ACH580-01 PxR, UL Type 1/12 Frame R3/R4

Base drive replacement instructions

Purpose or Scope
The following are the instructions for replacing an ACH580-01 UL Type 1 (Frames R3 & R4) drive in PxR enclosures.

Equipment required*:
– Replacement drive (see note below)
– T20 bit
– T25 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

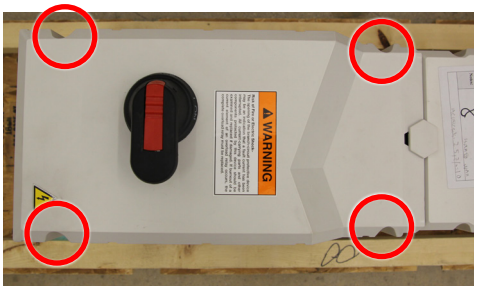
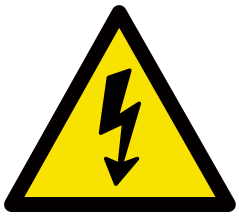
Notes and cautions

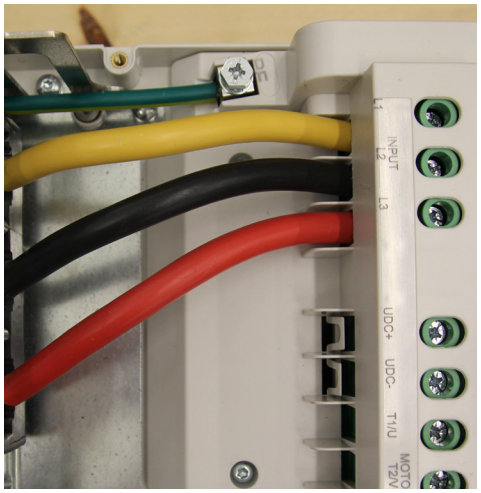
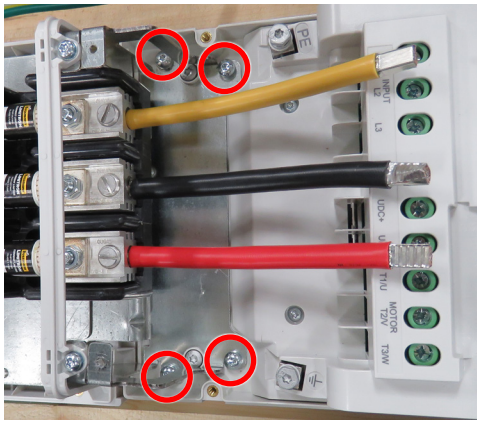
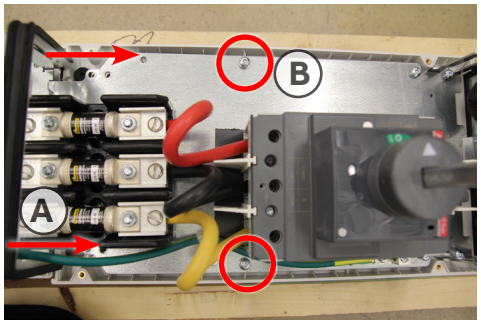
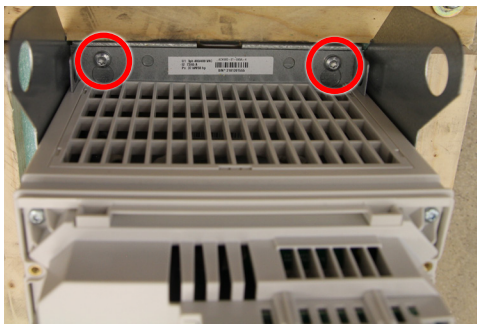
CAUTION! Review complete safety and electrical considerations prior to replacing the drive. See ACH580 IOM (3AXD50000049127).

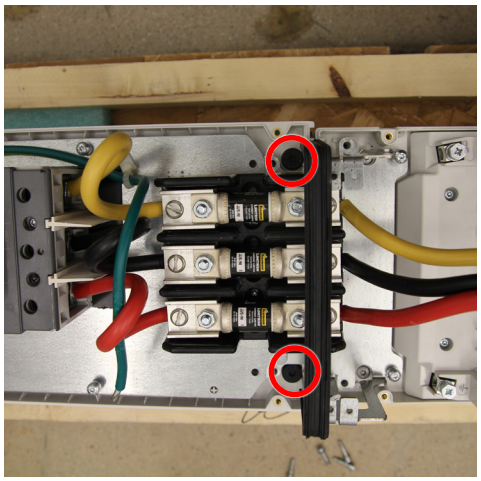
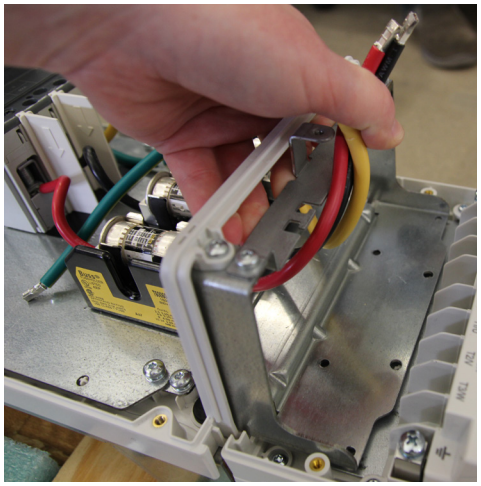
CAUTION! Two people are recommended for this job. The drive is heavy and can fall, causing property damage and injury.

