



# Operating Instructions for TWS Control

900-0241 10/84

## GENERAL

The Onan TWS (three-wire start) control is a universal control compatible with all Onan three-wire start generator sets and virtually any transfer switch or remote start/stop signalling device.

Operator involvement is limited to positioning of the TWS control toggle switch to select the generator set operational mode. The preheat and overcrank controls (inside the TWS control) were adjusted by the installer for the generator set and should not be changed. A descriptive use of the control functions and optional equipment follows.

**CAUTION** *Haphazard adjustment of controls might result in failure of the generator set to start and in burnout of the engine preheaters.*

**WARNING** *Contact with high voltage in the TWS control when the generator set is running might cause serious personal injury or death. Shut down the generator set and disconnect the starting battery cable before opening the control door for any reason.*

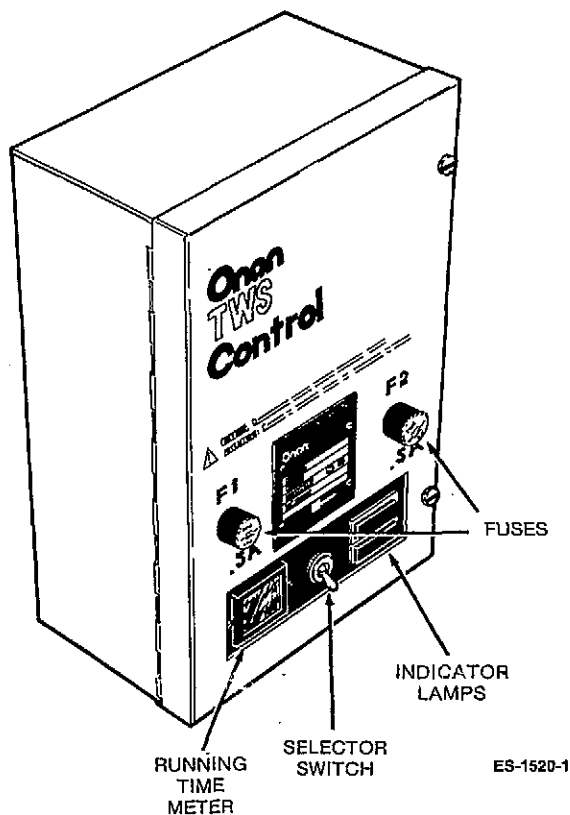
## TOGGLE SWITCH

This switch has three positions providing the following functions:

**Auto:** The normal operation position. This position allows automatic starting/stopping of the generator set by the remote 2-wire start contact. If a fault shut-down occurs when in this position, the TWS control can be reset either by placing the toggle switch in a position other than Auto, or by removal and re-application of the remote start signal.

**H.C. (Hand Crank):** This position effectively removes the remote 2-wire start signal from the TWS control. It allows for routine maintenance service on the generator set, and allows manual starting at the engine control panel.

**WARNING** *Contact with moving machinery or high voltages might cause serious personal injury or death. Always disconnect the starting battery before doing maintenance service on the generator set.*



**Stop:** This momentary position allows for stopping of the generator set in any operational mode.

## FUSES

Fuses F1 and F2 are in the AC voltage sensing circuit (K4 relay coil). A blown fuse will cause the generator set to shut down after running about one minute and turn on the fault lamp (if equipped). If a replacement is needed, use only a 0.25 x 1.25 in. (6 mm x 32 mm) cartridge fuse rated 0.5 ampere, 250 VAC. Be sure to disable the generator set before removing fuses.

**WARNING** *Contact with high voltage in the TWS control when the generator set is running might cause serious personal injury or death. Shut down the generator set and disconnect the starting battery cable before removing the fuses.*

### **RUNNING TIME METER (OPTIONAL)**

This meter registers the total number of hours that the generator set has run. This data is useful to keep a record for periodic maintenance service. The meter time is cumulative and cannot be reset.

### **INDICATOR LAMPS (OPTIONAL)**

The Generating and Fault lamps provide indication of generator set operation or of a fault shutdown.

### **PARTS AND SERVICE INFORMATION**

Contact the dealer from whom you purchased this equipment for service and parts. Remember to give the complete model and serial number when requesting service or parts information.



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