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|---|--------------------|-------------------------------------|-----------------|---------------------------------|
| <br>ABB Oy, Drives Service |                    | <b>On-Site Service Instructions</b> |                 | Document nbr<br>3AXD10000303478 |
|   |                    | <b>ACx580-01 R6-R9</b>              |                 | Related to material             |
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### 3. Preventive maintenance actions

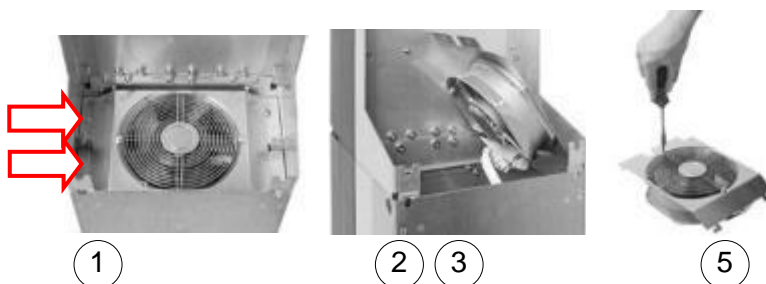
#### 3.1 Cooling fan replacement

Switch off the main power supply for the drive before any other actions.

##### 3.1.1 Frame R6-R8 Main cooling fan replacement

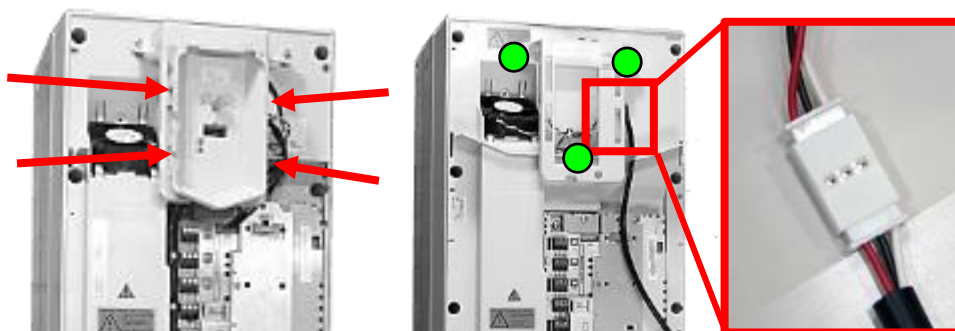
The main cooling fan is located at the bottom of the drive. Replace the fan as follows:


1. Undo the fastening screws or clips of the fan assembly plate
2. Lift the fan assembly plate up from the side edge.
3. Unplug the power supply wires.
4. Lift the fan assembly plate off.
5. Remove the fan from the assembly plate and unfasten the plug holder.
6. Clean the cooling air duct and heat sink with compressed air. See separate instructions in section 3.2.1
7. Install the new fan in reverse order to the above and ensure the fan operation when the drive is powered up.



##### 3.1.2 Frame R6-R8 Internal cooling fan replacement

1. Lift the control panel off, remove front cover **fixing screws** (2pcs) and lift the cover off.
2. Unplug the fan power supply wires. Release the control panel support locking clips to gain access to the wire holder. If necessary, also remove support holder **fixing screws** (3pcs).
3. Release the fan from locking clips and lift it off
4. Install the new fan in reverse order to the above, see that the fan power supply wire is correctly attached and the fan outlet direction is outwards
5. Re-install control panel support, front cover and control panel.  
Notice that the control panel support is attached to different position based on frame size (see page 10)
6. Ensure the fan operation when the drive is powered up.

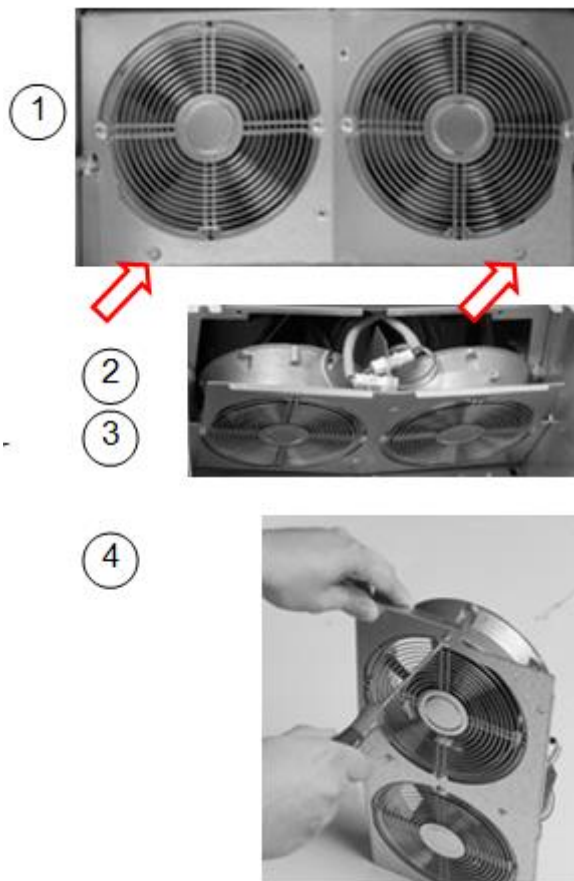



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### 3.1.3 Frame R9 Cooling fan replacement

The cooling fans of frame R9 are located at the bottom of the drive. Replace the fans as follows:

1. Undo the two fastening screws of the fan assembly plate.
2. Turn the assembly plate downwards.
3. Disconnect the fan power supply wires.
4. Undo the two fastening screws of the fan.
5. Clean the cooling air duct and heat sink with compressed air. See separate instructions in section 3.2.1
6. Install the new fans in reverse order to the above. After connecting the fan power supply wires, insert the fan assembly plate to the drive upper end first.
7. Ensure the fan operation when the drive is powered up.



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## 3.2 Heat sink temperature check and cleaning

Heat sink temperature check and cleaning depends on the dustiness of the environment. The heat sink fins pick up dust from the cooling air. The drive runs into over temperature warnings and faults if the heat sink is not clean. Too high operating temperature causes faster aging of the drive components. In a normal environment the heat sink should be checked annually and cleaned if needed, in a dusty environment more often. Heat sink must also be cleaned when replacing a cooling fan.

NOTE! Compressed air or normal vacuum cleaner must NOT be used to clean any other parts of the drive than heat sink only. Airflow causes a high risk of ESD damage to components. Fan must also be removed before cleaning with compressed air. Otherwise strong air flow will affect fan bearings.

### 3.2.1 Heat sink cleaning

- a. Turn off the main input power of the drive
- b. Remove the cooling fan
- c. Blow clean dry compressed air from the bottom
- d. Use a vacuum cleaner on top to trap the dust
- e. Install the cooling fan