



INSTRUCTIONS

GEK-39683

POWER/VAC* REMOTE RACKING OPERATOR
TYPE 115 VAC, 60/50 HERTZ
OR
230 VAC, 60/50 HERTZ

GENERAL  ELECTRIC

**POWER/VAC* REMOTE RACKING OPERATOR
TYPE 115 VAC, 60/50 HERTZ
OR
230 VAC, 60/50 HERTZ**

INTRODUCTION

The remote racking operator permits remote racking between the connected and disconnected positions. A control box connected to the operator with a thirty-foot cable permits control from a remote location.

The remote racking operator is portable and is designed for easy attachment to the metalclad. No special equipment

modification or adaptation is required.

The operator attachment method provides for two metalclad door positions; the door fully open and the door fully closed. Closed door attachment is used for racking breakers between the connected and disconnected positions. The open door attachment is recommended solely for racking the manual ground and test device.

RECEIVING, HANDLING AND STORAGE

Receiving and Handling

Each remote racking operator is carefully inspected and then packed by workmen experienced in the proper handling of electrical equipment. Immediately upon receipt of a device, an examination should be made for any damage sustained during shipment. If injury or rough handling is evident, a damage claim should be filed at once with the transportation company, and the nearest General Electric Company sales office should be notified promptly.

The device should be removed from the crating with sufficient care so that no damage will result from rough handling. "Loose parts" associated with the apparatus may be included

in the crate. Care should be taken to make certain that these parts are not overlooked.

Storage

The remote racking operator should be carefully protected against condensation, preferably by storing it in a warm, dry environment at moderate temperatures such as 40°F to 100°F. The storage area should be clean, free from corrosive gasses or fumes, and dust-free.

If the device is stored for any length of time, it should be inspected prior to use to insure its proper mechanical and electrical working condition.

DESCRIPTION

The remote racking operator consists of a drive train, control switches, and attachment clamps. The drive train is made of a gear motor (1, Fig. 1) a six-point drive socket (5, Fig. 1) and a universal joint (8, Fig. 2) which couples the motor to the socket. Two types of operators are provided; one requiring a supply voltage of 115 VAC, 50 or 60 hertz, and the other re-

quiring a supply voltage of 230 VAC, 50 or 60 hertz. The required supply voltage is identified on the motor cover (12, Fig. 1). For the 115V type, the voltage connection is made via a three-prong grounding plug extending from the operator. For the 230V type, the plug is to be supplied by the user, to fit his type of receptacle.

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the General Electric Company.

To the extent required the products described herein meet applicable ANSI, IEEE and NEMA standards; but no such assurance is given with respect to local codes and ordinances because they vary greatly.

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Two control switches and a circuit breaker are included with each remote racking operator. The ON/OFF switch (16, Fig. 1) housed in the hand-held box (17, Fig. 1) controls the power to the motor. Pushing the button closes the switch and in turn supplies current and voltage to the motor. This control switch is spring loaded, therefore, continuous pressure on the button is required to keep the motor running. The motor directional control switch (3, Fig. 1) is mounted on the motor housing. Two positions are provided, "IN" and "OUT". For racking toward the connected position the switch should be set to "IN". For racking toward the disconnected position, the switch should be set to "OUT". The circuit breaker (2, Fig. 1) senses the motor stall current when the breaker reaches the end of its travel and causes the motor to stall. The higher

motor stall current trips the circuit breaker to the off position and in turn shuts off the power to the motor.

The clamps are designed to provide the means for attaching the remote racking operator to the front of the metalclad. Two clamps are provided with each operator, an upper and a lower. Two locating positions are provided for each clamp, one for closed door (Fig. 1) mounting and the other for mounting with the door open (Fig. 2). The forward clamp locating position (shown in Fig. 2) is to be used when racking is desired with the metalclad door open. Open door racking is recommended only for the POWER/VAC* manual ground and test device, see instruction manual GEK-39677. The inboard clamp location (shown in Fig. 1) is the normal location and is used for attaching the operator to the metalclad when the door is closed.

OPERATION

Attachment procedure of the remote racking operator to the metalclad unit:

Closed Door Attachment

- 1) Position the upper and lower clamps as shown in Fig. 1. Tighten the clamp attachment bolt (8, Fig. 1) to 25-20 inch-pounds.
- 2) Insert the drive socket (5, Fig. 1) into the door jack screw opening (19, Fig. 1) until the "U" channel (11, Fig. 1) is flush with the door (14, Fig. 1). The socket may have to be rotated to align it with the equipment jack screw (4, Fig. 1). Move the operator laterally until the door hinge (13, Fig. 1) rests in the "V" formed by the "U" channel (11, Fig. 1) and the clamp bracket (6, Fig. 1).
 - a. A firm push is required to depress the jackscrew interlock and permit the "U" channel to be flush with the door. In the test position, the drive socket is easier to insert when the breaker is discharged.
- 3) Position the clamping hook (7, Fig. 1) end behind the door hinge (13, Fig. 1). Adjust the hook length "A" so that the operator is firmly attached. The length "A" can be changed by simply turning the clamping hook (7, Fig. 1). A jam nut (9, Fig. 1) is provided to lock the clamping hook in place.

