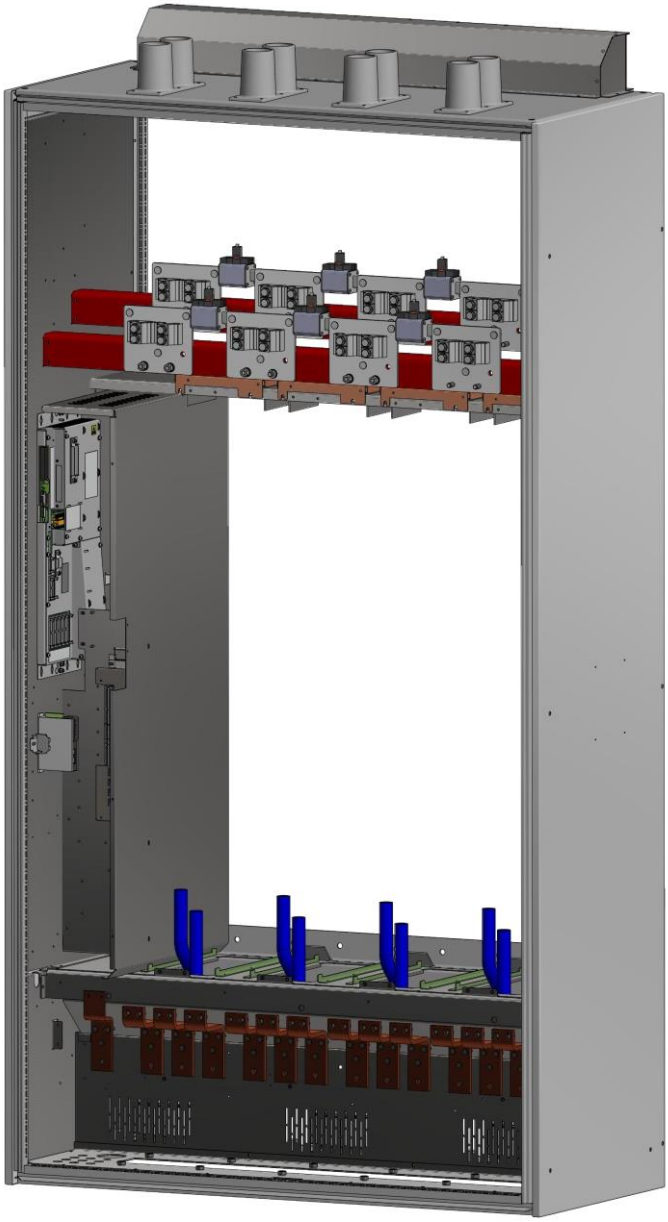
Wind Turbine Upgrade kit, Avid Extreme Cable connection, For SWP 3.6MW Class Turbines



REV 00
December 7th, 2022

Avid Controls Inc.
41261 Park 290 Drive, Waller, TX 77484, USA
info@avidcontrolsinc.com
(+1) (281) 640-8600

Contents

1. Introduction

- The following procedure is specific to the installation of AEC-UPGR-KIT-01 AVID Extreme Cable Connections
- This procedure details how to upgrade a Siemens Wind Power 3.6MW turbine from Original DC Cable connection Fishplates to AVID Extreme DC Fishplates.
- For reference, see the following AVID documents which are supplied alongside this Installation Instruction:
    - DTS-MID0012 for additional specifications related specifically to the AEI1000L.

2. WARNINGS

- Always refer to the Cautions and Warnings in the associated MV DELTA and MV3000 manuals when installing / commissioning / fault-finding any system containing an AEI1000L module.
- This equipment may be connected to more than one live circuit.
- ***Disconnect all power sources before working on the equipment.***
- ***Wait at least 8 minutes after isolating all power sources and check that the voltage between DC+ and DC- has reduced to a safe level before working on the equipment.***
- Surfaces on the coolant pipes can reach high temperatures and remain hot for some time after power is switched off.
- Figures are for reference only.

3. Tools Required

- Wire Cutters
- #3 Pozi-drive Screwdriver
- Phillips #2 x 4” Screwdriver
- Torque Wrench 3/8” Drive
- 13mm Drill bit
- Socket Wrench 3/8” Drive
- Power Drill (DeWalt or similar)
- 17mm Socket, 3/8” Drive
- Power Impact Tools (DeWalt or similar)
- Digital Voltmeter (DVM)
- 15mm Drill bit
- 17mm Drill bit
- 17mm Spanner

