

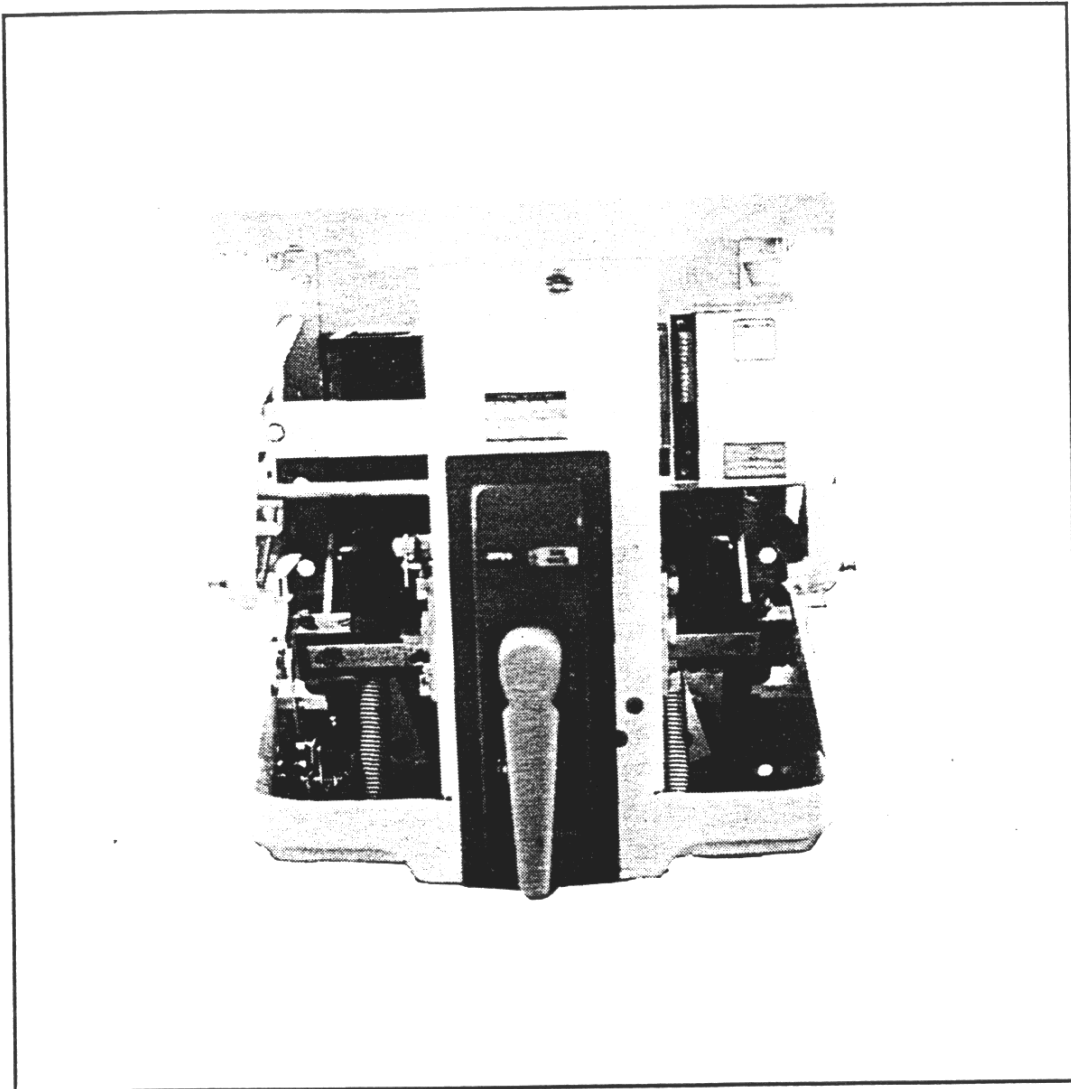
STATIC TRIP CONVERSION
INSTRUCTION MANUAL
for
GENERAL ELECTRIC MODEL AK-1-50/AK-2-50/AK3-50

COPYRIGHT 1987 MULTILIN, INC.
ALL RIGHTS RESERVED

Multilin, Inc.
P.O. Box 2700
215 Anderson Avenue
Markham, Ontario
Canada
L3P 4C7
Tel: (416) 294-6222
Telex: 069-66503
Fax: (416) 294-8512

Manual No.: AK2-50K-Rev.A.2
Retrofit Kit No.: AK2-50K

GENERAL ELECTRIC AK1-50 CIRCUIT BREAKER



Retrofitted Breaker



INTENT

This manual describes the procedure for retrofitting the General Electric AK1-50, AK2-50 and AK3-50 model circuit breaker.

<u>Manual Part Number</u>	<u>Revision</u>
AK1-50/2-50/3-50-600EKIT-M12/88	A.1
AK2-50K-M06/89	A.2

TABLE OF CONTENTS

	Page
LIST OF FIGURES - - - - -	v
1.0 INTRODUCTION	
1.1 KIT DESCRIPTION - - - - -	1
1.2 NOTES ON KIT COMPONENTS - - - - -	2
1.3 BILL OF MATERIALS	
1.3.1 KIT COMPONENTS - - - - -	3
1.3.2 OPTIONS - - - - -	5
2.0 INSTALLATION	
2.1 RECOMMENDED TOOLS FOR INSTALLATION - - - - -	6
2.2 RELAY MOUNTING - - - - -	7
2.3 BUS AND CURRENT TRANSFORMER MOUNTING - - - - -	10
2.4 AUTOMATIC RESET PACKAGE (OPTIONAL) - - - - -	14
2.5 ACTUATOR INSTALLATION	
2.5.1 MANUAL RESET - - - - -	16
2.5.2 AUTOMATIC RESET - - - - -	21
3.0 TESTING AND CALIBRATION	
3.1 ACTUATOR TRIPPING	
3.1.1 MANUAL RESET - - - - -	23
3.1.2 AUTOMATIC RESET - - - - -	24
3.2 RELAY TESTING - - - - -	25

LIST OF FIGURES

Figure		Title						Page
1-1	-	Kit Components	-	-	-	-	-	4
2-1	-	Drilling Locations for Relay Mounting	-	-	-	-	-	8
2-2	-	Relay Mount	-	-	-	-	-	9
2-3	-	Bus and Current Transformer Assembly	-	-	-	-	-	11
2-4	-	Bus and Current Transformer Installation	-	-	-	-	-	12
2-5	-	Typical Wiring Diagram and Harness Assembly	-	-	-	-	-	13
2-6	-	Automatic Reset Package (Optional)	-	-	-	-	-	15
2-7	-	Actuator Mounting Template	-	-	-	-	-	17
2-8	-	Actuator and Trip Arm Mounting Location	-	-	-	-	-	18
2-9	-	Actuator Clearance	-	-	-	-	-	19
2-10	-	Manual Reset Assembly	-	-	-	-	-	20
2-11	-	Automatic Reset Assembly	-	-	-	-	-	22

1.0 INTRODUCTION

1.1 KIT DESCRIPTION

This kit contains all the necessary material to convert an existing GE AK1-50, GE AK2-50 or GE AK3-50 model air circuit breaker with series overcurrent devices to a solid state device incorporating the Multilin "FB" static trip relay. This design is intended for use where manual reset of the circuit breaker is desired; if a trip occurs, the system must be reset manually. For details on systems requiring an automatic reset feature, please consult the factory.

The design of this kit allows flexibility of component mounting and ease of assembly. Although a great deal of consideration has been given to anticipated requirements, the suitability of this package must always be evaluated for each individual breaker.

1.2 NOTES ON KIT COMPONENTS

Please check each item to ensure that the kit is complete before proceeding with the installation. All packages include an FB600E relay and in the case of ground fault an additional current transformer may be provided that is suited to the ground monitoring requirements specified.

The required current transformer ratios must also be specified for each circuit breaker. Current transformers are available in single ratio or multi-ratio (max. 2 taps).

Always ensure that all kit components, particularly the actuator and relay, mount in the locations specified in the instructions. If a factory bolt-on component occupies the area we have chosen, it will be necessary to either relocate the factory component or to utilize an alternate mounting method. Please consult the factory for any queries you may have.

1.3 BILL OF MATERIALS

1.3.1 KIT COMPONENTS

The manual reset retrofit kit is listed below. An automatic reset feature is available as an additional package. See the OPTIONS section for further information.

