

Chapter 3. Calibration and Checkout Procedure

Introduction

This chapter covers the checkout and calibration of the SPM-A Synchronizer. These procedures must be followed in sequence for proper calibration of the synchronizer. Notes in the text indicate when procedures are different for each SPM-A model.

NOTICE

Before attempting to calibrate the synchronizer, read Woodward Manual 82715, *Guide for Handling and Protection of Electronic Controls, Printed Circuit Boards, and Modules*.

General Information

Read and follow these instructions carefully when checking or calibrating the synchronizer:

- Observe precautions for handling static-sensitive devices (see page iii).
- Use battery-operated test equipment whenever possible.
- Isolate the test equipment from all grounds, including the chassis.
- Use a digital multimeter (DMM) for all measurements and a volt-ohmmeter (VOM) when checking indicators and relay contacts.
- Apply power to the synchronizer before applying power to any test equipment connected to it.
- Make sure that the wiring connections have been made in accordance with the plant wiring diagram (Figure 1-4) and that the connections are tight.
- The values given in this procedure are the values used by the factory for calibration of the new synchronizer. Be sure that no specification changes or modifications have been made that will change these values.

Pre-Checkout

All other units in the engine control system must be adjusted and working correctly before operating the synchronizer. While operating the engine to make adjustments on the other units, the synchronizer mode switch (user supplied) must be in the OFF position.

Dwell Time Adjustment

The dwell time is factory set at 1/2 second. To set the dwell time for one of the other settings (1/8, 1/4, or 1 second) do the following:

1. Turn off the power to all voltage inputs to the synchronizer.
2. Remove the four elastic nuts securing the synchronizer cover. Remove the cover.

NOTICE

To prevent damage to the components of the synchronizer, read and follow the Electrostatic Discharge Awareness precautions on page iii.