

*Breakers for incoming lines and
motors CH.P.S.
TYPE-AM-15-150
#KK-678465-1*

GEI-17352B

INSTRUCTIONS

Switchgear

POWER CIRCUIT BREAKERS

Magne-Blast Breakers

**Type AM-15-150-0
1200 and 2000 Amperes**

**Type AM-15-250-1,
1200 and 2000 Amperes**

**Type AM-15-250-2
2000 Amperes**

**With
MS-11 and MS-12 Mechanism**



GENERAL  **ELECTRIC**

CONTENTS

	PAGE NO.
INTRODUCTION	3
RECEIVING - HANDLING - STORAGE	3
DESCRIPTION	3
INSTALLATION	3
PRECAUTIONS	3
INSPECTION	4
OPERATION	4
PRINCIPLES OF OPERATION	4
ADJUSTMENTS	5
MAINTENANCE	6
PERIODIC INSPECTION	6
LUBRICATION	8
REPLACEMENT OF PARTS	8
RENEWAL PARTS	8

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.

MAGNE-BLAST AIR CIRCUIT BREAKER

TYPE AM-15-150-0

TYPE AM-15-250-1

TYPE AM-15-250-2

WITH MS 11 AND MS 12 MECHANISM

INTRODUCTION

The Magne-Blast Air Circuit Breaker shown on the cover is a triple pole single throw breaker with integral operating mechanism and is arranged for application in Vertical Lift Metal Clad Switchgear.

The AM-15-150-0 Breaker is available in 1200 and 2000 Ampere Current Ratings, the AM-15-250-1 Breaker is available in 1200 and 2000 Ampere Current Ratings and the AM-15-250-2 Breaker is available in 2000 Ampere Current Rating only. These Breakers are designed for application at a maximum circuit voltage of 15,000 volts. Within the published interrupting current range; the AM-15-150-0 Breaker has an interrupting capacity of 150,000 KVA, the AM-15-250-1 and AM-15-250-2 Breakers have an interrupting capacity of 250,000 KVA, on a duty cycle basis consisting of two closing-opening operations with a time interval of 15 cycles between them.

The AM-15-150-0, 1200 Ampere Breaker and the AM-15-250-1, 1200 and 2000 Ampere Breakers are supplied with the MS-11 Mechanism only. The AM-15-150-0, 2000 Ampere and the AM-15-250-2, 2000 Ampere Breakers are supplied with the MS-12 Mechanism.

The Breaker-Mechanism combination is designed only for electrical closing and the Maintenance Closing Lever is supplied only for use in making adjustments. NEVER ATTEMPT MANUAL CLOSING WITH THE BREAKER IN SERVICE, for under such conditions, sufficient closing force and speed cannot be applied.

RECEIVING, UNPACKING AND STORAGE

Each Circuit Breaker is carefully inspected and then is packed by workmen experienced in the proper handling of electrical switchgear.

Immediately on receipt of a Circuit Breaker, 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's Sales Office should be notified promptly.

UNPACKING

The breaker should be removed from the crating with sufficient care so that no damage will result from rough handling. It frequently happens that "loose parts" associated with the apparatus are included in the crate. Care should be taken to make certain that these parts are not overlooked.

After the Breaker has been removed from the crating, the brace and steel hooks, holding the Box Barriers in position, should be removed and discarded. The red painted hex, head shipping bolts holding the top of the box barrier to the frame should be replaced by the thumb screws as shown in Fig. 4.

STORAGE

It is advisable that the Breaker be set up immediately, but if it must be stored, it should be kept in a clean dry place, free from corrosive gases or fumes. During construction work, particular care should be taken to protect this apparatus from moisture and cement dust as this combination has very corrosive effects on many parts. All machined parts except those on the contacts should be coated with heavy oil or grease to prevent rusting.

DESCRIPTION

The component parts of the Magne-Blast Air Circuit Breakers Type AM-15-150-0, AM-15-250-1 and AM-15-250-2 can be seen in a cross section view, Fig. 4.

In this view the following description of a closing, tripping and tripfree operation may be followed readily.

When the solenoid coil is energized, the armature is driven upwards and the plunger rod threaded into the armature raises the roller carried by the set of links fastened to the operating crank. This action rotates the crank and closes the breaker contacts. After the armature and linkage have reached the end of their travel, the prop rotates into position under each end of the pin through the roller and the mechanism is held in the closed position. The solenoid coil is de-energized by a relay which is actuated by the cut-off switch at the end of the armature stroke, and the armature is returned by gravity to its original position.

When the trip coil is energized, the trip plunger forces the latch off of the roller causing the linkage to collapse which allows the opening springs to rotate the main crank and open the contacts. During the opening stroke, auxiliary switch contacts open to interrupt the trip coil circuit. After the breaker is open, the mechanism linkage returns to its normal position, and a spring resets the trip latch.