Item #	Quantity	Reference	Description
1	1	951C003	wiring harness
2	3	955B045	lower bus
3	3	953A007	upper bus
4	3	953A010	bus spacer
5	1	954B013	relay mounting plate
6	1	954B130	auxiliary relay mount
7	1	954B015	right angle adaptor
8	1	954B016	actuator mount
9	1	955A046	trip arm
10	3	951A090	insulating channel
11	1	951A005	mounting hardware kit consisting of:
	6	-	3/8-16 x 2" loctite countersunk capscrews
	3	-	1/2-13 x 1-1/4" loctite countersunk capscrews
	2	-	10-32 x 5/8" slot head machine screws
	4	-	10-32 x 3/8" socket head cap screws
	6	-	3/8-16 x 1-1/2" hex bolts
	6	-	3/8" flat washers
	6	-	3/8" lock washers
	10	-	#10 flat washers
	10	-	#10 lock washers
	4	-	10-32 x 3/8" slot head machine screws
	2	-	10-32 Nylock nuts
	1	-	actuator reset knob
	1	-	"PULL TO RESET" label
12	1	FB600E	static trip relay
13	1	MR600	actuator
14	1	951A027	actuator hardware consisting of:
	3	-	10-32 x 5/8" s.s. slot head machine screws
	3	-	10-32 x 1/2" s.s. slot head machine screws
	3	-	#10 s.s. lock washers
	3	-	#10 s.s. flat washers
	1	-	neoprene isolation gasket
	1	-	nylon push rod extender
	1	-	red push rod cap
	1	-	24" heat shrink tubing
	1	-	"PUSH TO RESET" label
15	3	952A008	1600-800/1A current transformer
16	1	AK2-50K	instruction manual

KIT COMPONENTS

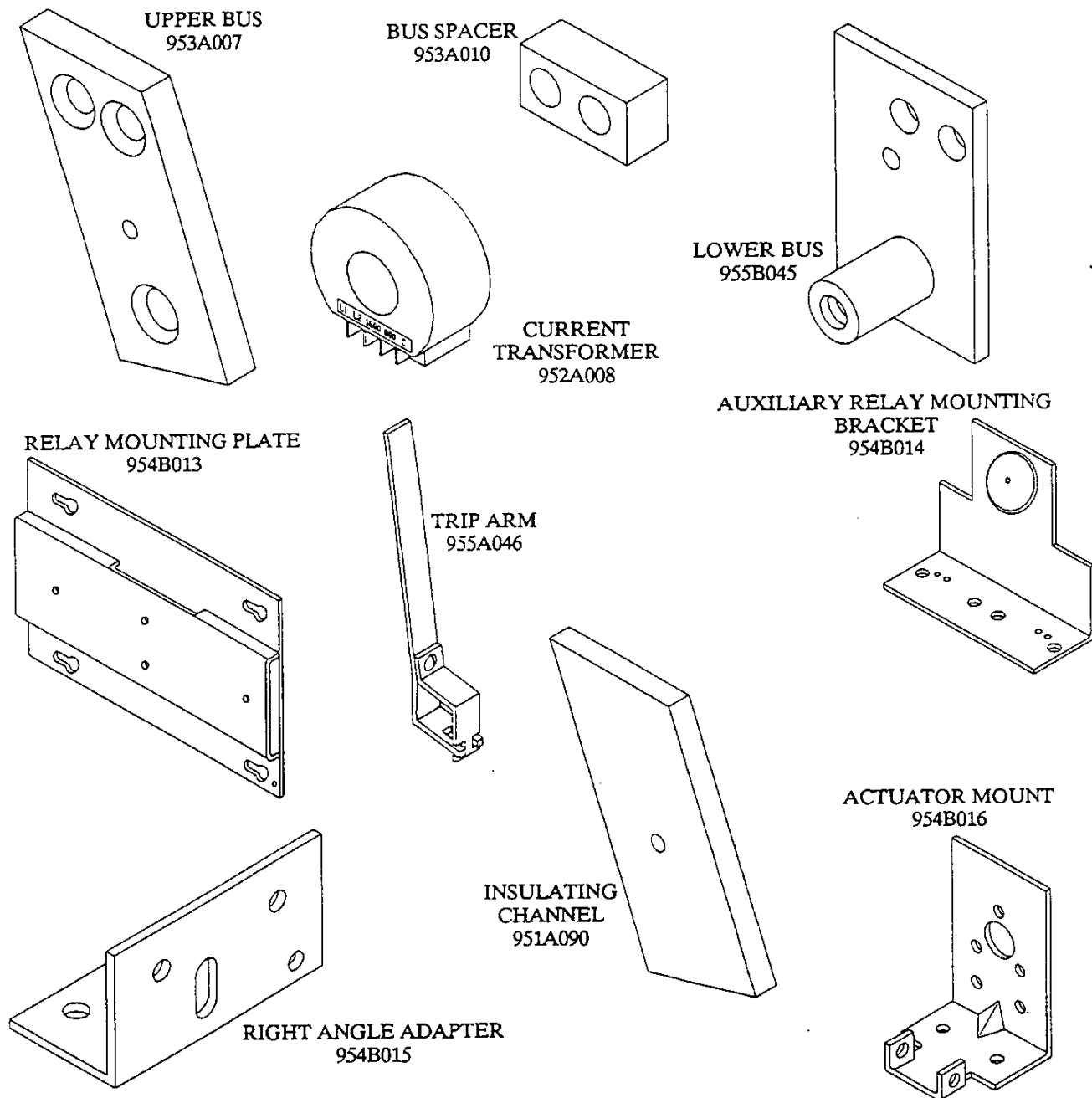


Figure 1-1

1.3.2 OPTIONS

The following material is not included in the kit and may be purchased separately if required. When ordering, please include the reference number and the description of the desired product.

<u>Reference</u>	<u>Description</u>
951A026	automatic reset package
952A...	ground fault current transformers
953B021	neutral bus section

2.0 INSTALLATION

2.1 RECOMMENDED TOOLS FOR INSTALLATION

To assist you in the installation process, it has been our experience that a few specific tools will simplify the task.

- 3/8" drive socket set with a universal joint attachment
- circlip pliers
- electric/pneumatic screw gun with interchangeable bits
- electric hand drill
- long slot head screwdriver
- Philips #3 screwdriver
- adjustable open-end wrench
- vernier calipers/measuring tape

An assortment of common hand tools and wrenches may also be used. Always use recommended torque values as per N.E.T.A. specifications.

2.2 RELAY MOUNTING

NOTE: The preferred relay mounting location for all AK-50 Circuit Breakers is the handle mechanism housing right side flange. See figure 2-1. Alternate locations may be preferable if this location is occupied by factory installed options. An additional bracket is included with the kit which will allow the relay to be mounted to the upper horizontal frame, if this is a more desirable location. The auxiliary relay mount #954B014 or the right angle adaptor #954B015 may be used separately or in conjunction to provide a suitable mounting.

1. Mount the relay to the relay mounting plate #954B013.
2. Slot the relay mounting plate to the auxiliary relay bracket #954B014 with the flange of the auxiliary bracket turned to face the relay. Do not secure with the 10-32 cap screw.
3. Trial fit this assembly to the right side of the handle housing as high up as possible, with the hasp indexed to the bottom of the breaker. Ensure that the relay door will open and no operating components of the breaker are impinged upon.
4. Mark this location on the handle side frame and auxiliary bracket. Disassemble the auxiliary relay bracket from the relay bracket. Using the auxiliary relay bracket as a template align the marks from the trial fit and mark locations on the outboard holes of the auxiliary bracket. Drill and tap the marked locations (2) to accept 10-32 hardware.
5. Affix the auxiliary relay bracket to the handle side frame in the location chosen using 10-32 x 3/8" S.H.M.S. s, #10 lock washers and #10 flat washers.
6. Slot the assembled relay and bracket to the auxiliary relay bracket with the hasp indexed to the bottom of the breaker and secure with one 10-32 x 3/8" socket head cap screw, one #10 lock washer and one #10 flat washer.

This completes the relay installation.