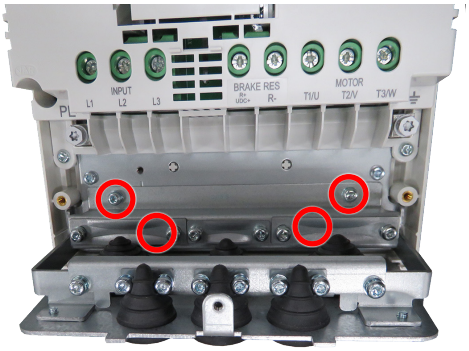
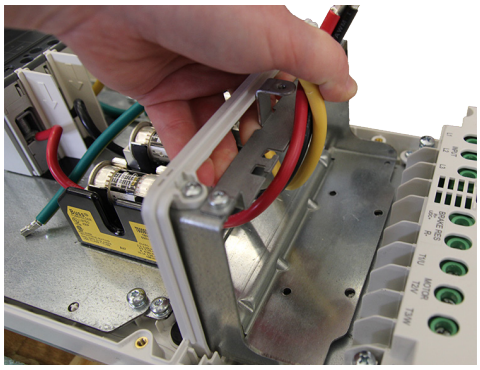
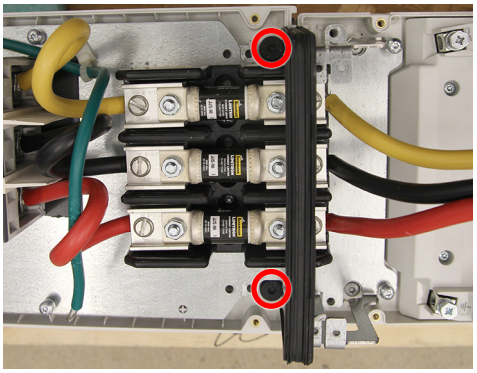
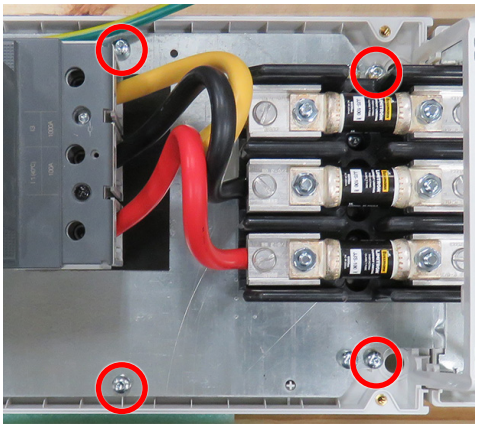
NOTE: UL Type 12 drives require a UL Type 12 replacement drive, UL Type 1 drives are not allowed as substitutes for UL Type 12.

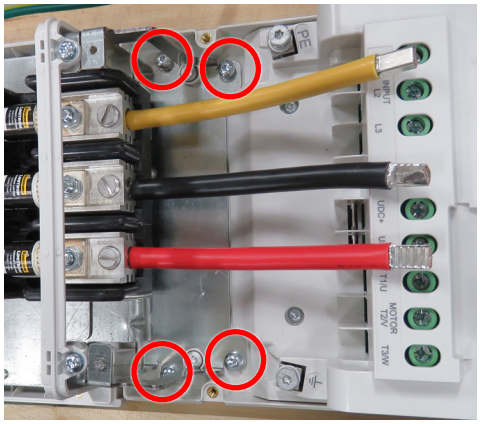
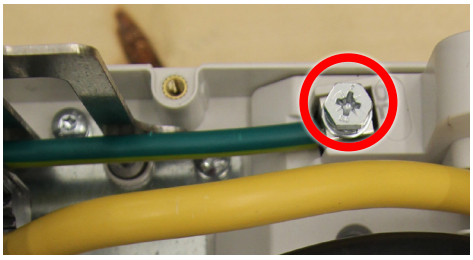
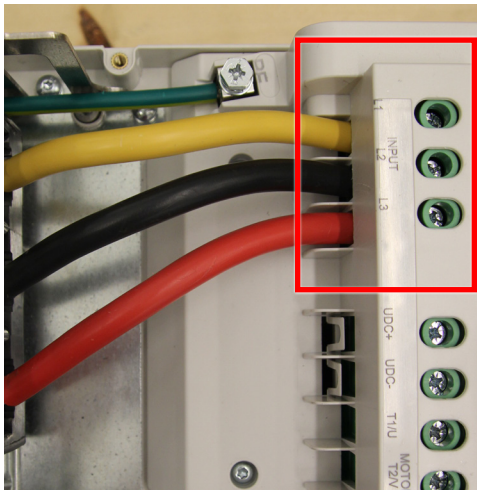
* Not all of these tools are needed for each frame size.

