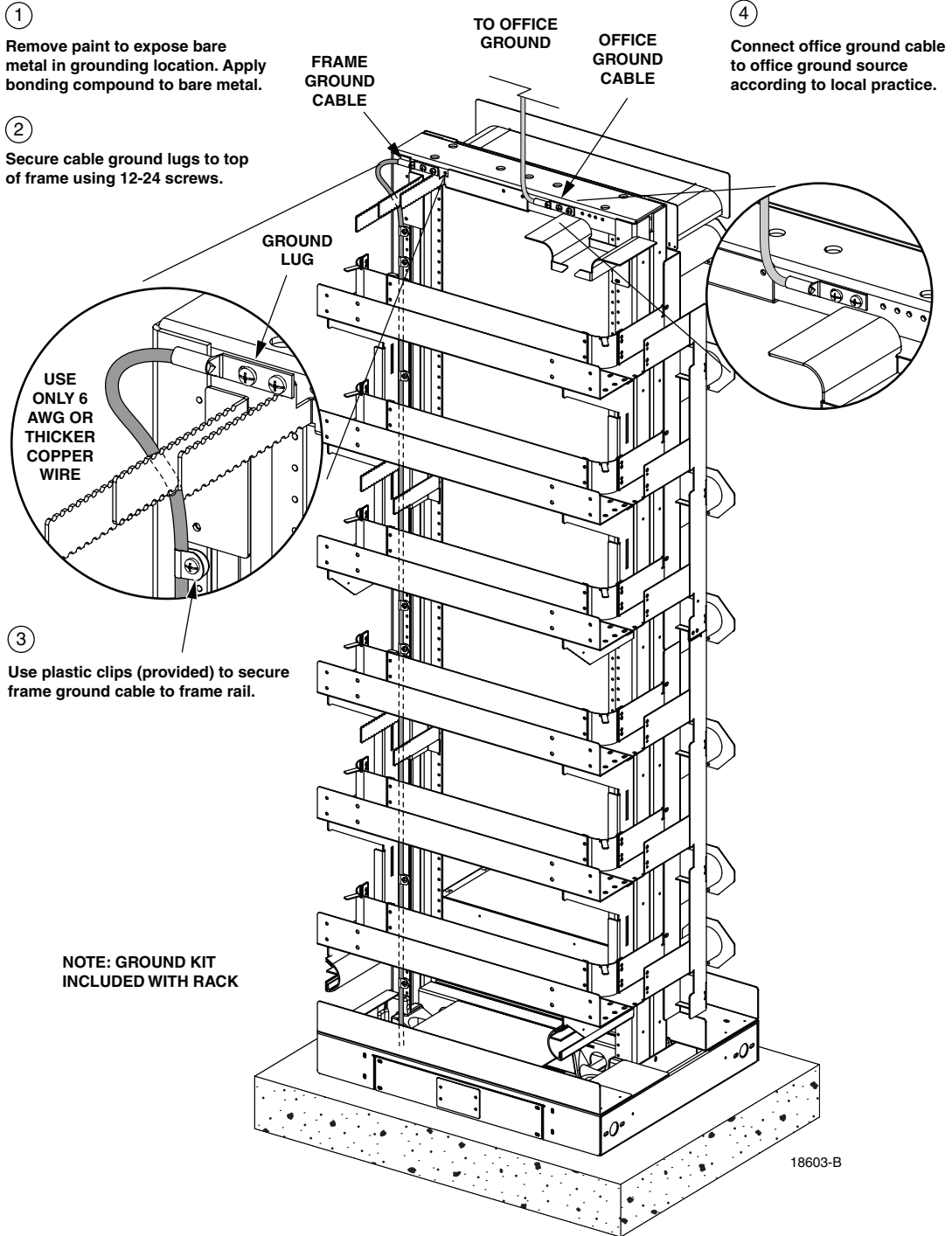
1 Attach ground cables to rack as specified in numbered steps.

