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WOODWARD

Product Manual 55011
(Revision J, 05/2019)
Original Instructions

Portable Speed Loop Tester with Load Sensor

8909-555 for 2301/2301A/EGM

Installation and Operation Manual

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11. With the LOAD switch on, turn the LOAD ADJ on the tester clockwise until a continuous decrease in speed is noted (overload condition). The ACTUATOR VOLTAGE meter should now read at least 6.5 Vdc. Return the LOAD ADJ counterclockwise until the ACTUATOR VOLTAGE meter reads 5 Vdc. (You may have to press the START switch to restart the tester.) If the unit is unstable with load, again adjust GAIN and STABILITY.

12. Check that the speed returns to the same setting within 2 Hz whether the LOAD ON/LOAD OFF switch is on or off.

13. Turn the LOAD ON/LOAD OFF switch OFF, as it will not be used beyond this step.

14. Set the multimeter for DC (10V scale) and plug it into the LOAD SIG jacks on the control. Turn the L.S.T. switch to position 2 and turn the LOAD GAIN adjustment from one end of its travel to the other. The meter reading should vary smoothly from about 1.5 Vdc for 8271-308, and 8271-500. It will be 0 V for 8271-442, 8271-467, 8271-452, and 8271-706 at the counterclockwise end. Repeat for positions 3 and 4. Return the switch to position 2. Set LOAD GAIN to the full clockwise position.

15. Turn the DE-DROOP adjustment from one end to the other and the speed should vary. Set the DE-DROOP adjustment so that turning the L.S.T. switch from position 1 to position 2 causes no speed change. Leave the switch at position 2.

16. Turn the DROOP adjustment fully clockwise and remove the jumper between terminals 26 and 27. The speed should decrease. Turn the DROOP fully counterclockwise, and the speed should increase to 3600. Reconnect the jumper and turn the L.S.T. switch to position 1.

17. Turn the RATED SPEED adjustment slowly from one end of its travel to the other. Adjust GAIN and STABILITY as necessary for stable operation at all speeds, but no erratic actuator voltage changes should occur. Return the rated speed to 3600. (This verifies that the ten-turn RATED SPEED pot is OK.)

18. Turn off (open) SW1. The speed should decrease. Turn the LOW IDLE SPEED adjustment from one end to the other, and the speed should vary over a wide range. Leave the LOW IDLE SPEED at the middle of its travel. The tester may have to be restarted. Set LOW IDLE SPEED to the desired idle frequency.

19. Turn the RAMP TIME adjustment fully counterclockwise. Turn on (close) SW1. The speed should increase to 3600 in 3 to 5 seconds. Turn off SW1 and turn the RAMP TIME fully clockwise. Turn on SW1, and the speed should increase to 3600 In about 10 to 12 seconds. Set to the desired ramp rate.

20. Recheck the LOW IDLE SPEED adjustment for desired idle frequency.

21. Disconnect one of the magnetic pickup leads from the control, and the actuator voltage should immediately drop to zero. (Do not reconnect yet). Disconnect the jumper between terminals 29 and 30, and the actuator voltage should go to maximum. Replace the jumper first and then the pickup lead, and restart the tester.

22. Short across terminals 22 and 23. The actuator voltage should go to zero.

23. Set the RATED SPEED adjustment to the desired speed for the unit.

24. Turn SW1 on (up).
    Turn the REV/NORM switch to NORM.
    Turn the EGM/2301 switch to 2301.
    Turn the ACTUATOR meter switch to (+).
    Apply 1.5 Vdc to the MPU terminals. Speed should increase. Apply 1.5 Vdc to the SW1 terminals. Speed should decrease.

25. With LOAD GAIN full clockwise, and a jumper on terminals 26 and 27, apply 1.5 Vdc to the SW2 terminals. Speed should increase.