



**DIVISION OF ONAN CORPORATION**

MINNEAPOLIS, MINNESOTA 55432

Printed in U.S.A.

# INSTRUCTION SHEET C75

## INSTALLATION AND OPERATION OF START CONTROLS

300-737 AND 300-738

(used with furnished transfer switch)

The 300-737 3-to-2 wire adapter start control is designed for use with AJ,NI,JB and JC Onan electric generating sets and can be used for any voltage of these units. The 300-738, 3-to-2 wire adapter start control is designed for use with the LK,NB and CCK at 120 volts only.

Both start controls will automatically start and stop the generating set with a 3-wire control and 12-volt cranking, and can be used with a 2-wire circuit for load transfer control operation or similar remote start-stop operation.

Any customer-furnished transfer switch must be equipped with engine start contacts. The contacts must close upon loss of commercial power or upon high or low voltage conditions determined by voltage sensitive relays if used (on the transfer switch).

The start control includes a three-position switch (RUN,STOP and REMOTE positions), a cranking limiter to protect the unit from overcranking and a start-disconnect relay on the 300-738 start control only.

NOTE: Onan recommends adding an optional trickle charger to maintain starting batteries since the control has no charging circuit.

## INSTALLATION

This control can be directly mounted on the unit or wall mounted near the unit. For outdoor installations, be sure the control is protected from the elements.

NOTE: Be sure to check local codes and regulations on all aspects of the installation.

All the generating sets except the JC require adapter brackets for mounting the Onan start control. See Figure 1.

Note the start control for the JC mounts directly on the output box cover. Center the control without cover on the output box (5/8 inch from each side). Mark and center-punch the mounting holes needed. Also mark and center-punch a hole for the wires coming through the rear of the start control (needs approximately a one-inch diameter hole). Remove the cover of the output box and drill the holes. Mount the start control on the output box cover.

## WIRING

Move the selector switch on the start control to STOP and disconnect the starting batteries before making wiring connections.

On the LK,NB and CCK, connect wire leads W5 and W6 to the 120-volt generator connections. For the AJ,NI,JB and JC, connect wire lead W5 to the start solenoid coil terminal. If the coil has two terminals, connect to the one marked "S".