DRILLING LOCATIONS FOR RELAY MOUNTING

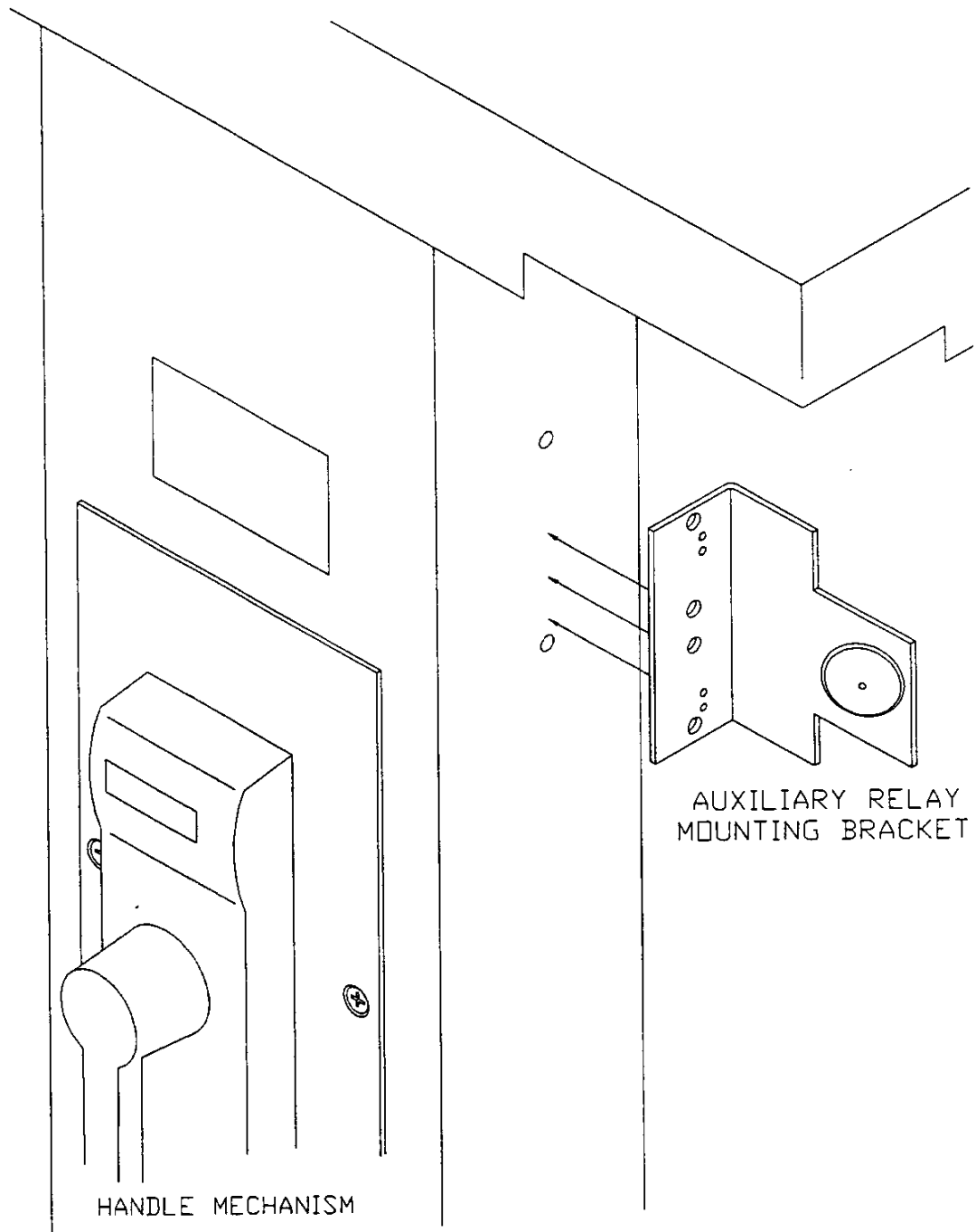
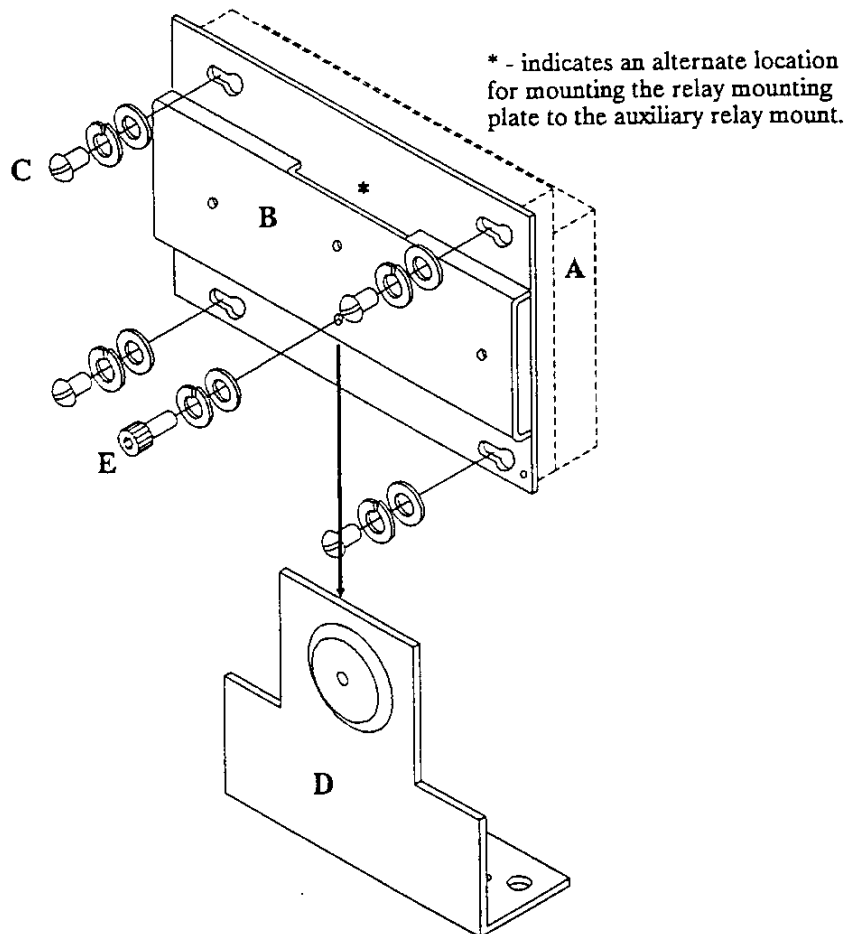


Figure 2-1

RELAY MOUNT



ITEM	QTY	REFERENCE	DESCRIPTION
A	1	FB600E	STATIC TRIP RELAY
B	1	954B013	RELAY MOUNTING PLATE
C	4		8-32x1/4" S.H.M.S.
	4		#8 LOCKWASHER
	4		#8 FLAT WASHER
D	1	954B014	AUXILIARY RELAY MOUNT
E	1		10-32x3/8" CAPSCREW
	1		#10 LOCKWASHER
	1		#10 FLAT WASHER

Figure 2-2

2.3 BUS AND CURRENT TRANSFORMER MOUNTING

1. Separate the base assembly from the handle mechanism and frame by following steps 2 thru 6.
2. Remove the main pin connecting the handle spring mechanism to the main contact shaft.
3. Remove the racking mechanism interlock.
4. Remove the contact arm springs from the chassis.
5. Disconnect the trip shaft accessory mechanism as applicable.
6. Remove the eight nuts holding the handle mechanism to the lower chassis and separate the components.
7. Remove the securing hardware for the three series overcurrent devices and remove these devices from the breaker. New hardware is provided for reinstallation of the upper and lower bus assemblies.
8. Clean the existing bus pads.

Refer to Figure 2-4 for bus and current transformer installation.

9. Bolt the lower bus sections #955B045 to the clean bus pads using the 3/8-16 x 1-1/2" hex bolts and hardware provided with the kit.
10. Slide the current transformers over the bus poles.
11. Install the upper bus sections #953A007 such that one end covers the current transformer post and the other end rests on the #953A010 spacer permitting fastening to the upper load side bus pad.
12. Fasten the upper bus sections using the special hardware provided.
13. Install the insulating channel #951A090 to the upper buses by using the 10-32 x 3/8" S.H.C.S.s, #10 flat washers and #10 lock washers.
14. Connect the appropriate wires from the FB relay to the current transformers. Refer to the wiring diagram for details. (Figure 2.5)

