

# ACH580-01 VxR, UL Type 1 Frame R1/R2

## Base drive replacement instructions

### Purpose or Scope

The following are the instructions for replacing an ACH580-01 UL Type 1 and 12 (Frames R1 & R2) drive in VxR enclosures.

### Equipment required\*:

- Replacement drive (see note below)
- T20 bit
- T30 bit
- PZ2 bit
- PZ3 bit
- Torque wrench
- Zip ties

### Basic overview of steps

- Back-up drive parameters (if you can)
- Remove power and verify after 5 minutes
- Remove covers
- Disconnect all wiring
- Remove drive
- Prepare replacement drive
- Remove conduit assembly
- Install in reverse order
- Check connections
- Power drive
- Reprogram and test


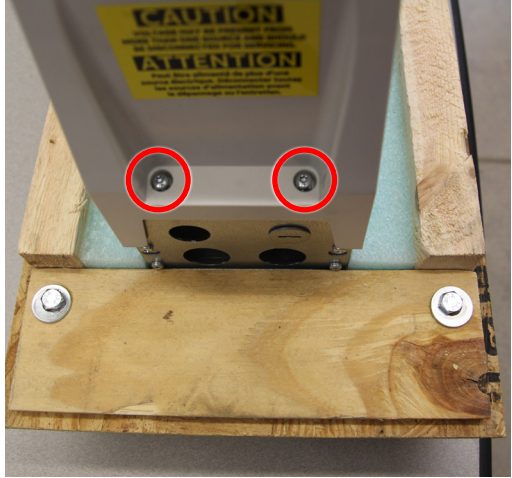

### Notes and cautions

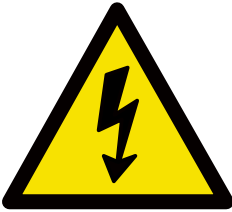
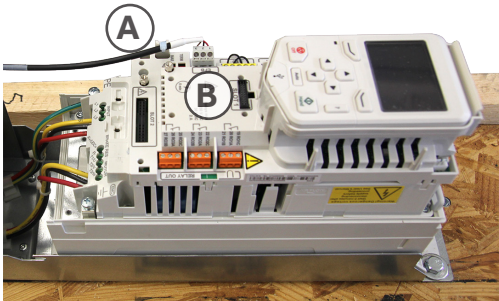
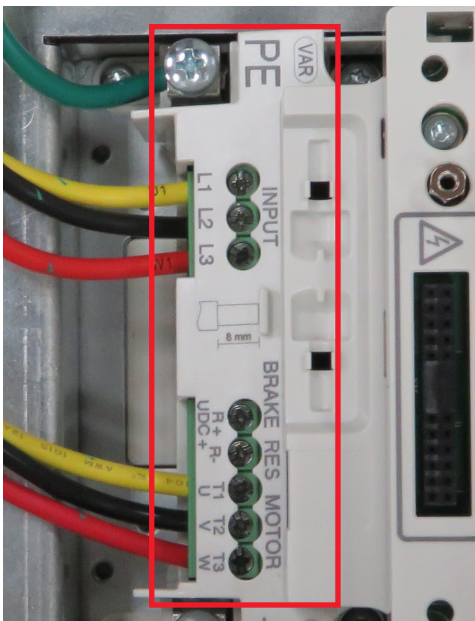




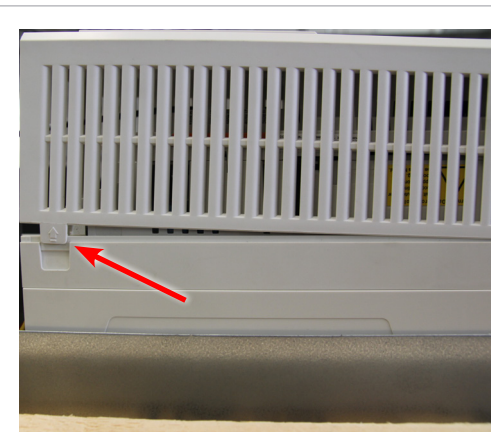
**CAUTION!** Review complete safety and electrical considerations prior to replacing the drive. See ACH580 IOM (3AXD50000049127).

