



GOVERNOR CONTROL SYSTEMS

TRAINING



2301A/D and 2301A & E Load Sharing & Speed Controls

CLASS OBJECTIVES:

Upon successful completion of this course, the student will be able to:

Demonstrate a strong foundation on governor control theory pertaining to the 2301A and 2301D family of controls.

Field calibrate the controls and adjust actuators, linkage and accessories.

Demonstrate an understanding of power management issues such as; soft loading and unloading, base loading, peak shaving, import/export control, and power transfer.

Describe the concepts of basic adjustments, paralleling, and droop.

Demonstrate an understanding of theory, methods of synchronizing, and paralleling of electrical generators.

SOUTHEAST

Phone: +1 954-462-7404

Toll free: 877-659-6328

GULF COAST

Phone: +1 985-626-8707

Toll free: 888-427-4853

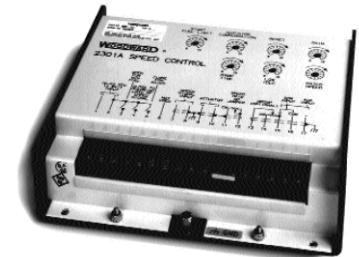
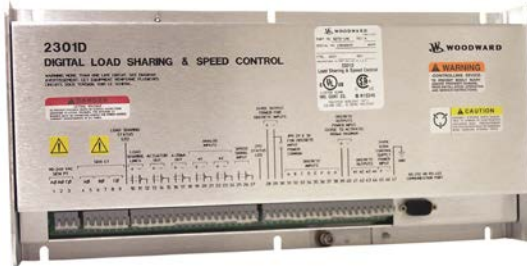
MID-ATLANTIC

Phone: +1 757-852-5808

Toll free: 877-659-6328

PACIFIC NORTHWEST

Phone: +1 206-297-0300



2301A/D LOAD SHARING & SPEED CONTROLS

2301A & E LOAD SHARING & SPEED CONTROLS

The Woodward 2301A and 2301D Load Sharing and Speed Controls are successive generations of the same control. Learn the operation, installation and adjustments of the 2301A (Analog) and the 2301D (Digital) Load Sharing Speed Control. Ideal for those who need the understanding of how the 2301A and 2301D control, actuators, and their associated accessories allow their engines to operate together, either on or off the infinite bus (utility). The hardware and software will be explained. During the course both hardware and software configuration/monitoring will be explained. The class will operate both controls connected to a closed loop test set.

CLASS OUTLINE:

A. Concepts of Basic Control Theory

A review covering governor fundamentals of mechanical and electrical governors, governor terminology, basic power generation, and paralleling generators.

B. 2301A Control Systems

MPU, Speed trim and Motor Operated Potentiometer (MOP)

Input & Outputs (I/O) of the 2301A controls.

Calibration and Adjustment of the 2301A controls.

Troubleshooting 2301A controls (Hands-on exercises with engine simulators.)

C. 2301D Control Systems

Comparisons of the 2301A and 2301D controls.

Input & Outputs (I/O) of the 2301D controls.

Calibration/Adjustment of the 2301D controls with Woodward Watch Window

Troubleshooting 2301D controls (Hands-on exercises with engine simulators.)

Power management overview

