

WOODWARD 2301A TO 2301E RETROFIT

Retrofit of the soon to be obsolete old analogue Woodward 2301A LSSC (Load Share and Speed Control) with the state-of-the-art Digital Woodward 2301E LSSC. The new digital control has the same fit and functionality but with additional features to improve performance.

BRIEF

The analogue 2301A LSSC is commonly used on supply vessels such as this, and in many other applications especially where isochronous load sharing between generators is desired. The 2301A was originally designed more than 30 years ago and is renowned for its reliability. However due to its age, component obsolescence makes it difficult to support and is more costly. The latest digital controller 2301E has been in production for more than 4 years and has become the ideal tried and tested replacement. The 2301E has the same mounting and terminal specifications as the 2301A and only a few wiring changes may be required depending on the application.

Using a PC interface, the new 2301E eliminates the need for potentiometers that could be adjusted by anyone with a screwdriver. The new controller setup is also much more precise using real engineering units opposed to using jumpers and potentiometers for configuration and tuning. This also has the advantage of minimizing variations between multiple controllers and as a result, minimizes variation in engine response. Additionally, the new 2301E has features to reduce smoke at startup and during load transients as well as different dynamic settings for different operating modes. All this delivers an easy to setup controller where parameter settings from one controller can be downloaded to the next, therefore providing plug and play spares, as well as a guaranteed improved engine performance.

RESULT

The retrofit was successfully completed for unit 1 in less than a day without affecting the operating philosophy, the client now enjoys the reliability, performance and added functionality that accompanies the Woodward 2301E controller. The site was handed over to the client after completing the required load tests and on-board personnel training.

RECOMMENDATION

The 2301E will be supported by Woodward for many years to come and is already the less expensive option compared to the 2301A which is fast approaching its end of life. It is recommended therefore to consider this retrofit as part of your fleet maintenance schedules.

PROJECT FACTS

Description:	Retrofit 2301A LSSC with 2301E LSSC
Vessel TYPE:	Offshore Supply Vessel
Location:	Sharjah, U.A.E.



Figure 1: Legacy Analogue Woodward 2301A LSSC



Figure 2: Removal of the Analogue Woodward 2301A LSSC



Figure 3: Digital Woodward 2301E LSSC installed