LSM - Load Sharing Module

Simon - 2023-04-25 - other

The part number 9907-232 LSM provides a 0.5-4.5 Vdc speed reference output to a speed control. Most Woodward speed controls use +/-3 Vdc for that reference, which means it's likely used on another manufacturers speed control or ECU. The output reference changes the speed reference in the speed control by providing a plus/minus offset from the speed controls normal reference. Thus an output of 2.5 Vdc from the LSM would be a ZERO offset. The speed pot on the LSM would provide a fixed offset from the normal 2.5 Vdc.

When the LSM is active with breaker closure [connection of terminal 13 to 14], then the LSM seeks to equalize its generator percent of load with the average presented on the load share line. The AGLC provides a ramping of the individual generator relative to the average on the load share line. The LSM creates an offset up or down to match its percent loading to that of the generator average. When this is achieved, the LSM output should again be at it normal 2.5 Vdc [or offset value as determined by the speed pot]

The output bias and load share signals are low power and very susceptible to influence by induced voltage. Please check shielding and proper grounding. The speed pot creates and output offset, so its condition and resolution are critical. A quality multi-turn pot is typical.

The synchronizer will not close the breaker out of sync. However, once closed, the synchronizer is no longer active and the LSM output is determined by trying to match the load share line or it will return to normal output if the terminal 13-14 connection is not made.