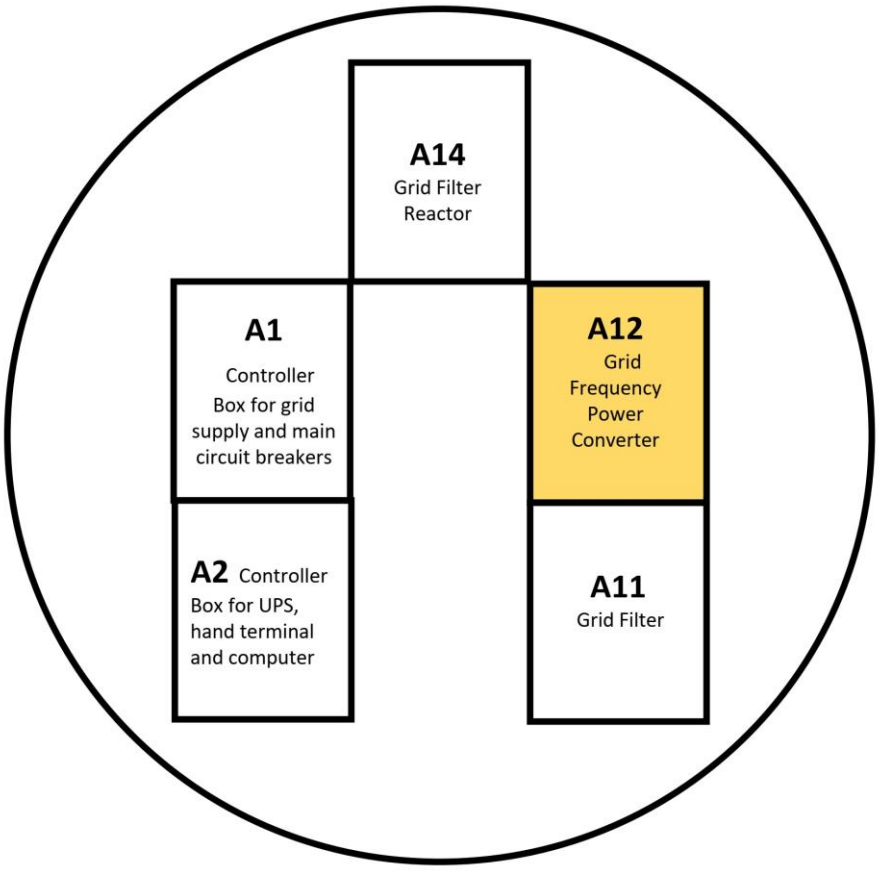
4. GRID DC Fishplate Upgrade Kit

AVID Model Number	Qty.	Description
AEC-UPGR-KIT-01	1	Assy, Wind Turbine Upgrade kit, Avid Extreme cable connection for 3.6MW Class Turbines. ***Network Converter.***

5. Overview of SWP 3.6MW Cabinet Layout

5.1 Tower Base Layout

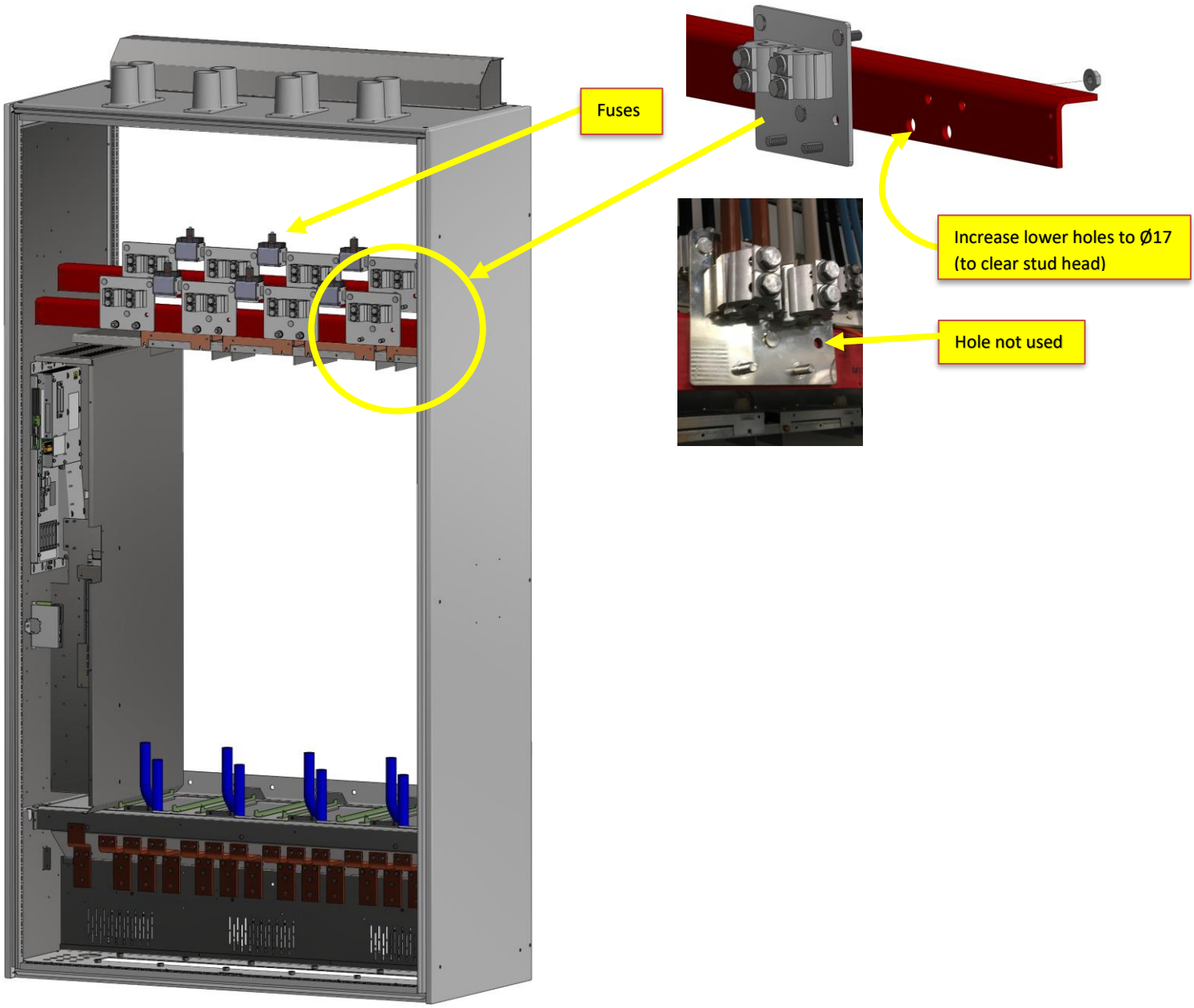
Ref	*Contains*
A14	Main Grid Filter Reactor
A1	Controller Box for grid supply and main circuit breakers
A2	Controller Box for UPS, hand terminal and computer
A11	Grid Filter
A12	Grid Frequency Power Converter