In case the trip coil is energized while the breaker is closing, the trip plunger forces the latch off the trip roller allowing the mechanism linkage to collapse and the breaker to re-open. The armature completes its closing stroke, however, and the coil is de-energized as in a normal closing operation.

INSTALLATION

Outline, wiring and all other drawings relating to dimensions, electrical connections, and control should be on hand so that points in question are readily settled as they arise. Before any installation work is done, consult these drawings and the Instruction Book for the "Metal-Clad Switchgear".

The complete Breaker Mechanism unit has already been assembled, adjusted, inspected, and tested at the factory in accordance with the detailed adjustments listed under the section "OPERATION". It is possible, however, that unusually rough handling

or transportation may have caused some loosening or disturbance of the apparatus to warrant a rechecking and in some cases, readjustment.

Before proceeding, the following precautions should be noted:

PRECAUTIONS

Make certain that all Control Circuits have been de-energized.

Make certain that the Primary Breaker Circuits are open and effectively grounded.

Never work on either the breaker or mechanism while in the closed position unless the Prop and Trip Latch have been wired or blocked to prevent accidental tripping.

INSPECTION

1. Check all nuts, bolts, screws and cotter pins to make certain that they are properly tightened.
2. Inspect all wiring and make certain that no damage was done during installation. Check all terminals, screws, and connections and test the circuit for possible short circuits or grounds.
3. Position the maintenance closing lever under the solenoid coil as shown in Fig. 5 & 6. Push down on the handle to close the breaker. With a screwdriver (CAUTION: Keep the finger clear of the linkage as accidental tripping or fast movement could cause severe injury) rotate the prop from under the closing roller pin with maintenance operating handle pushed all the way down, and then raise the handle to open the breaker. Operate in this cycle of slow close and slow open operation several times making certain that all parts are working freely.
4. Check the operating voltage for both the closing coil and trip coil to determine if, with line drop, it is within the limits specified on the nameplate. In the case of a rectifier operated mechanism, the D.C. voltage across the coil terminals with full closing coil current flowing should be 110 volts. Adjustment is possible by means of the tap resistor in the rectifier A.C. line. For detailed description of this adjustment refer to Instruction Book on Copper Oxide Rectifiers for Circuit Breaker Closing Service.

OPERATION

After the breaker has been closed and opened slowly with the maintenance closing lever and the voltage supply for both the closing and the trip coils checked as described under "Installation", check the following items:

1. The wipe of the primary contacts.

2. The gap between the primary contact fingers and the movable primary contact block with the intermediate contacts just touching.
3. The gap between the intermediate contacts with the arcing contacts just touching.
4. The gap between the primary contacts with the breaker in the open position.
5. The latch wipe.
6. The prop clearance.
7. The latch clearance.
8. The plunger clearance.

All these dimensions are given under "Adjustments".

The solenoid mechanisms are trip free and will operate satisfactorily over the standard ranges for closing and tripping voltages as discussed below.

For electrical operation, control power may be from either an Alternating or Direct Current source. In the case of Alternating Current, it is necessary to use a Copper-Oxide Rectifier to supply the Direct Current required by the closing coil.

Operating ranges are given on the mechanism nameplate. Ordinarily, standard ranges apply and are as follows:

STANDARD CLOSING & TRIPPING VOLTAGE RANGE

Nominal Voltage	Closing Range	Tripping Range
125 V.DC.	90-130 V.DC.	70-140 V.DC.
250 V.DC.	180-260 V.DC.	140-280 V.DC.
220 V.A.C.	180-240 V.A.C.	180-240 V.A.C.

PRINCIPLES OF OPERATION

The Magne-Blast Circuit Breaker utilizes magnetic forces produced by the load current through the blow-out coils to interrupt the arc. These magnetic forces together with an arc stream from the "Boosters" drives the arc from the contacts out along the diverging arc runners into the "interleaving" arc chutes. The tapered fins that project alternately from the two opposite inner surfaces of the chute deflect the arc into a gradually deepening serpentine path, this lengthening and consequent cooling action rapidly increases the electrical resistance of the arc to cause interruption. Hot exhaust gases are cooled while passing through the muffler at the end of the arc chute. Easily removable box barriers encase each phase separately, segregating the interrupting units and providing insulation between phases and from each phase to the grounded frame.

For following the closing tripping and trip-free operations Fig. 4 may be readily consulted.

When the solenoid coil is energized, the armature is driven upwards and the plunger rod threaded

into the armature raises the roller carried by the set of links fastened to the operating crank. This action rotates the crank and closes the breaker contacts. After the armature and linkage have reached the end of their travel, the prop rotates into position under each end of the pin through the roller and the mechanism is held in the closed position. The solenoid coil is de-energized by a relay which is actuated by the cut-off switch at the end of the armature stroke, and the armature is returned by gravity to its original position.