1 Remove paint to expose bare metal in grounding location. Apply bonding compound to bare metal.

2 Secure cable ground lugs to top of frame using 12-24 screws.

3 Use plastic clips (provided) to secure frame ground cable to frame rail.

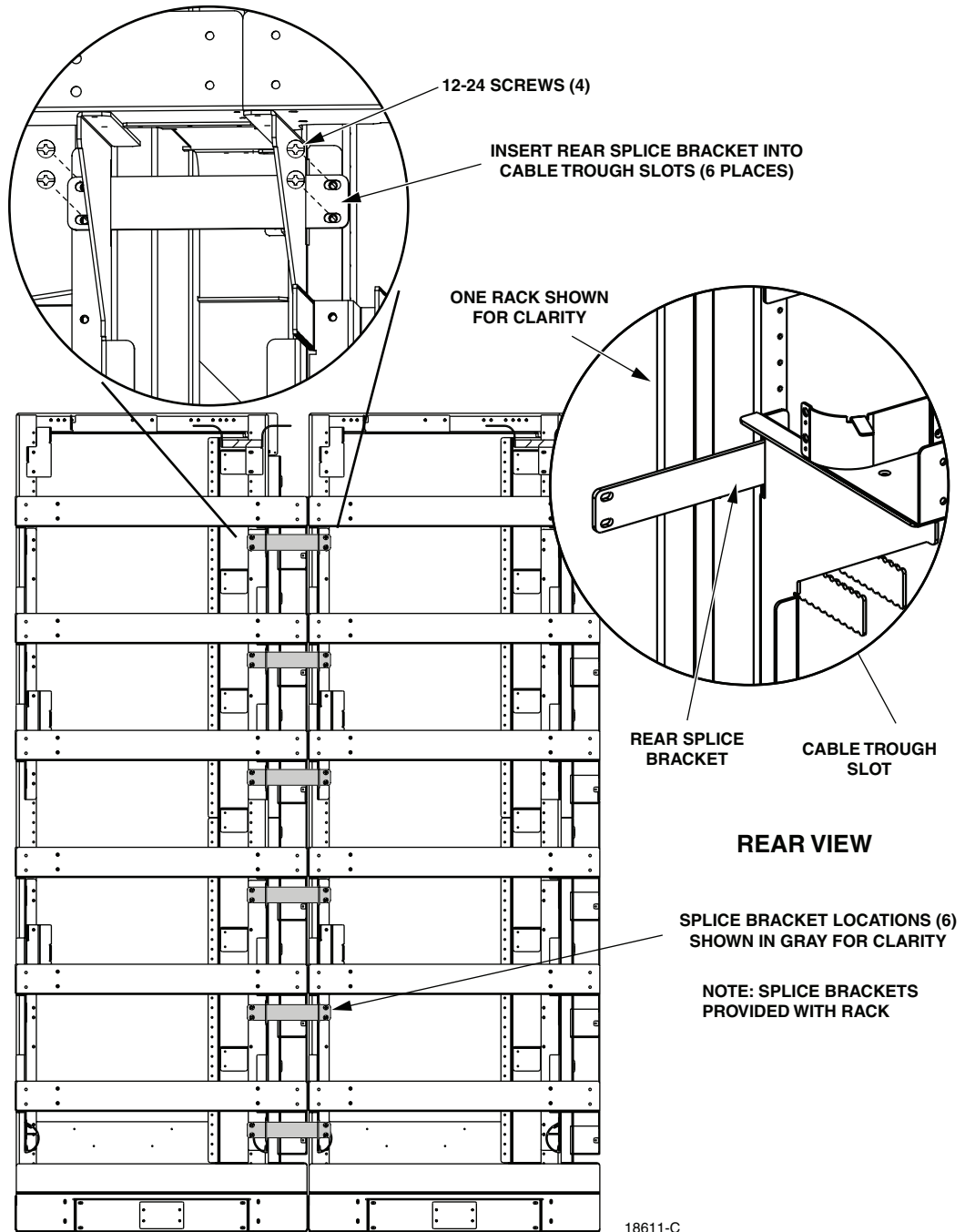
4 Connect office ground cable to office ground source according to local practice.