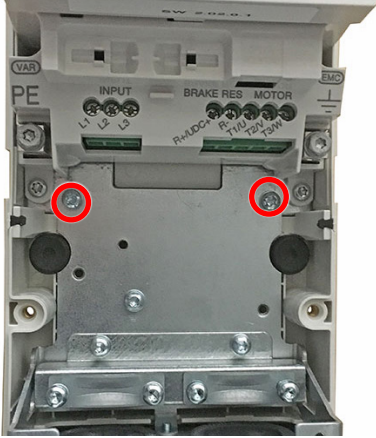
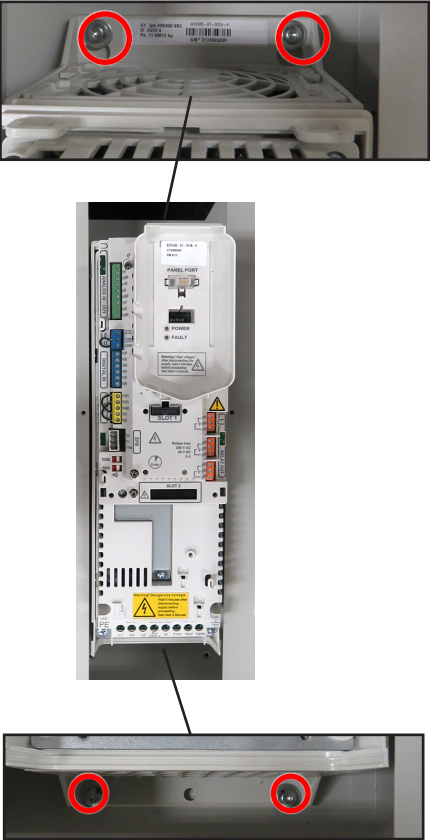
**CAUTION!** Two people are recommended for this job. The drive is heavy and can fall, causing property damage and injury.


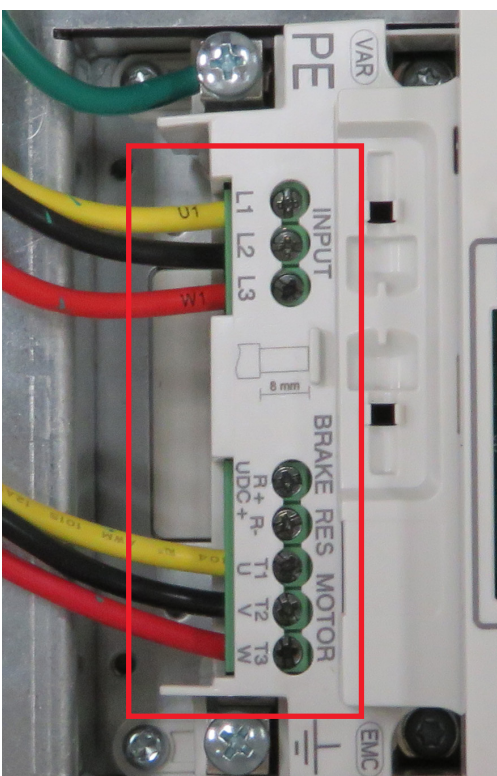
\* Not all of these tools are needed for each frame size.

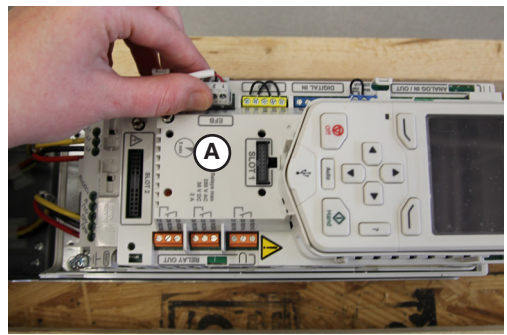


Step	Instruction	Diagram
<p><b>1</b></p>	<p><b>NOTE:</b> If needed, back-up parameters prior to disconnecting power.</p> <p>Turn off source power and wait 5 minutes for the DC bus capacitors to discharge.</p> <p>Turn handle to the off position.</p>	
<p><b>2</b></p>	<p>Using a T20 bit, loosen and remove two (2) M4x16 screws securing the enclosure cover.</p> <p>Save hardware.</p>	
<p><b>3</b></p>	<p>Remove drive cover by pushing up on the sides as indicated by arrow.</p> <p>Recycle drive cover.</p>	

