

## **Service Bulletin**

Bulletin No: SB-0001-18-184-SW Effective Date: 07-03-2018

Type: Informational

# Subject: 12&24V Potted SW350 SCR Charge Controller issue when a remote sensor is installed.

#### Issue

There have been several occurrences where customers have incorrectly determined that a turbine was not charging properly. MCE assisted troubleshooting determined that the SW350 12&24V SCR Charge Controller was diverting all power produced by the turbine to the dump load resistors, despite the fact that the battery State of Charge (SOC) had not reached the 'Diversion' set point.

### Determination

Troubleshooting revealed that in all cases, the customer was using a remote temperature sensor and although the sensor was installed correctly, one or both of the two (2) screw contacts for the sensor were not making proper contact. In each case the customer had failed to utilize the included flat washer provided for use below the friction/lock washer for each screw (Fig. No. 1). Further investigation revealed that the depth of the screw holes was insufficient without use of the flat washer, preventing the screw head from fully seating the connected remote sensor leads. When

tightened, the screws "bottomed out" giving a false impression that the screws were fully seated and that a proper connection was made. Once the flat washer was reinstalled, it allowed the screw to tighten down on the remote sensor wire connection and the SRC charge controller and remote sensor operated properly.

Upon comparing older and newer model SW350 SCR Charge controllers, it was found that while

the two (2) temperature sensor screws were the same length, the depth of the screw seats (holes) were significantly different. The new SCR Charge controller holes are between 8.9 to 10.5mm in depth, whereas the older units ranged from 15.0 to 15.3 mm.

#### Resolution

When installing a temperature sensor (remote or standard), ensure the provided flat washer is properly installed beneath the friction washer on each sensor connection screw to ensure a proper connection (Fig. No. 2).



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#### superwind GmbH

Am Rankewerk 2-4 D-50321 Brühl Germany Tel: +49 / 2232 / 577357 Fax: +49 / 2232 / 577368 Email: power@superwind.com www.superwind.com

Mission Critical Energy Inc 1801 North French Rd Getzville, NY 14068 USA Tel: +1-716-276 8465 Email: power@missioncriticalenergy.com www.missioncriticalenergy.com

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