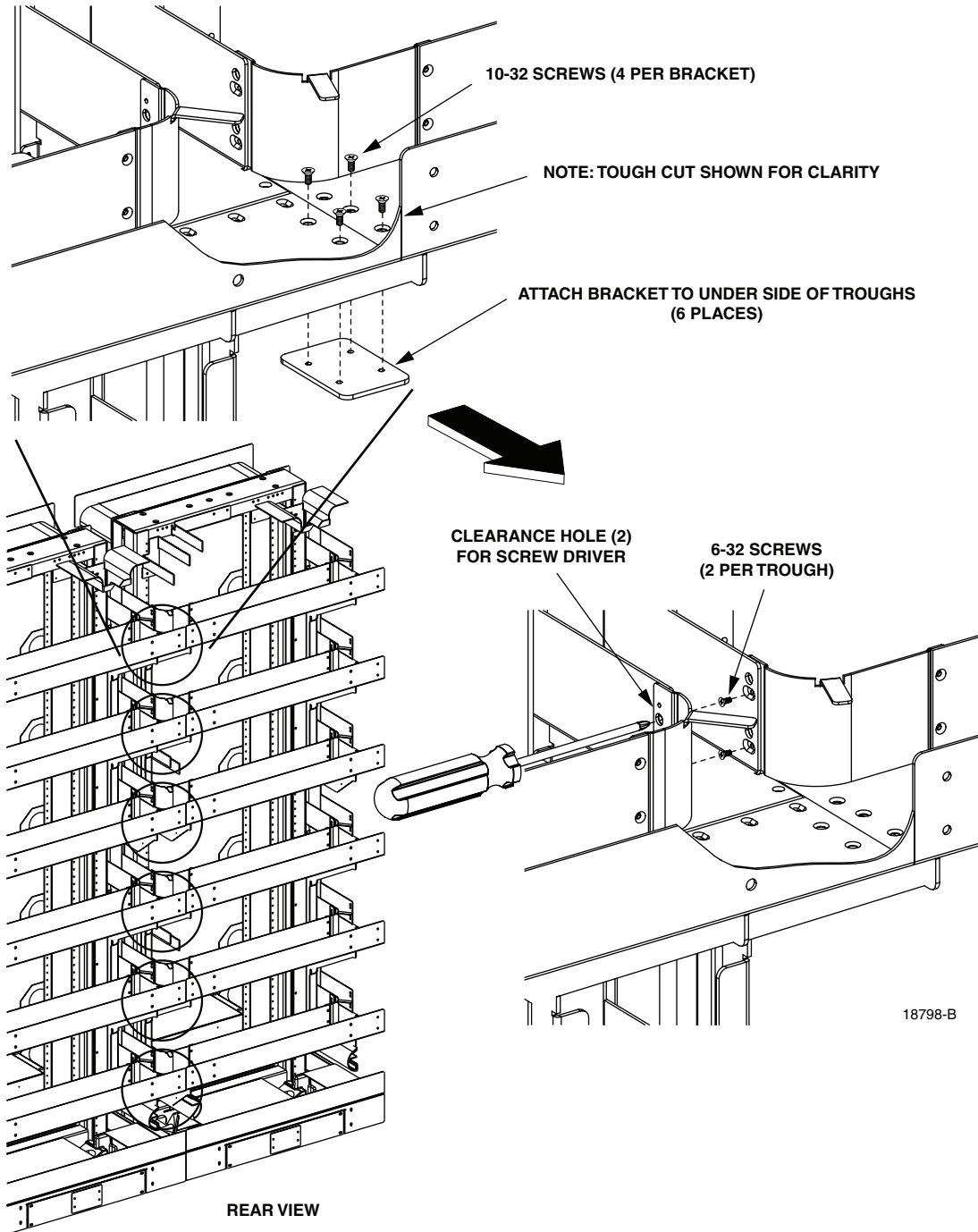
4 SECURING TWO RACKS TOGETHER

To secure two racks together, follow the instructions in drawings 1 and 2.

- 1 Use rear splice brackets (6) to secure adjacent racks together.



- 2** Use 10-32 screws (4 per trough) to attach bracket (6 places).
Use 6-32 screws (2 per trough) to attach racks (6 places).



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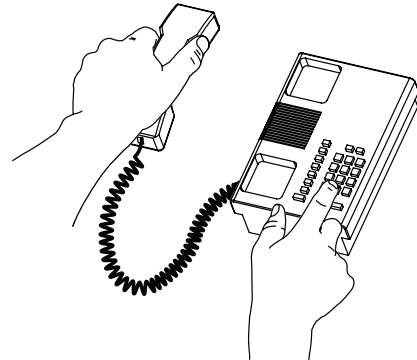
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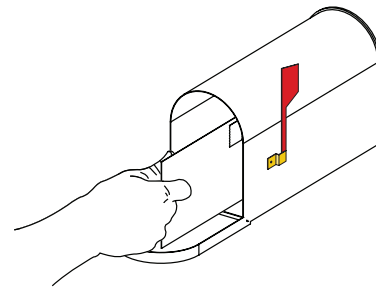


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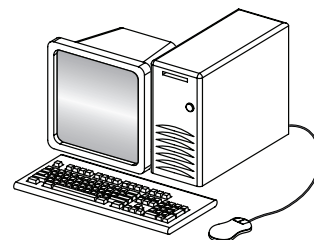
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