FN 5030 (Output Filter)
Failure Analysis
Failure Analysis

1. Intended use

| Warning | The mounting of FN5030 shall be made on a metal plate which has a reliable protective earth (PE) connection. |
| Warning | Always connect FN5030 to protective earth (PE) first, and then continue with the wiring of line terminals. When decommissioning the FN5030 remove the PE connection at the end. |
| Warning | FN5030 are designed to be floor-mounted or wall-mounted. The reactors shall in principle be mounted vertically in order to respect a proper heat dissipation flow. To ensure an optimum ventilation and thermal radiation, it is recommended to leave enough space towards surrounding equipment, walls or components in all directions. A minimum free space below and above the filter of >150 mm and >50 mm aside is required. |

Note
More technical information of FN 5030 can be found from the datasheets of the products available at www.schaffner.com.

2. Personnel qualification

Installation of the FN 5030, inspections for proper operation, and certain troubleshooting measures may only be performed by qualified personnel. All other measures may be performed by people who have read these instructions.

Attention!
Before starting to work on the Output Filter, ensure that it is disconnected from the grid

1. Tool list (standard kit)
   - Camera
   - Multimeter (for example Fluke)
   - Screwdriver set
2. General condition

Take a picture of the label to get the filter data.

☐ Label

Take a picture of the front including near surroundings, check the basic condition outside.

☐ Front
☐ Near surrounding
☐ Basic condition outside

3. Application & Installation

Specify the type & values of the load & external fuses or forward a schematic diagram.

Load:__________________________

Load Values:________________________
Check and indicate how the Output Filter is connected.

- U,V,W connected to sinusoidal output?
  Yes [ ] No [ ]

- U',V',W' connected to Motor?
  Yes [ ] No [ ]

Specify the environmental conditions: Ambient temperature in °C & humidity. Also indicate device temperature during operation.

Ambient temperature: _____°C
Humidity:_______%RH

Any other Schaffner filters are installed in same application:

Type & Qty:_______________________
No:           

Any other problems detected on these other filters, same/other problems happen in the past:
__________________________________
4. Measurements

Perform the DC resistance measurement between U - U', V - V' and W - W'.
Enter the measurement result:

1. _______ Ω  
2. _______ Ω  
3. _______ Ω  

Perform the continuity test with multimeter between PE and each phase. 
In the case of a passage, contact Schaffner Service.

Perform the ohm test with the multimeter of the temperature sensor. 
Enter the measurement result:  
_______ Ω  

Perform the capacitance test with the multimeter between U'-V'; V'-W'; U'-W'. Enter the measurement result:

1. _______ F
2. _______ F
3. _______ F

Perform the capacitance test with the multimeter of the DC-Link. Enter the measurement result:

_________ nF
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