Step	Instruction	Diagram
4	<p>Perform voltage check to confirm no voltage is present.</p> <p><b>NOTE:</b> If you have control wiring connected to the Control Unit, disconnect at this time.</p>	
5	<p>Cut zip tie <b>(A)</b> and disconnect the RS485 cable <b>(B)</b> from the drive by pulling out the terminal block.</p> <p><b>NOTE:</b> Remove any additional drive I/O wiring.</p>	
6	<p>Using a PZ2 bit, loosen and remove wires from the input terminals of the drive.</p> <p>Using a PZ2 bit, loosen and remove wires from the motor terminals of the drive.</p> <p>Using a PZ3 bit, loosen and remove ground wire from the drive.</p>	

Step	Instruction	Diagram
7	<p>Using a T30 bit, loosen the two (2) bottom M6 screws securing the drive, four (4) turns of the screw.</p> <p><b>NOTE:</b> Do not remove the screw completely. Only loosen enough to be able to lift the drive off the screws.</p>	
8	<p>Using a T30 bit, loosen and remove the top two (2) M6 screws securing the drive.</p> <p>Carefully lift the drive out of channel.</p>	
9	<p>Unpack the replacement drive.</p> <p>Remove drive cover by pushing up on the sides as indicated by arrow.</p>	

Step	Instruction	Diagram
10	<p>Using a T20 bit, loosen and remove two (2) M4x8 screws. Remove conduit assembly.</p> <p>Recycle the conduit assembly and hardware.</p>	
11	<p><b>CAUTION!</b> Use two people to install the drive.</p> <p>Slide the drive mounting holes over the bottom two (2) screws and slide drive in place.</p> <p>Using a T30 bit, replace the two (2) M6 screws that were removed earlier.</p> <p>Torque all four (4) mounting screws to 27 in-lb (3 Nm).</p>	

Step	Instruction	Diagram
<b>12</b>	<p>Secure the ground wire to the drive.</p> <p>Using a PZ3 bit, torque to 14 in-lb (1.5 Nm).</p>	
<b>13</b>	<p>Connect the input wires (from fuse block) to the Input Terminals of the drive.</p> <p>Yellow U1 to L1 Black V1 to L2 Red W1 to L3</p>	
	<p><b>R1 Frame:</b> Using PZ2 bit, torque terminals to 5 in-lb (0.5 Nm). <b>R2 Frame:</b> Using a PZ2 bit, torque terminals to 14 in-lb (1.5 Nm).</p>	
	<p>Connect the motor wires (from 1M contactor) to Motor Terminals of the drive.</p>	
	<p>Yellow U2 to T1/U Black V2 to T2/V Red W2 to T3/W</p>	
	<p><b>R1 Frame:</b> Using PZ2 bit, torque terminals to 5 in-lb (0.5 Nm). <b>R2 Frame:</b> Using a PZ2 bit, torque terminals to 14 in-lb (1.5 Nm).</p>	

Step	Instruction	Diagram
14	<p>Reconnect the RS485 terminal block (A) to EFB on control unit and secure with zip tie.</p> <p>Reconnect any control wiring removed in steps 4 and 5.</p> <p><b>WARNING!</b> This configuration does not support Safe Torque Off (STO) functionality in bypass mode.</p>	
15	<p>Place the top of the drive cover on first, then press down on the bottom.</p>	
16	<p>Place enclosure cover in place and secure using two (2) M4x16 screws that were removed earlier.</p> <p>Using a T20 bit, torque to 14 in-lb (1.5 Nm).</p>	
17	<p>Power and reprogram the drive.</p>	
18	<p>Test and verify drive operation and motor direction.</p>	
19	<p>Back-up and save parameters to the keypad prior to putting the drive back into service.</p>	