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Troubleshooting

EMCP 3

Media Number -RENR7902-01

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i02464693

Generator Overvoltage Warning

SMCS - 4490

System Operation Description:

If the voltage rises above the Generator Overvoltage Percentage Threshold setpoint value, then the overvoltage timer will begin timing. When the timer expires, the Generator Overvoltage event is made active (if the voltage has been above the threshold level continuously while timing). If the voltage drops below the Generator Overvoltage Percentage Threshold, then the Generator Overvoltage event will be made inactive and the timer will be reset.

If an overvoltage condition is detected, then "GEN OVERVOLTAGE SHUTDOWN" or "GEN OVERVOLTAGE WARNING" will be displayed on the EMCP 3 in order to inform the operator of an overvoltage condition.

Note: The severity of the overvoltage condition will determine if a warning or shutdown event occurs.

Conditions Which Generate This Code:

The code for generator overvoltage is generated when the EMCP 3 determines that a generator overvoltage condition has occurred.

Test Step 1. TALK TO THE OPERATOR

- A. Determine the conditions that caused the overvoltage condition.

Expected Result:

An overvoltage was caused by an occurrence that is known to the operator and the operator would like to put the genset back into service.

Results:

- **OK** - The operator can determine the cause for the overvoltage condition, the condition has been

repaired and the operator wants to put the genset back into service.

Repair: Reset the genset. Resume normal operation and verify that the problem has been corrected.

STOP

- **NOT OK** - The overvoltage condition was not caused by an occurrence that is known to the operator. Proceed to Test Step 2

Test Step 2. CHECK THE SETPOINTS.

- A. View the Generator Overvoltage setpoints. Make a note of the setpoints. See Testing and Adjusting, "Electronic Control Module (Generator Set) - Configure". Compare the setpoints against the default setpoints of the particular generator set.

Expected Result:

The setpoints are correct.

Results:

- **OK** - The setpoints are correct for your particular genset.

Repair: Reset the genset. Resume normal operation and verify that the problem has been corrected.

STOP

- **NOT OK** - The setpoints are NOT correct.

Repair: Reprogram the setpoints. Reset the genset. Resume normal operation and verify that the problem has been corrected.

STOP

Test Step 3. VERIFY VOLTAGE CAN BE ADJUSTED

Verify the generator output voltage can be adjusted from the EMCP 3 Display Screen.

Expected Result:

The generator output voltage can be adjusted from the EMCP 3 Display Screen.

Results:

- **OK** - The generator output voltage can be changed from the EMCP 3 Display Screen.

Repair: Adjust the generator output voltage to meet site requirements. Resume normal operation

and verify that the problem has been corrected.

STOP

- **NOT OK** - The generator output voltage cannot be adjusted. Proceed to test step 4

Test Step 4. CHECK CAT DATA LINK BETWEEN THE EMCP 3 AND THE VOLTAGE REGULATOR

Refer to the Genset Electrical System Schematic in the Service Manual and check the Data Link wiring between the EMCP 3 and the Voltage Regulator. For more information on troubleshooting the Data Link, see Troubleshooting , "Data Link Circuit Fault ".

Results:

- **OK** - The Data Link wiring is correct.

Repair: Refer to the appropriate voltage regulator service manual and perform an operational check of the voltage regulator. Replace the voltage regulator if necessary. Resume normal operation and verify that the problem has been corrected.

STOP

- **NOT OK** - The wiring is not correct

Repair: Repair the Data Link wiring or Replace the Data Link wiring. Resume normal operation and verify that the problem has been corrected.

STOP