BUS AND CURRENT TRANSFORMER ASSEMBLY

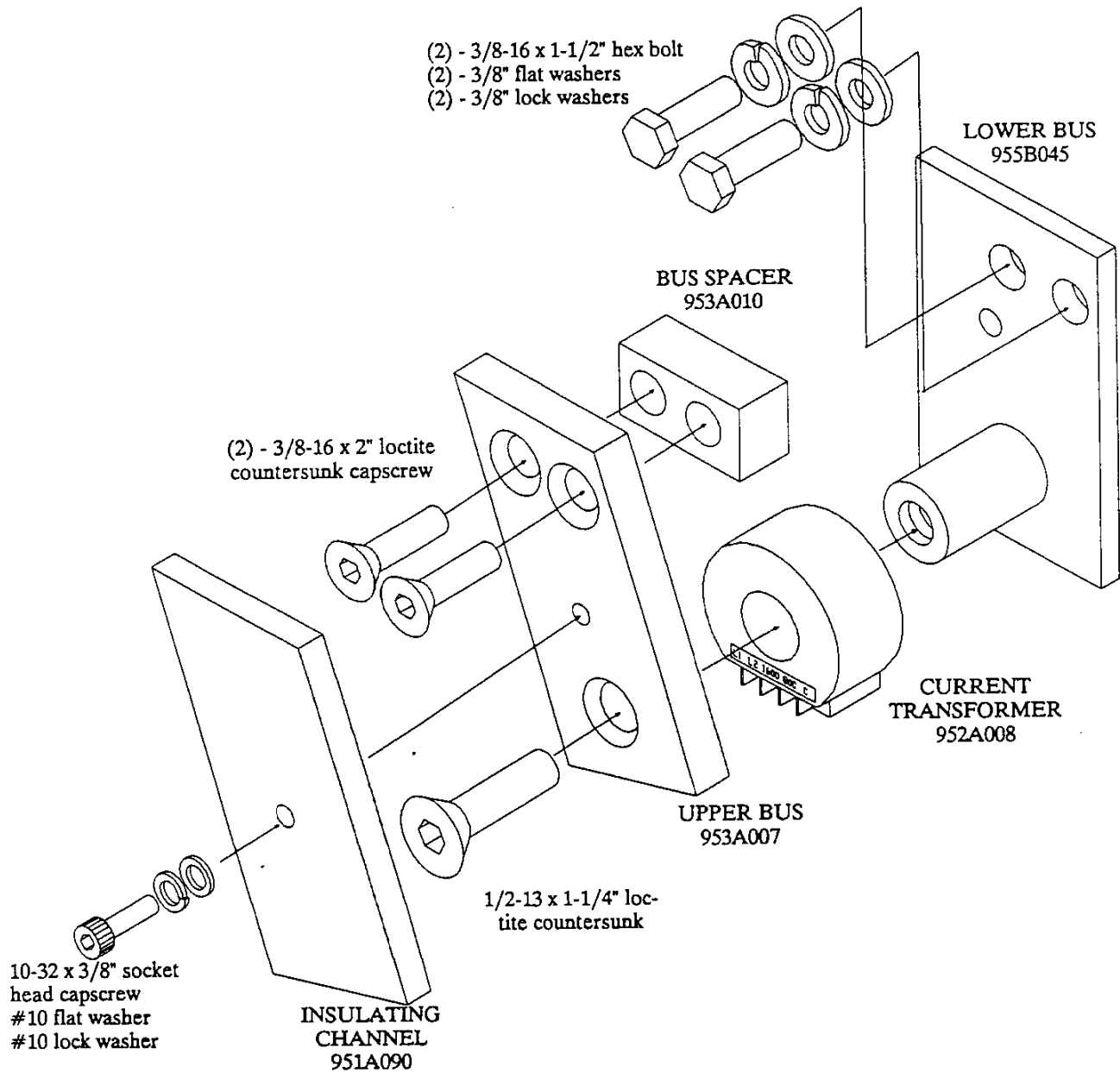


Figure 2-3

BUS AND CURRENT TRANSFORMER INSTALLATION

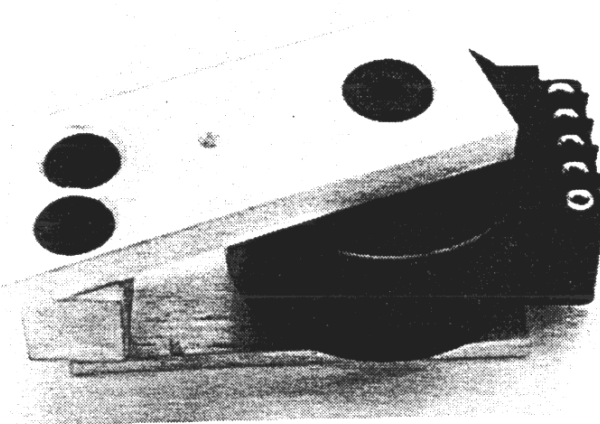
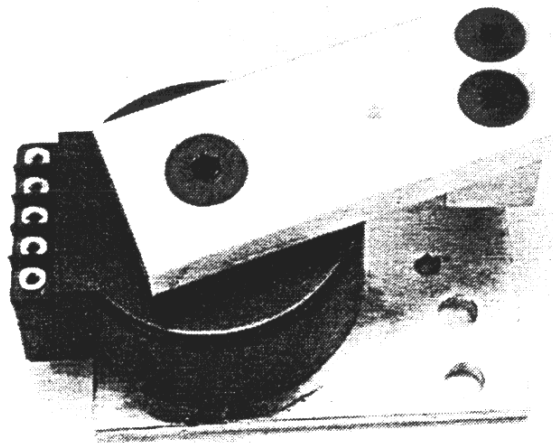


Figure 2-4

TYPICAL WIRING DIAGRAM AND HARNESS ASSEMBLY

#16 ga. 26 strand TEW green complete with 16 RA-10 crimp lug for ground

ASSEMBLY INSTRUCTIONS

Assemble wires in the order shown above. Crimp lugs to be mounted to wires as shown. Ty-wraps to be mounted to harness in size and quantity necessary allowing for appropriate location of the 12' spiral wrap.

*FOR GROUND FAULT APPLICATION

See wiring diagrams 2, 3, 2, 4 & 2, 5 in the FB600E manual. Wiring is provided in the Ground Fault Wiring Kit. The Kit has 3-4 foot lengths of #16 ga. TEW red 26 strand wire plus the required crimp lugs for field installation. (6-#16 RA-10)

TYPICAL FOR MULTI-TAP CONNECTION:

Choose signal terminal with desired amp. rating any C.T. 1600-800/1 Amp shown for clarity only

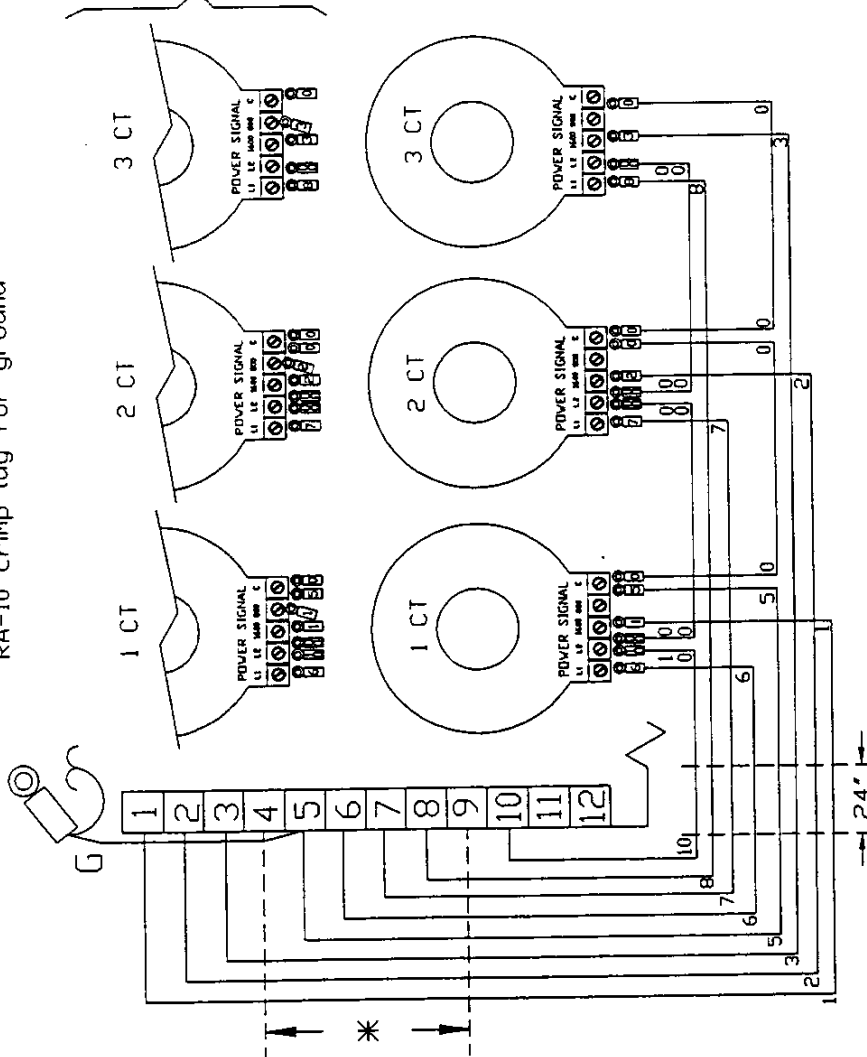
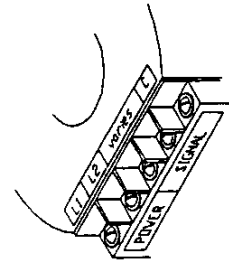
FOR RIGHT HAND WIRING TAKE-OFF:

Make connections as shown but as if #1 C.T. & #3 C.T. exchanged positions. (Harness will now be flipped to exit on right side.)