Step	Instruction	Diagram
1	**NOTE:** If needed, back-up parameters prior to disconnecting power. Turn off source power and wait 5 minutes for the DC bus capacitors to discharge. Turn handle to the off position.	
2	Using a T20 bit, loosen four (4) M4x16 screws securing the enclosure cover.	
3	**UL Type 1:** Using a T20 bit, loosen one (1) M4x16 screws securing the drive cover and remove cover. **UL Type 12 R3 Frame:** Using a T20 bit, loosen four (4) M4x16 screws securing the drive cover and remove cover. **UL Type 12 R4 Frame:** Using a T20 bit, loosen six (6) M4x16 screws securing the drive cover and remove cover. Recycle drive cover.	
4	Perform voltage check to confirm no voltage is present. **NOTE:** If you have control wiring connected to the control unit, disconnect at this time.	

Step	Instruction	Diagram
5	**R3 Frame:** Using a PZ2 bit, loosen and remove wires from the input terminals of the drive. **R4 Frame:** Using a T20 bit, loosen and remove wires from the input terminals of the drive. Using a PZ3 bit, loosen and remove ground wire from the drive.	
6	**R3 Frame:** Using a T20 bit, loosen and remove four (4) K40x12 screws. Remove conduit assembly. **R4 Frame:** Using a T25 bit, loosen and remove four (4) M5x16 screws. Remove conduit assembly.	
7	Using a T25 bit, loosen and remove two (2) M5x25 screws. (A) Using a T25 bit, loosen two (2) M5x25 screws. (B)	
8	Using a T30 bit, loosen the two (2) bottom M6 screws securing the drive, four (4) turns of the screw. **NOTE:** Do not remove the screw completely. Only loosen enough to be able to lift the drive off the screws.	

Step	Instruction	Diagram
9	Remove two (2) grommets from the tray to access mounting screws. Using a T30 bit, loosen and remove the top two (2) M6 screws securing the drive. Carefully lift the drive out of channel.	
10	Lift enclosure and slide the drive out of the channel.	
11	Unpack the replacement drive. **UL Type 12:** UL Type 12 drives require a UL Type 12 replacement drive, UL Type 1 are not allowed as substitutes for UL Type 12. Using a T20 bit, loosen screws securing the cover. **UL Type 12:** Recycle the hood that was included in the box.	

Step	Instruction	Diagram
12	**R3 Frame:** Using a T20 bit, loosen and remove two (2) M4x16 screws. Remove conduit assembly. **R4 Frame:** Using a T25 bit, loosen and remove four (4) M5x25 screws. Remove conduit assembly. Recycle the conduit assembly and hardware.	
13	⚠ **CAUTION!** Use two people to install the drive. Lift the enclosure and slide the drive mounting holes over the bottom two (2) screws and slide drive in place.	
14	Using a T30 bit, replace the two (2) M6 screws that were removed earlier. Torque all four (4) mounting screws to 27 in-lb (3 Nm). **UL Type 12:** Reinstall grommets that were removed earlier.	
15	Secure the mounting plate using the two (2) M5x25 screws that were removed earlier. Using a T25 bit, torque to 18 in-lb (2 Nm).	

Step	Instruction	Diagram
16	Secure the support plate using the four (4) M4x16 screws that were removed earlier. Using a T25 bit, torque to 18 in-lb (2 Nm).	
17	Secure the ground wire to the drive. **R3 Frame:** Using a PZ3 bit, torque to 14 in-lb (1.5 Nm). **R4 Frame:** Using a PZ3 bit, torque to 27 in-lb (3 Nm).	
18	Connect the input wires (from fuse block) to the Input Terminals of the drive. Yellow U1 to L1 Black V1 to L2 Red W1 to L3 **F3 Frame:** Using a PZ2 bit, torque to 31 in-lb (3.5 Nm). **R4 Frame:** Using a T20 bit, torque to 35 in-lb (4 Nm).	
19	Place the top of the drive cover on first, then press down on the bottom. **R3 & R4 Frame:** Using a T20 bit, torque to 14 in-lb (1.5 Nm).	

Step	Instruction	Diagram
20	Place enclosure cover in place and secure using two (2) M4x16 screws that were removed earlier. Using a T20 bit, torque to 14 in-lb (1.5 Nm). **UL Type 12:** Reinstall the hood to drive.	
21	Power and reprogram the drive.	
22	Test and verify drive operation and motor direction.	
23	Back-up and save parameters to the keypad prior to putting the drive back into service.	