Open Door Attachment

- 1) Position the upper and lower clamp as shown in Fig. 2.

Tighten the clamp attachment bolt (19, Fig. 2) to 25-20 inch-pounds.

- 2) Insert the drive socket (5, Fig. 2) over the jack screw (4, Fig. 2) until the clamp bracket (6, Fig. 2) nests in the equipment post corner (20, Fig. 2). Rotate the socket (5, Fig. 2) as required for alignment with the jack screw hex.
- 3) Position the clamping hook end (7, Fig. 1) inside the equipment post as shown in Fig. 2. Adjust the hook length "A" as required so that the operator is firmly attached when the clamp is actuated.

Operating Procedure

- 1) Follow the breaker installation and breaker racking procedure recommended in the POWER/VAC* metal-clad switchgear instruction manual GEK-39672A. Make certain the breaker racking engagement levers are down and engage the moving nut prior to starting the racking procedure.
- 2) Attach the remote racking operator as previously described and connect it to a power source.
- 3) Set the circuit breaker switch (2, Fig. 1) to "ON".
- 4) Set the direction control switch to "IN" or "OUT" (3, Fig. 1); "IN" for racking to the connected position, "OUT" for racking to the disconnected position.
- 5) Carry the hand-held control box (17, Fig. 1) to a safe remote location. Push the on-button (16, Fig. 1) and

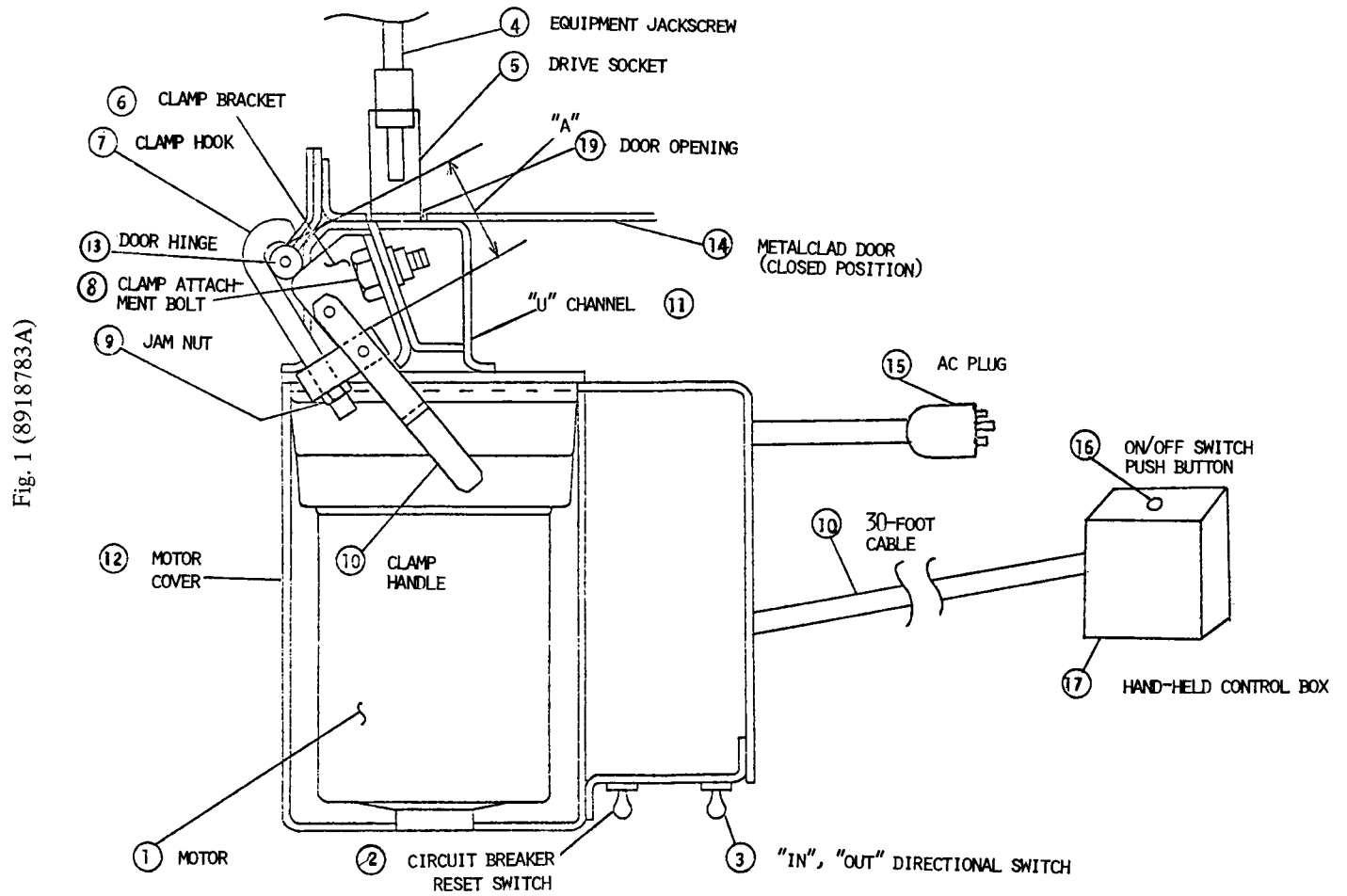


Fig. 1 Remote Racking Operator (Shown for Closed Door Attachment)

maintain pressure on the button until the circuit breaker has sensed the end of the travel and shuts off the motor. The time required to travel between positions is 20 to 30 seconds. The breaker is now in the connected or disconnected position and racking is complete.