Note: For clarity the connectors are not shown mounted to the terminals.
16 RA-10 crimp lug

CABLE HARNESS ASSEMBLY & CONNECTION:

For connecting FB600E static trip relay to current transformers.
Note: Each harness requires 16 T&B crimp lugs (16 RA-10) plus one additional 16 RA-10 for ground.



FB TERMINAL SIDE, T & B LUG	WIRE #DUTY	C.T. TERMINAL SIDE, T & B LUG	#16GA.26 STRAND WIRE COLOUR
Nil	1	16 RA-10	Blue
Nil	2	16 RA-10	Blue
Nil	3	16 RA-10	Blue
Nil	5	16 RA-10	Yellow
16 RA-10	0	16 RA-10	Yellow
Nil	6	16 RA-10	Black
Nil	7	16 RA-10	Black
Nil	8	16 RA-10	Black
Nil	10	16 RA-10	White
16 RA-10	00	16 RA-10	White
Nil	G	16 RA-10	Green

#16 ga. 26 strand TEW wire-colour and length as specified in the following table

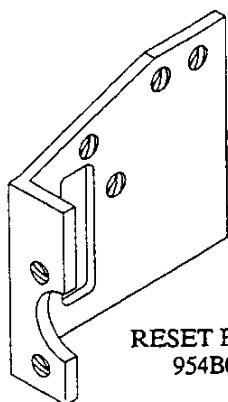
Figure 2-5

2.4 AUTOMATIC RESET PACKAGE (OPTIONAL)

The components listed below permit the installation of an actuator with automatic reset. For purchasing details, please refer to the OPTIONS section.

Kit #951A026

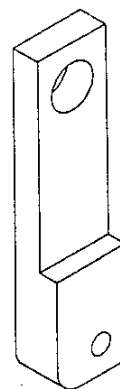
<u>Item #</u>	<u>Quantity</u>	<u>Reference</u>	<u>Description</u>
1	1	954B067	reset plate
2	1	954A068	reset link
3	1	951A069	drop link
4	1	954A065	reset arm
5	1	954A064	reset shaft
	2		1/4" x 1/4" x 10-24 shoulder bolt
	1		1/4" x 3/8" x 10-24 shoulder bolt
	1		5/16" x 1-1/2" shoulder bolt
	1		5/16" Nylock nut
	2		10-24 Nylock nut
	2		10-32 x 1/2" S.H.M.S.s
	2		#10 flat washers
	2		#10 lock washers
	1		3/16" x 1-1/2" stainless steel round pin
	1		3/16" pushnut

AUTOMATIC RESET COMPONENTS (OPTIONAL)

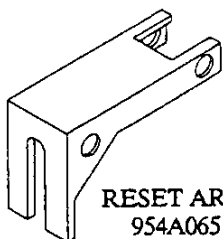
RESET PLATE
954B067



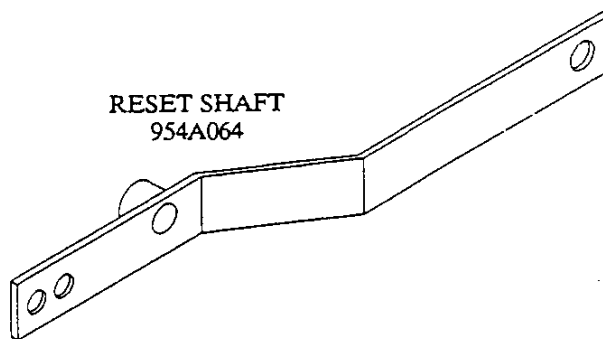
RESET LINK
954A068



DROP LINK
951A069



RESET ARM
954A065



RESET SHAFT
954A064

Figure 2-6

2.5 ACTUATOR INSTALLATION

2.5.1 MANUAL RESET

CAUTION/DANGER!!!

BEFORE PROCEEDING WITH THIS WORK, ENSURE THAT THE BREAKER IS IN THE TRIPPED POSITION. A CHARGED SPRING MECHANISM IS EXTREMELY HAZARDOUS AND CAN RESULT IN SERIOUS INJURY TO ANYONE WORKING ON THIS EQUIPMENT.

1. Refer to figure 2-8 for the drilling locations to the side frame of the breaker. Remove the template in the manual (page 17) and index it to the left side frame using the trip shaft as the main index location. The holes may be drilled and tapped to accept 10-32 hardware or cleared for use with 10-32 hardware and nylock nuts.
2. Remove the threaded shaft and solenoid plunger from the actuator body by removing the nylock nuts on the threaded shaft and cut 3/8" of material off the extension at the solenoid end. See figure 2-9. Ensure that all the components are absolutely clean upon reassembly.
3. Secure the actuator to the actuator mounting bracket #954B016 with the 10-32 x 1/2" S.H.M.S.s supplied with the actuator. Adjust the stroke nut (nut closest to actuator body) to allow 1/2" to 5/8" of solenoid movement. Do not reinstall the strike nut (nut furthest from actuator body) as it is not required.
4. Align the holes of the actuator bracket, see figure 2-9, with the drilled locations in the side frame. Ensure that the actuator solenoid is facing toward the trip shaft of the breaker and the threaded shaft is facing toward the front of the breaker. Temporarily affix in place by clamping or securing with at least one screw. This assembly may have to be removed for final adjustment in step #5.
5. Install the trip arm to the trip shaft with the clamp screw accessible from the front of the breaker. The trip arm should drop vertically from this position. The trip arm may then be aligned horizontally with the centre line of the actuator solenoid extension and tightened to the trip shaft. Refer to figure 2-9 for trip arm and actuator clearances. Ensure that the actuator is reset when measuring this clearance.
Adjustment of this clearance is achieved by cutting the solenoid shaft extension. Where clearances are excessive the plastic sleeve supplied with the actuator may be cut to an appropriate length. This sleeve can be placed over the shaft extension and retained using an adhesive. (Actuator may be packaged with the sleeve already installed. This may be removed if required.)
6. Once the trip clearances are set affix the installed actuator bracket to the side frame of the breaker using the 10-32 hardware provided.
7. Install the reset knob to the threaded shaft of the actuator and place the identification label "Pull to Reset" in close proximity to the reset knob.
8. Discharge the actuator manually and determine if positive contact is made with the trip arm. When this is operating satisfactorily the trip action of the breaker may be tested by charging the breaker to the closed position and manually discharging the actuator.
9. These procedures must be completed prior to the installation of the automatic reset.

The complete MANUAL RESET ASSEMBLY is illustrated in figure 2-10.