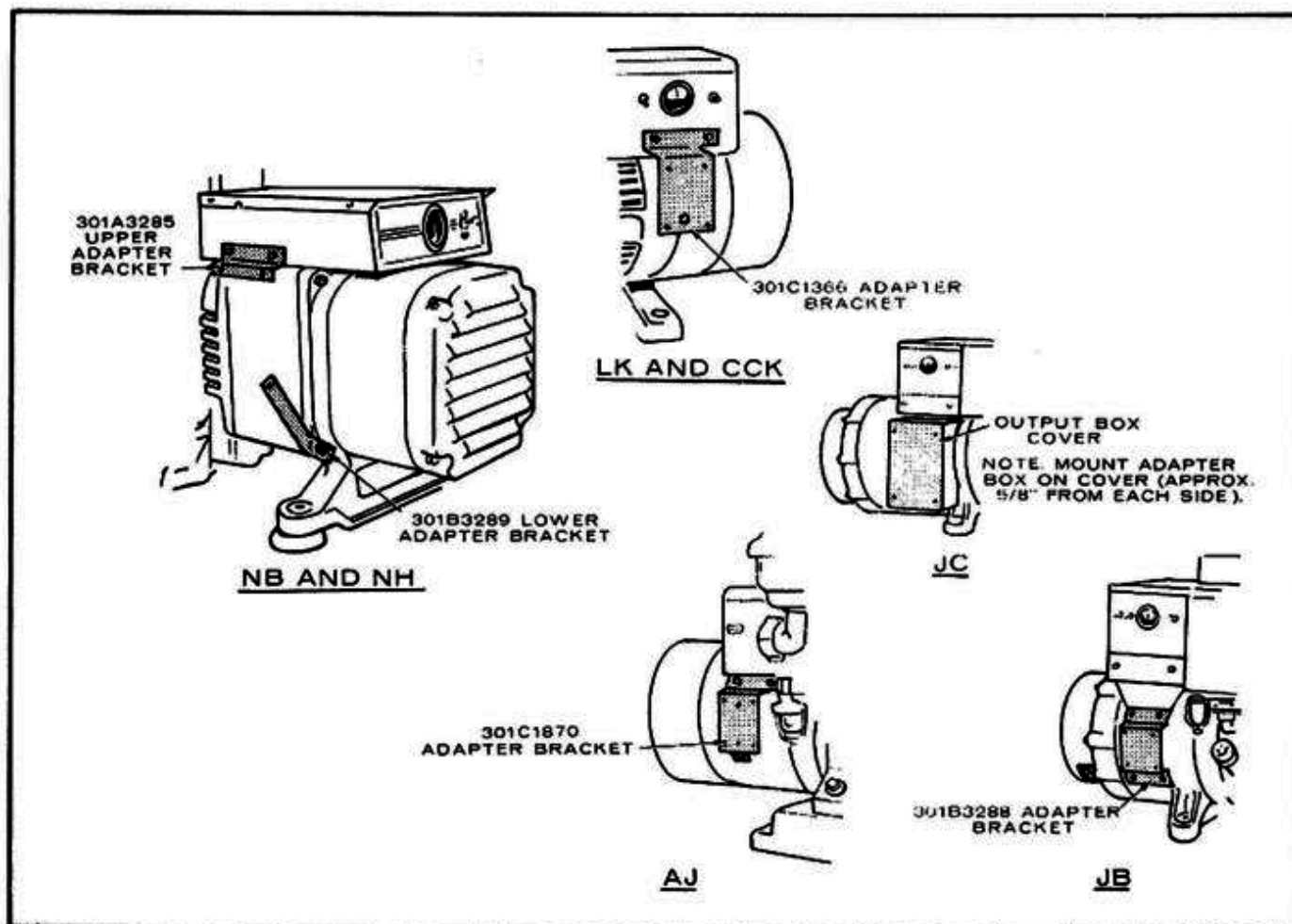


FIGURE 1. MOUNTING START CONTROL

Use the two terminals of terminal board TB1 in the start control for connections to the start contacts of the load transfer. The knockout on the side of the start control can be used for this purpose.

**JC ONLY:** With the start control mounted, replace the output box cover.

Connect the batteries to the generating set and check operation (see OPERATION).

#### OPERATION

The selector switch has three positions: REMOTE, STOP and RUN.

**Remote:** In the REMOTE position, the Onan electric generating set will automatically be started if there is an interruption of normal power or if the voltage sensitive relays operate (if used).

**Note:** During a power outage or period of voltage fluctuation with sensitive relays, the generating set will start whether or not there is a load on the load circuit.

**Stop:** Selecting the STOP position disables remote starting and will stop the engine if running. This position should be used while servicing the generating set, transfer switch, etc.

Run: The RUN position is used to exercise the unit or for checking unit operation after maintenance or service (load remains on commercial power).

#### CRANKING LIMITER

If the generating set doesn't start within 45 to 90 seconds, the cranking limiter (K1) opens the cranking circuit. This action is caused by a heating element in the cranking limiter which is energized during cranking. It trips the limiter and as a result, the red reset button on the front cover of the start control projects out. It can be reset after waiting approximately one minute (time allows for heating element to cool). Locate the cause of the trouble and correct it before resetting the button.

#### PARTS AND SERVICE INFORMATION

For service or parts, contact the Onan dealer from whom you purchased the equipment or your nearest Onan parts and service center.

Obtain part numbers and description of all repair parts from the wiring diagram. Be sure to state the complete model of the control (from the nameplate) for which the parts are required.