

GH-BETTIS

INSTRUCTIONS FOR THE

REMOVAL AND INSTALLATION OF

ACTUATORS FROM LOCKING DEVICE

MODEL KCBX20

PART NUMBER: 109023

REVISION: "A"

DATE: October, 1992

1.0 **INTRODUCTION**

- 1.1 This service procedure is offered as a guide to enable removal and installation of the actuator from a GH-Bettis, KCBX20 locking device.

2.0 **SUPPORT ITEMS AND TOOLS**

- 2.1 All required tools are American Standard inch. Suggested tools needed are: 1/2" inch drive socket set (which should include allen sockets and 12 point sockets), 8" inch adjustable wrench and 12" inch adjustable wrench.
- 2.2 Latex window caulk.

3.0 **REFERENCE GH-BETTIS MATERIALS**

- 3.1 GH-Bettis Assembly Drawing part number 108464.

4.0 **GENERAL**

- 4.1. Numbers in parentheses () indicate the bubble number/reference number, used on locking device assembly drawing and locking device parts list.
- 4.2 The K-MASS is an epoxy type resin coating varying from 1/2" to 3/4" thick. The locking device is standard, however, due to the thickness of the coating several hex head screws had to be changed to socket cap screws. Also some of the screws will extend through the mounting bracket.
- 4.3 If the four screws that secure the actuator, extend through the bracket they will be on a larger bolt circle than the locking device mounting screws.
- 4.4 All of the seams where the K-MASS comes together, and around all exposed hardware were caulked to provide a weather tight seal. The caulk must be replaced to insure that the K-MASS will work properly during the event of a fire.

WARNING **PRIOR TO REMOVING THE ACTUATOR FROM THE LOCKING DEVICE THE ACTUATOR MUST BE IN THE FULL FAIL POSITION.**

5.0 **PREPARATION FOR DISASSEMBLY**

- 5.1 Measure the exposed length of the actuator stop screws and record each. Marking the torque shaft's orientation on the actuator housing is helpful.
- 5.2 Note the orientation of the actuator, and mark appropriately.
- 5.3 Remove all supply pressure, and insure that the actuator is in the full fail position.

6.0 **DISASSEMBLY**

- 6.1 Cut and remove the latex caulk from only the joints and screw heads needed to remove the adapter flange and actuator.
- 6.2 Remove the lockscrew cover (60) from the locking device housing (10).

- 6.3 Loosen the hex jam nut (50) and hold in place while tightening the stop screw (40) until it impacts the stem adapter and torque to 30 ft-lbs, then torque the hex jam nut (50) to 30 ft-lbs.
- 6.4 Adjust the actuator stop screw, located in the actuator housing, until the stem adapter becomes loose.
- 6.5 While supporting the actuator remove the four hex head cap screws (110) from the actuator/valve mounting bracket. If there are more than four screws protruding thru the mounting bracket, only remove the screws on the larger bolt circle.
- 6.6 Slowly lift the actuator off of the locking device.
- 6.7 Remove the four ferris head cap screws (100) from the adapter plate (30) and remove it from actuator.
- 6.8 If the actuator is to be repaired or refurbished refer to the Service Instructions Disassembly and Reassembly procedure.

7.0 REASSEMBLY

- 7.1 If the adapter plate (30) is not installed on the actuator attached then mount it to the actuator with the ferris head cap screws (100).
- 7.2 Place the actuator on the locking device in the position noted in step 5.2.
- 7.3 Bolt the actuator in place with the four hex head cap screws (110).
- 7.4 Return the stop screws to the length noted in step 5.1 and align the marks on the torque shaft/housing.
- 7.5 Reconnect all supply pressure.
- 7.6 Back out the stop screw (40) on the locking device until it loses thread engagement.
NOTE: Do not tighten the hex jam nut (50)! Tightening this hex jam nut may damage the retaining ring (120).
- 7.7 Replace lockscrew cover (60) and lock into place.
- 7.8 Caulk all places where the caulk was cut or removed in step 6.1.
- 7.9 Refer to Locking Device Operating Instructions, part number 108995, to test set up.

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* Signatures on file, Waller, Texas