ACTUATOR MOUNTING TEMPLATE

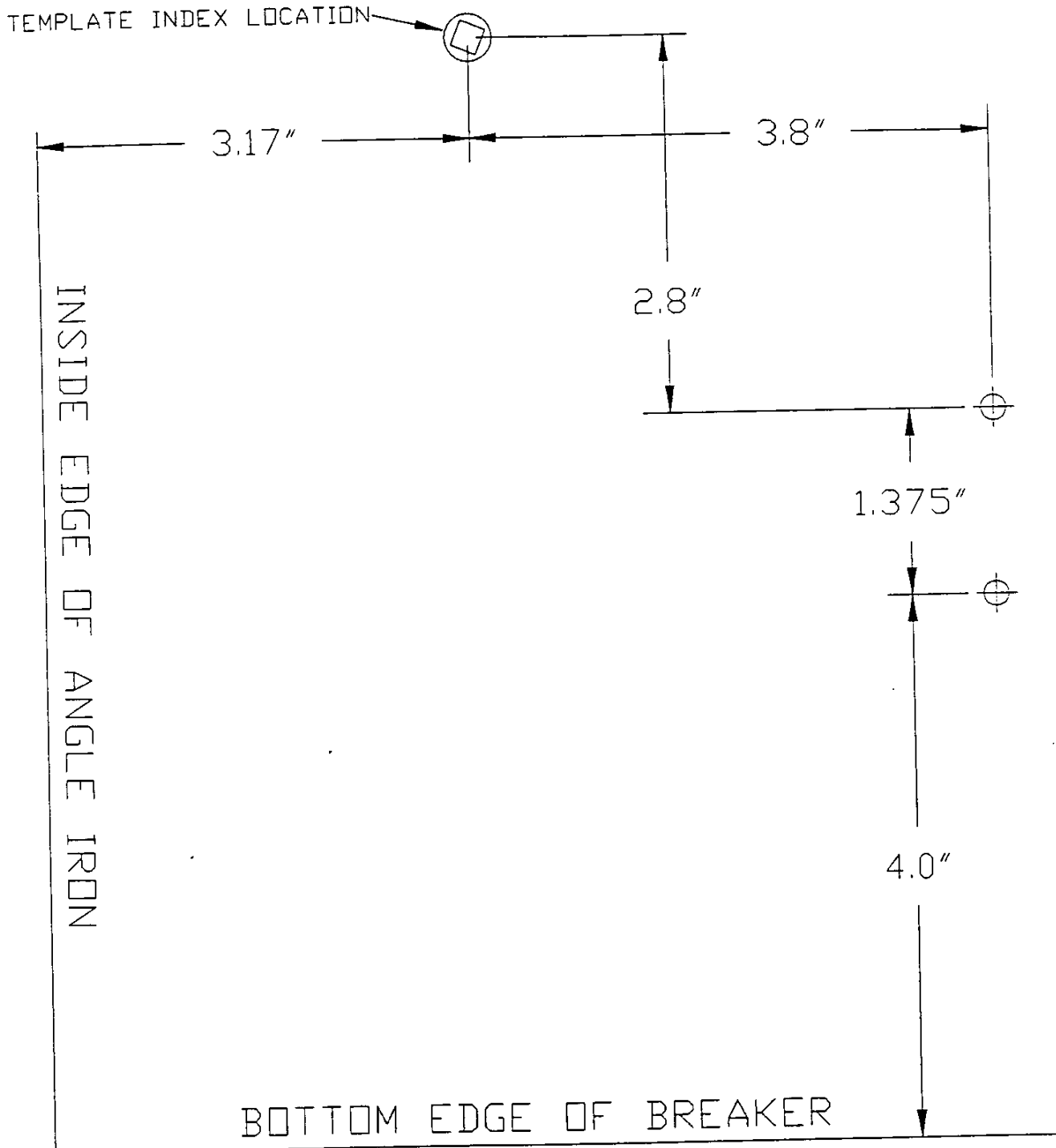


Figure 2-7

ACTUATOR AND TRIP ARM MOUNTING LOCATIONS

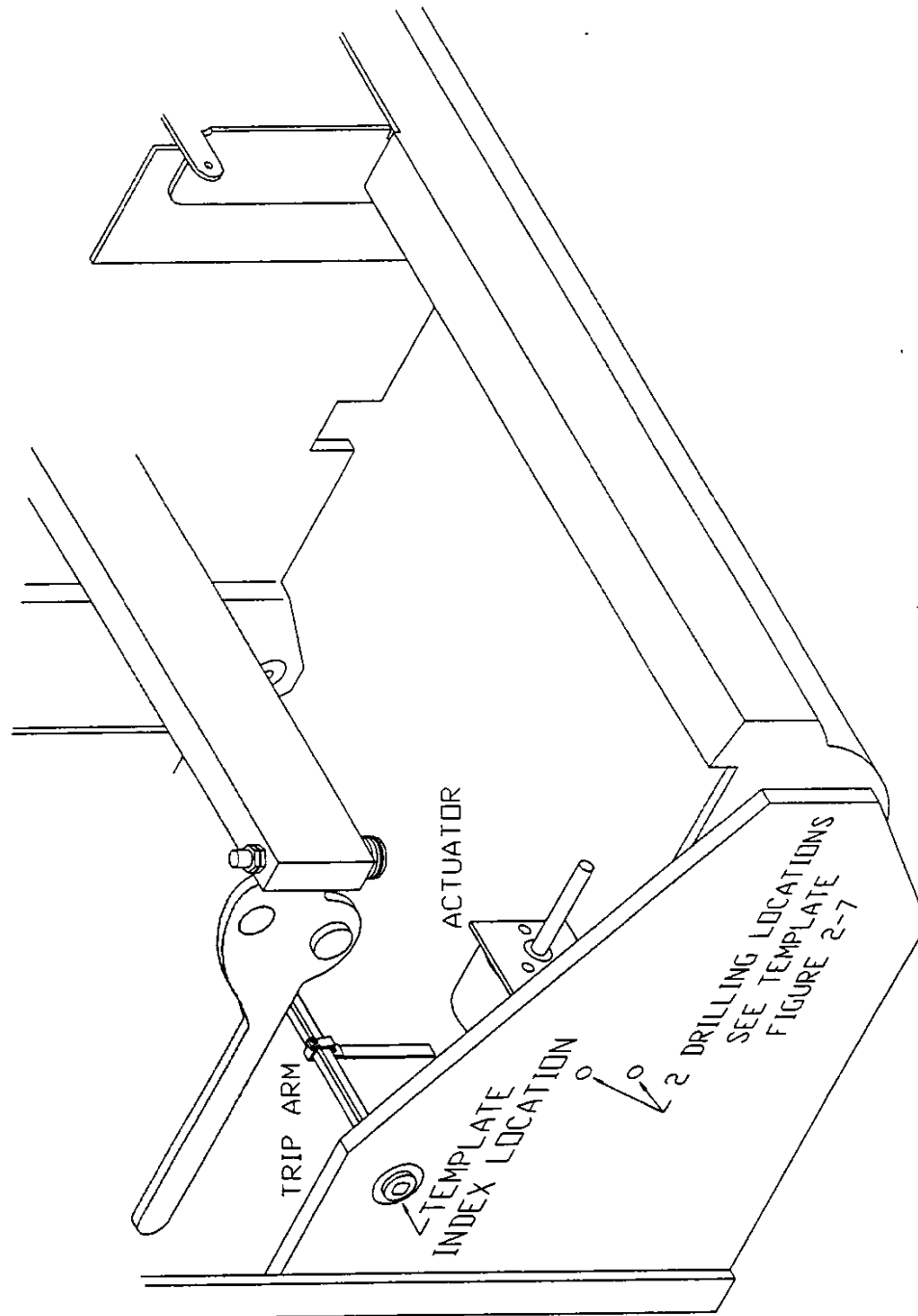


Figure 2-8

ACTUATOR CLEARANCE

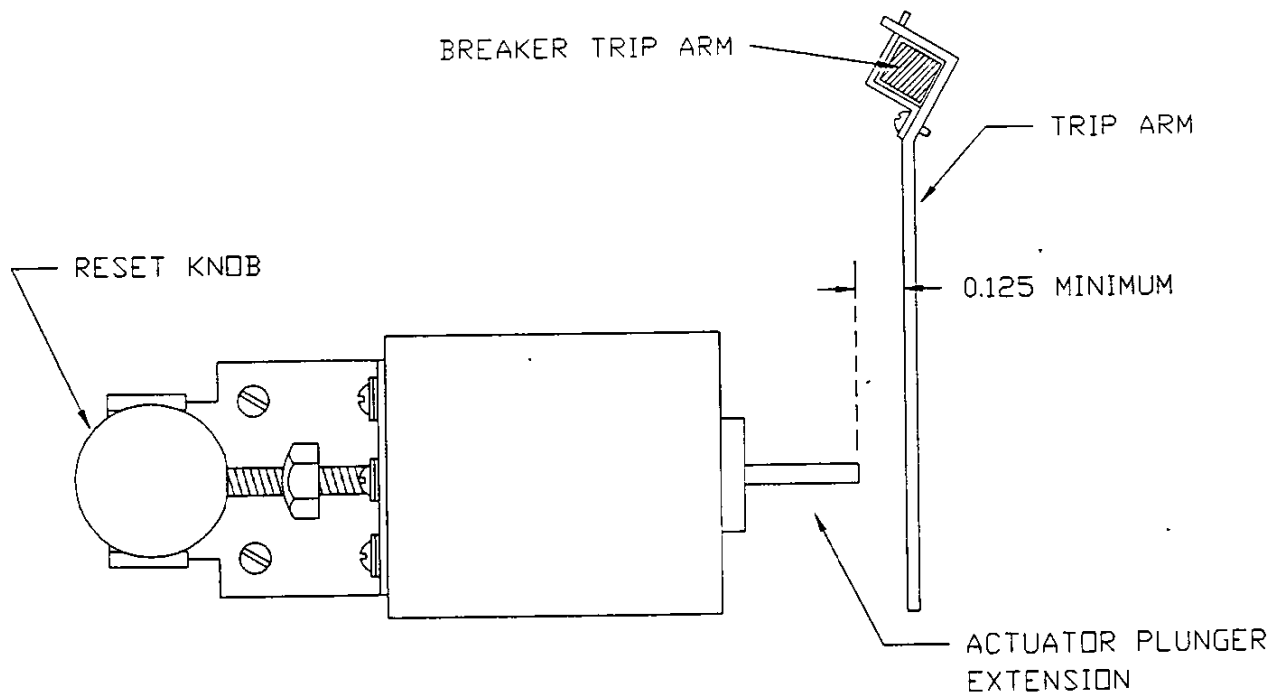
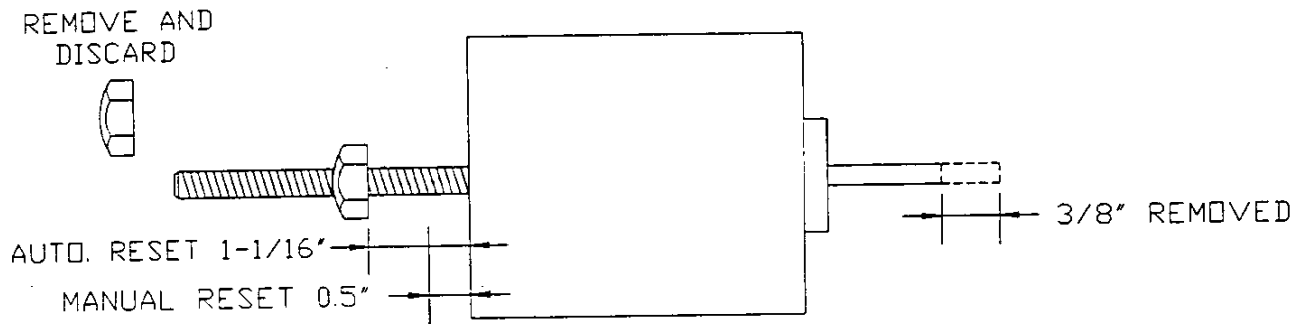