Plan View

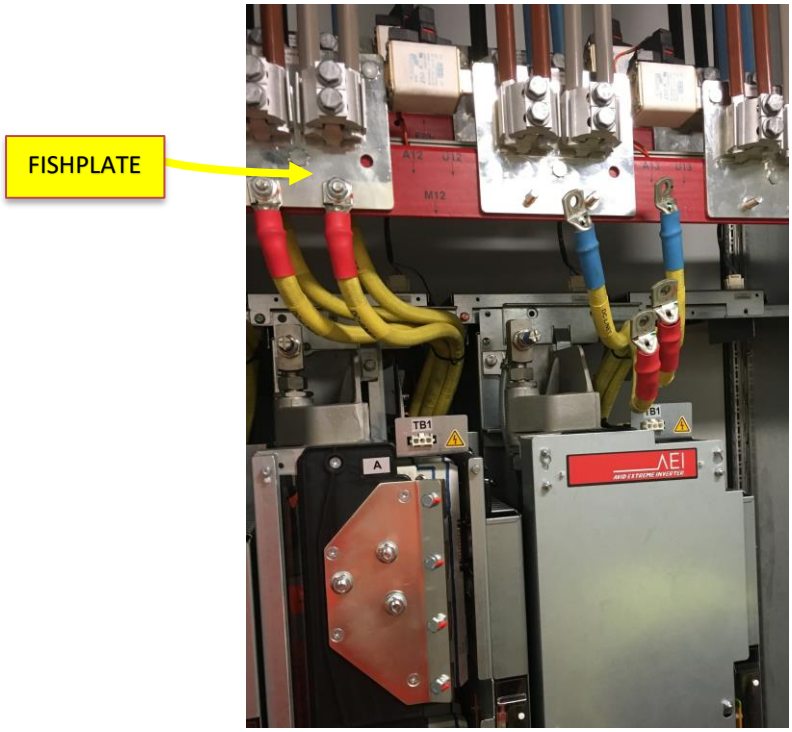
6. Replacement of DC Fishplates (Item AEC-UPGR-KIT-01)

- Disconnect All DC Positive and Negative cables from existing Fishplates
- Remove existing DC Fishplates & fuses
- Increase 2 X Ø11 holes to Ø17 (using a series of drill bits with 2mm increments) as shown below
- Fit new Fishplates supplied with kit using M10 SEMS nut at rear center fixing.
- Replace DC fuses and reconnect fuse blown indicator wires



7. Reconnect DC Cables

- Reconnect all the DC negative and DC positive front and rear cables to UPPER Fishplates using the supplied M10 flange nuts. Torque down all connections to 33.5Nm (297lb.in)



8. Document Revision History

Rev.	Date	Author	Changes
00	Dec 07 2022	M. Cooper	Initial Release