- 6) As a final check, the breaker position should be con-

firmed by reading the indicator tape through the door. The tape should read "CON" when in the fully connected position and it should read "DISC" when in the fully disconnected position. The remote racking operator should now be removed. NOTE: The breaker cannot be closed while the remote racking operator is in place.

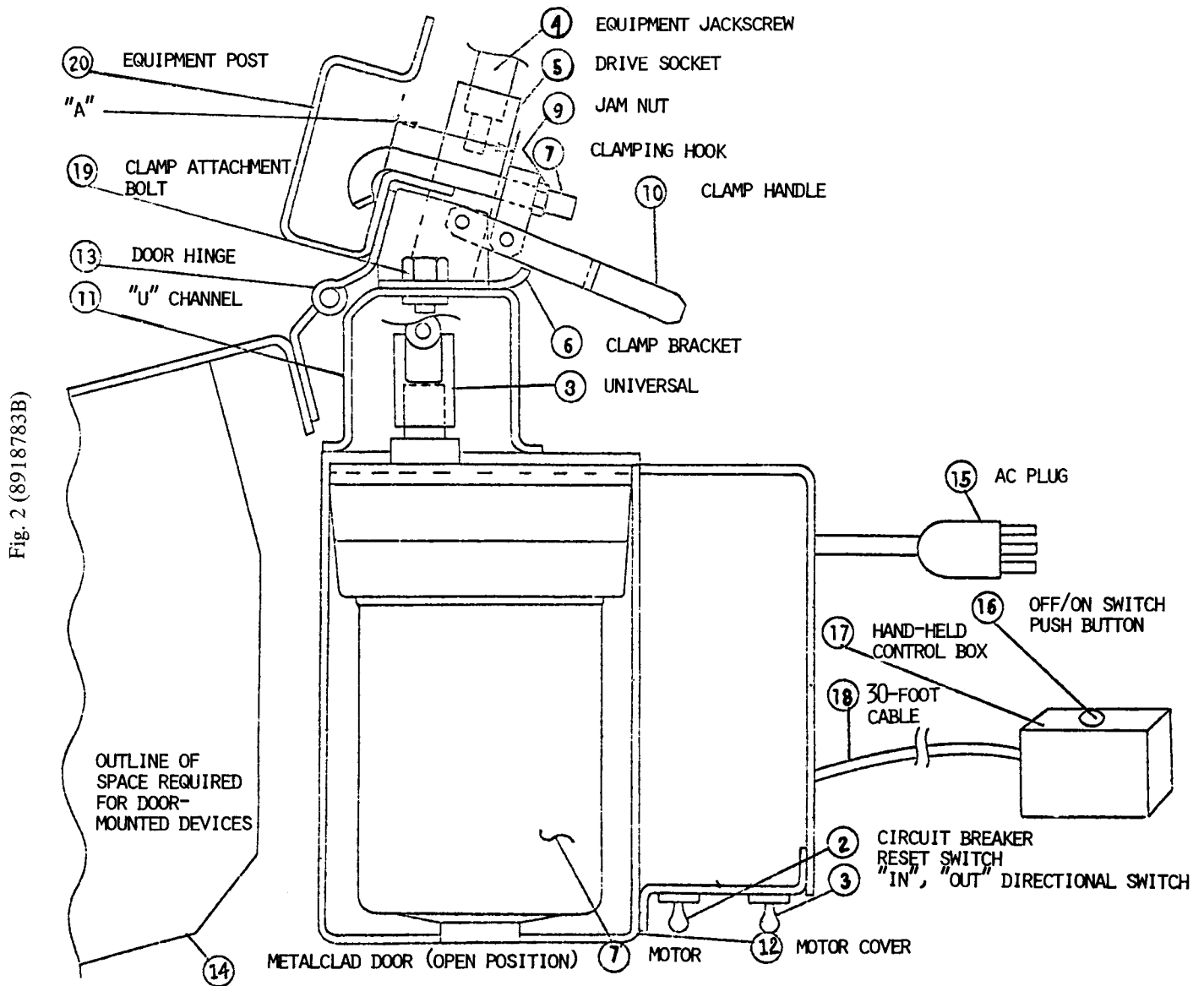


Fig. 2 Remote Racking Operator (Shown for Open Door Attachment)