Figure 2-9

MANUAL RESET ASSEMBLY

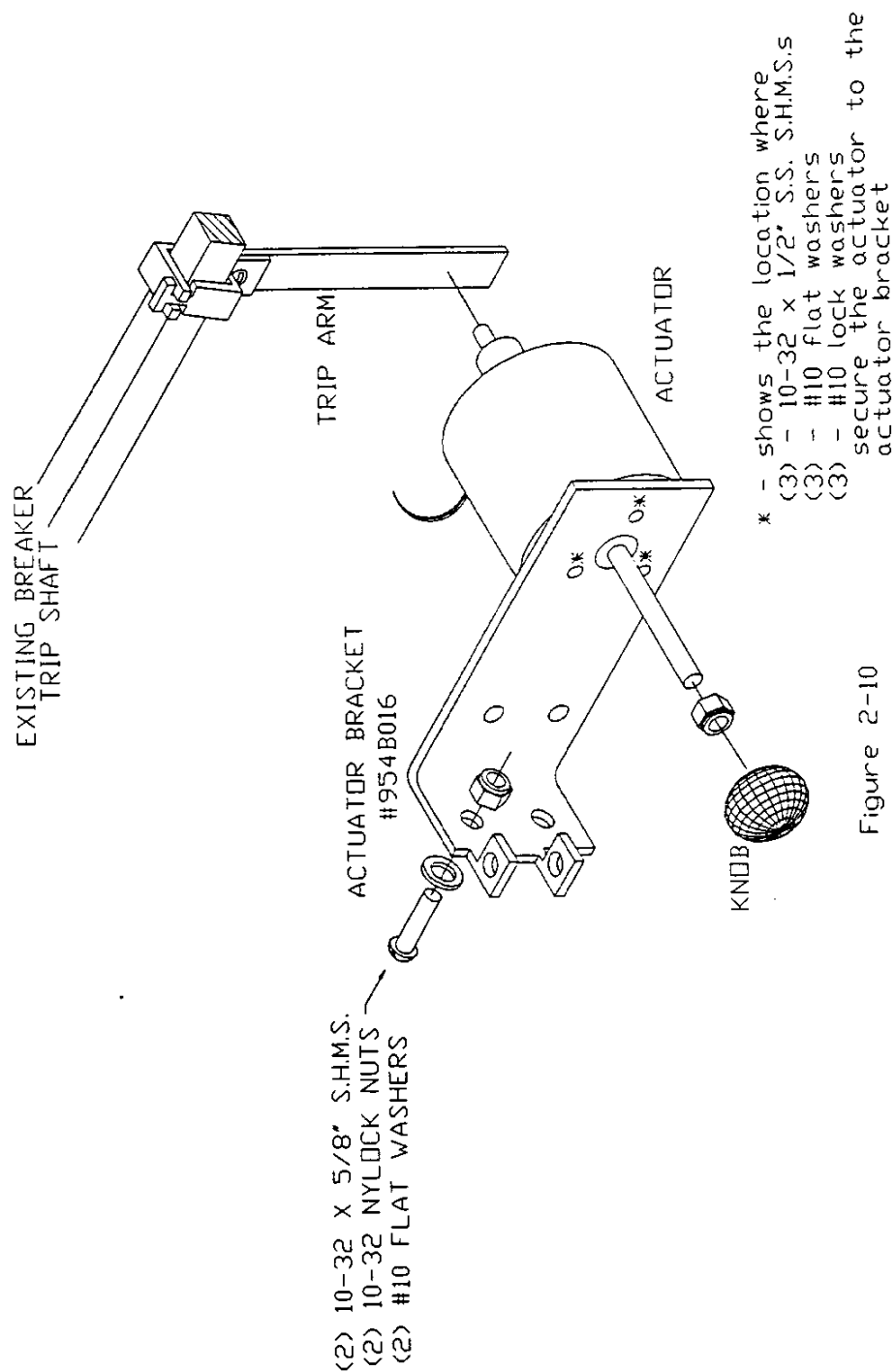


Figure 2-10

2.5.2 AUTOMATIC RESET

CAUTION/DANGER!!!

BEFORE PROCEEDING WITH THIS WORK, ENSURE THAT THE BREAKER IS IN THE TRIPPED POSITION. A CHARGED SPRING MECHANISM IS EXTREMELY HAZARDOUS AND CAN RESULT IN SERIOUS INJURY TO ANYONE WORKING ON THIS EQUIPMENT.

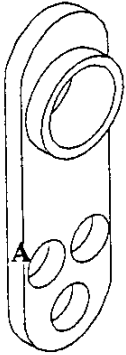
1. Complete steps 1 and 2 of section 2.5.1 Manual Reset before proceeding with automatic reset installation.
2. Remove one Nylock nut from the threaded portion of the actuator shaft and adjust the remaining nut to allow 1-1/16" clearance from the body of the actuator. This measurement is taken with the actuator reset. See figure 2-9.
3. Install the actuator to the actuator bracket using the 10-32 x 1/2" hardware supplied with the actuator and install the reset plate to the actuator bracket per figure 2-11.
4. Follow steps 4 thru 6 under manual reset for assembly to the circuit breaker, and trip function. Do not install the reset knob and label. These may be discarded.
5. Install the reset arm to the reset plate by slotting the flange of the reset arm over the threaded portion of the actuator shaft between the actuator bracket and nylock nut. The installed position is determined by securing the reset arm to the reset plate with the 5/16 x 1-1/2" shoulder bolt to the tapped hole "B" in the reset plate. A 5/16" nylock nut is supplied to retain the shoulder bolt.

Once the reset arm has been installed the actuator can be placed in the reset position. This may be confirmed by rotating the reset arm in a clockwise direction until the flange of the reset arm is prevented from rotating further by contacting the nylock nut on the actuator shaft. The flange of the reset arm will be at 90 degrees to the threaded shaft and the formed channel will lie directly above and parallel to the threaded shaft of the actuator. Minor adjustments of the strike nut may be necessary to achieve this position.
6. Install the reset shaft to the drop link using the 1/4" x 1/4" x 10-24 shoulder bolt provided. Do not bind the components when making this connection. Tighten the shoulder bolt until it bottoms in the drop link. If free movement at the pivot point is not evident back the shoulder bolt out slightly ensuring that free movement is possible.
7. Install the drop link to the 1/2" round shaft used as the main spring anchor point. This will be located directly above the actuator when it is installed on the breaker. First remove the main contact springs from the breaker. Then remove one circlip from the end of the shaft indexed to the inside of the breaker. Withdraw the shaft from the cradle until it is clear of the cradle. The drop link may be moved to a position directly against the inside edge of the cradle. It must be installed with the pivot point indexed toward the inside of the breaker. See fig 2-11. The shaft may now be reinstalled.

DO NOT REINSTALL THE MAIN CONTACT SPRINGS UNTIL FINAL TESTING HAS BEGUN

8. The reset shaft may be affixed to the reset plate using a 1/4" x 3/8" x 10-24 shoulder bolt aligned with hole "A" of the reset plate. Use a 10-24 nylock nut to retain the shoulder bolt. Properly installed, the reset shaft will lie directly above the actuator and will be parallel to the actuator shaft.
9. Install the reset link to the reset bar using a 1/4" x 1/4" x 10-24 shoulder bolt and a 10-24 nylock nut. The reset link must be indexed with the inside 3/16" hole located toward the actuator body. Align the same hole of the reset link with the 3/16" hole in the reset arm. Pin together using a 3/16" x 1-1/2" stainless steel pin and pushnut provided with the hardware.
10. If these components will not engage, turn the nylock nut on the actuator shaft counterclockwise until engagement of the holes is possible.

