

PLC and Wrench/Video Cabinets Air Filter Issue

Issue

The PLC cabinets in the Power House and Driller's Cabin and the Wrench/Video cabinet in the Driller's Cabin are reporting high temperature levels due to poor air circulation.

These cabinets have two exhaust fans mounted in the top. The fans have air filters installed which are preventing optimal air circulation and should be removed.



Note: Do not remove filters from the front of the cabinets.

Recommendation

Remove the filters from the two exhaust filter housings in the top of the following cabinets:

- Power House:
 - PLC Cabinet. See Figure 1 on page 2.
- Driller's Cabin:
 - PLC Cabinet (also called DC RIO Cabinet). See Figure 2 on page 3.
 - Wrench/Video Cabinet (also called Wrench PLC cabinet). See Figure 3 on page 4.

It is recommended to remove the filters during installation of the cabinets once all parts have been delivered to the site. Future builds will have the filters removed before shipping units to customers.

"Procedure A" on page 6 lists the steps to remove the fan filters from the outside of the cabinets. **This is the recommended procedure, unless access to the top of the cabinet is restricted.** In that case, refer to "Procedure B" on page 7 to remove the filters from the inside of the cabinets.



Warning! Never insert your fingers into the fan grill. Only remove the filter mat while the fan motor is stationary.



Figure 1: Power House PLC Cabinet

Model: All	Feb. 10, 2016
Serial #: All	



Figure 2: Driller's Cabin RIO Cabinet



Figure 3: Wrench PLC Cabinet

Circuit Breakers Identification

The following tables indicate which breakers are used to power the fans inside the cabinets.



Warning!

The circuit breakers powering the fans must be turned off before continuing with “Procedure A” on page 6 or “Procedure B” on page 7.

Table 1: Circuit Breakers - Nabors Rigs

	Fan 1 Breaker	Amps	Fan 2 Breaker	Amps
Driller’s Cabin RIO Cabinet	CB10	2	CB11	2
Power House PLC Cabinet	CB10	2	CB11	2
Wrench PLC Cabinet	CB3	2	CB4	2

Table 2: Circuit Breakers - Third Party Rigs

	Fan 1 and Fan 2 Breaker	Amps
Driller’s Cabin RIO Cabinet	CB19	4
Power House PLC Cabinet	CB19	4
Wrench Cabinet	Does not apply, no action required.	

Procedure A

Removing top filters from the outside of the cabinet



Warning! To avoid injuries, turn off fan breakers and ensure fan rotor is stationary before attempting to remove the filter.

To remove the top filters from the outside of the cabinet proceed as follows:

1. Turn off the fan breakers (Fan 1 and Fan 2) according to information listed on Table 1 and Table 2 on page 5.
2. Open the louvered grill pulling it up with your finger from the catch under the Rittal logo. See Figure 4. *Once released, the grill will open approximately 70° or 90°.*

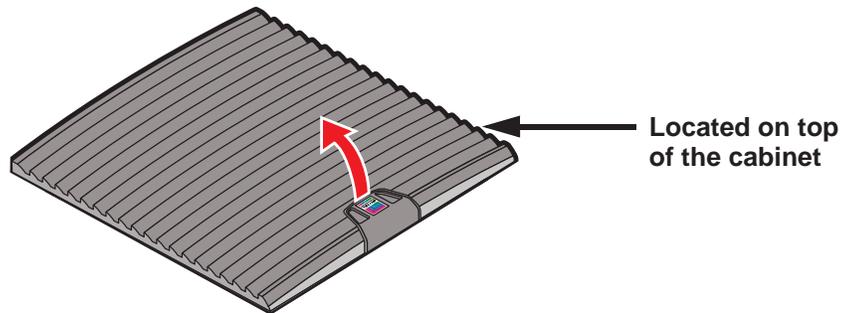


Figure 4: Louvered grill

3. Remove and discard the filter mat. See Figure 5.

TOP VIEW

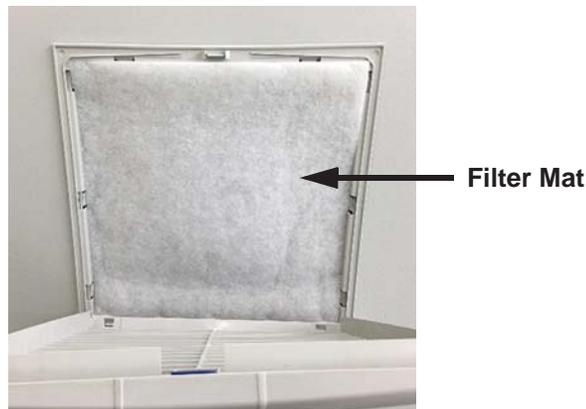


Figure 5: Louvered grill opened

4. Push the louvered grill back into position until it snaps audibly.
5. Turn on the fan breakers (Fan 1 and Fan 2).

Procedure B

Removing top filters from the inside of the cabinet



Warning! To avoid injuries, ensure power has been removed from the fans. Only qualified personnel should remove filters from the inside of the cabinet.

To remove the top filters from the inside of the cabinet proceed as follows:

1. Turn off the fan breakers (Fan 1 and Fan 2) according to information listed on Table 1 and Table 2 on page 5. Confirm by checking the wire tag on black cable powering the fan (see Figure 7 on page 8).



Note: The black wire that powers the fan should have a wire number tag indicating the breaker number. See Table 1 and Table 2 on page 5.

2. Locate the fan and turn it counterclockwise until it releases from the fan slots. Be careful not to pull down and twist counterclockwise. See Figure 6.



Figure 6: Fan slots

3. Once the fan is removed, pull the filter out from the louvered grill. See Figure 7. Don't let the fan to hang from the cables connected to it.



Figure 7: Fan removed with filter mat exposed.

- Place the fan back into position and turn it clockwise to lock it back into place. See Figure 8.



Figure 8: Fan back into position after filter removal.

- Turn on the fan breakers (Fan 1 and Fan 2).