This completes the installation of the Automatic Reset Assembly. Ensure that all hardware and pushnuts have been installed before proceeding to the testing and calibration section.

ADDENDUM

THE RESET LINK #954A068 WAS REVISED TO INCLUDE AN ADDITIONAL HOLE THAT IS NOT INDICATED IN THE MANUAL. IN LIGHT OF THIS, USE THE HOLE MARKED "A" IN THE MOUNTING PROCEDURE.

AUTOMATIC RESET ASSEMBLY

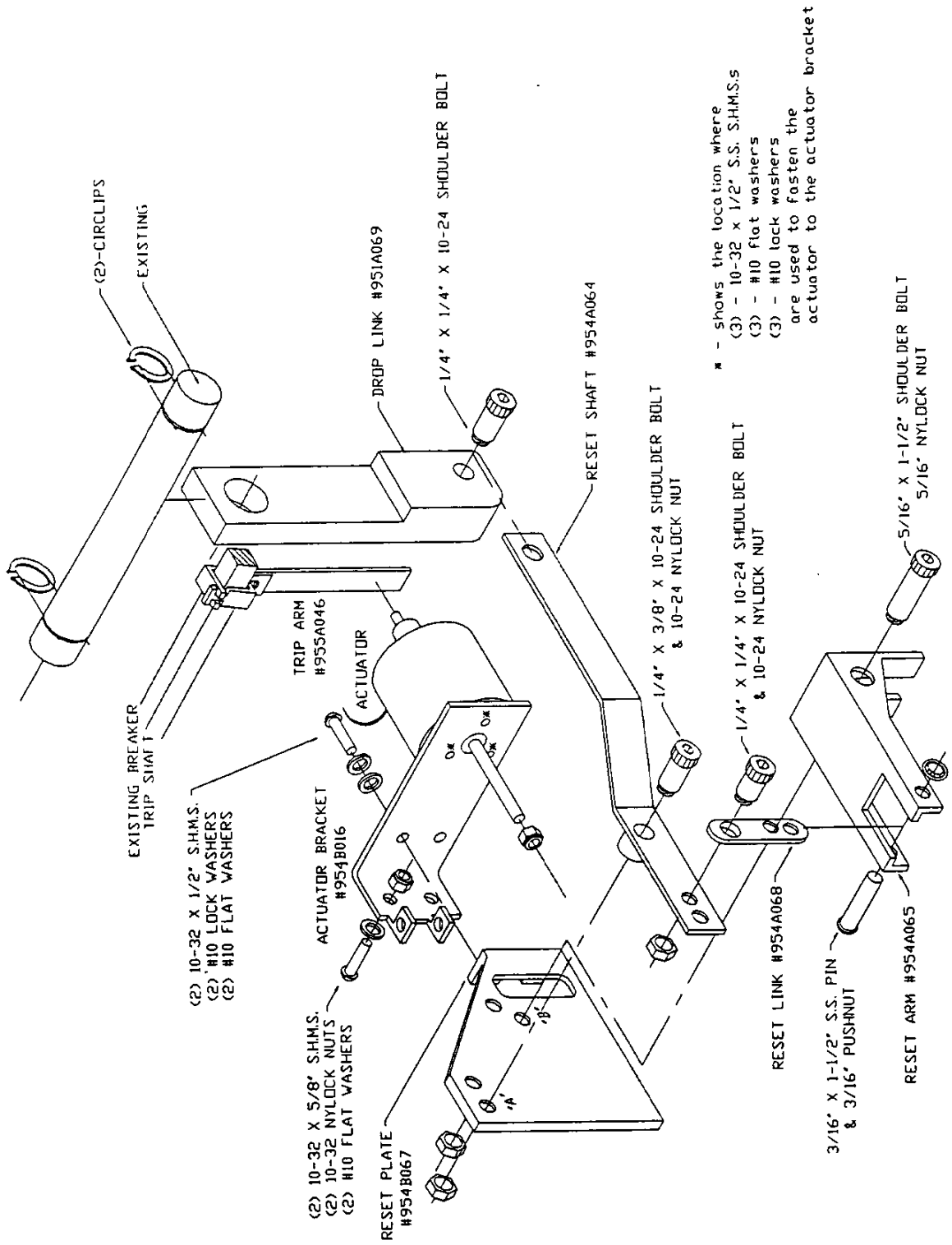


Figure 2-11

3.0 TESTING AND CALIBRATION

3.1 ACTUATOR TRIPPING

3.1.1 MANUAL RESET

Adjustment of the trip action is possible by adjusting the nylock nut on the actuator shaft. Adjust this nut until approximately 1/2" to 5/8" of solenoid travel is possible. Do not adjust for greater travel. Establish trip paddle clearance as shown in figure 2-10.

Operate the breaker using the charging mechanism and observe the trip action by manually discharging the actuator.

3.1.2 AUTOMATIC RESET

1. To begin, ensure that the actuator is in the reset position and the breaker is in the discharged (open) position. Check this before proceeding.
2. Manually lift the main contact shaft to the closed (on) position. Visually check to see if the flange of the reset arm rotates in a counter clockwise direction away from the nylock nut of the actuator shaft. This must occur or the trip function will not operate. Maintain this position.
3. Discharge the actuator manually and observe the stroke action. This will be limited by the flange of the reset arm. This travel should be sufficient to trip the breaker and is covered under item 5 of the Manual Reset installation.
4. Reset action may be observed by moving the main contact shaft of the breaker to the open (off) position. This will cause the reset arm to rotate clockwise and reset the actuator. Lift the main contact shaft toward the closed position and observe if the solenoid plunger of the actuator remains in the reset position. If the solenoid plunger moves to the trip position adjustment of the strike nut is necessary. Adjust this nut by rotating clockwise to exert light pressure on the flange of the reset arm. Repeat this procedure until successful reset is achieved.
5. Reinstall the main contact springs and repeat procedures using the charging mechanism for operation. Ensure that all hardware and pushnuts are installed and tightened.

3.2 RELAY TESTING

To test the completed installation, please refer to the FB600 static trip relay manual. We recommend the use of a microhm meter to check the resistance across the new bus installation.

MULTILIN RETROFIT KIT WARRANTY

The installation instructions and components of this kit are intended for use by qualified service personnel only. Multilin, Inc. will not accept responsibility or liability for faulty installation or servicing, or for consequential damages or expenses sustained as a result of incorrect installation. Multilin, Inc. will be responsible for the replacement or refund of purchase price of components that are found to be defective in materials or manufacture as determined by Multilin, Inc. and only when the said components are used as specified. All components are subject to the above replacement/refund warranty for 1 year from the purchase date.



GENERAL ELECTRIC AK1-2-3-50

MULTILIN, INC.

CUSTOMER RESPONSE

To help serve you better, please fill in the information below.

Retrofit Kit No. _____

Date of Purchase: _____

Purchased From: _____

Name: _____ Title: _____

Company: _____

Address: _____

Telephone: _____

	Excellent			Poor		No Comment
Product meets your requirements	5	4	3	2	1	0
Free from defects on arrival	5	4	3	2	1	0
Delivered on time	5	4	3	2	1	0
Clear instruction manual	5	4	3	2	1	0
Quality of construction	5	4	3	2	1	0
Ease of installation	5	4	3	2	1	0
After sales service	5	4	3	2	1	0
Salesman's knowledge	5	4	3	2	1	0

Product improvement suggestions: _____

Things you liked about the product: _____

Other products you would like to see Multilin develop: _____



GENERAL ELECTRIC AK1-2-3-50

Indicate the Multilin products for which you wish to receive information.

- ☐ Model 169 Motor Protection Relay
- ☐ Model 169+ Motor Protection Relay
- ☐ Model 139 Motor Protection Relay
- ☐ Protect4Z Motor Protection Relay
- ☐ TS3 Transformer Temperature Control
- ☐ TB3 Scanning Temperature Monitor
- ☐ SM-6/SM-10 Scanner
- ☐ HT3 Heat Tracing Control System
- ☐ AV3 Heat Tracing Monitoring System
- ☐ FB600E Static Trip Relay
- ☐ Other (Please specify) _____

FOLD ALONG LINE

Place
Postage
Here

MULTILIN, INC.
c/o General Manager
P.O. Box 2700
215 Anderson Avenue
Markham, Ontario
Canada
L3P 4C7

Staple Here