When the trip coil is energized, the plunger forces the latch off of the roller causing the linkage to collapse which allows the opening spring to rotate the main crank and open the contacts. During the opening stroke, auxiliary switch contacts open to interrupt the trip coil circuit. After the breaker is open, the mechanism linkage returns to its normal position, and a spring resets the trip latch.

In case the trip coil is energized while the breaker is closing, the trip plunger forces the latch off the trip roller allowing the mechanism linkage to collapse and the breaker to re-open. The armature completes its closing stroke, however, and the coil is de-energized as in a normal closing operation.

When the breaker is tripped under load or short circuit conditions, the opening springs act to swing the contact arms downward, parting first the primary contacts, and then the arcing contacts. The arc is then transferred to the arc runners and, as described before, into the arc chute where it is interrupted.

ADJUSTMENTS

Adjustments described herein should be referred to not only during placement of breaker in service but also during periodic inspection of the breakers, and should be followed whenever it becomes necessary to repair or replace parts that have become worn or defective in service.

Instructions for the replacement of parts will be found under the later heading of "MAINTENANCE".

Primary Contacts (Fig. 1 and 4)

On closing the breaker, the primary contact fingers should raise $1/4"$ to $5/16"$. This can be adjusted by means of the operating rod adjusting screw. To adjust, open the breaker, and after removing the cotter pin in one end of the shaft through the top of the operating rods, slide the shaft free of the rod to be adjusted. Loosen the check nut on the operating rod adjusting screw and shorten the screw to increase the primary contact travel ($1/2$ turn of the eyebolt gives approximately $5/64"$ change in the contact). Replace the check nut, shaft, cotter pin, and close the breaker to check the adjustment.

Intermediate Contacts (Fig. 2)

Close the breaker until the intermediate contacts first touch. The gap between the primary contact fingers and the movable primary contact block should be $5/16"$ to $7/16"$. This dimension has been

set in the factory and no adjustment is provided. If enough material has been eroded away to make this clearance too small, the contacts should be replaced.

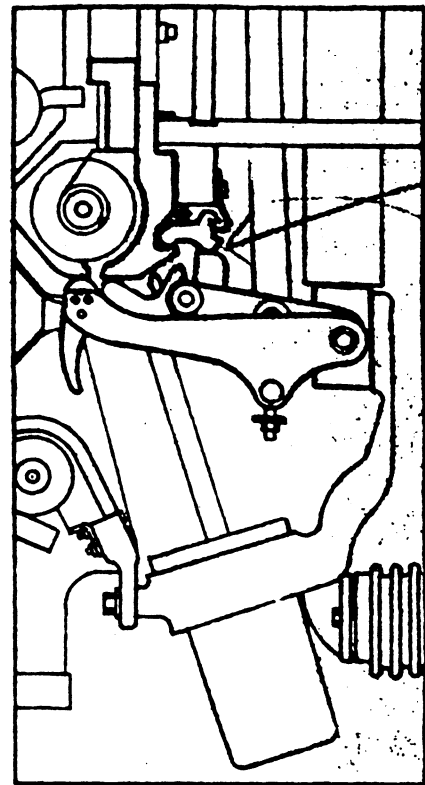


FIG. 1

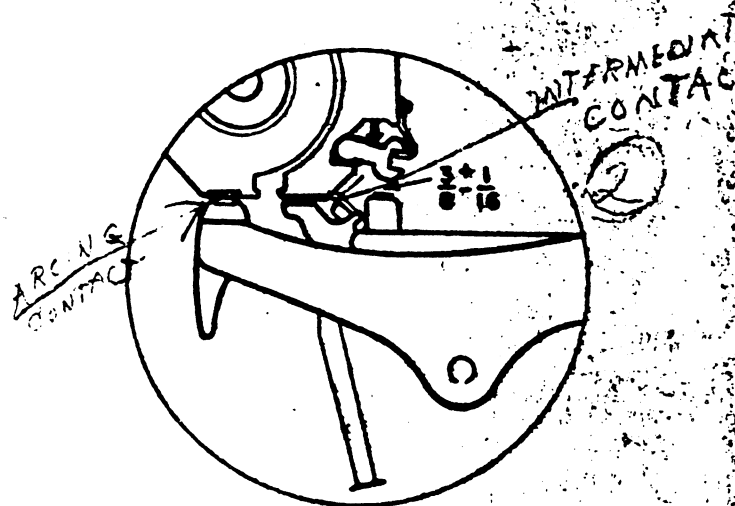


FIG. 2

(K-6496393)

(K-3496394)

Arcing Contacts (Fig. 3)

Close the breaker until the arcing contacts just touch. The gap at the intermediate contacts should be $15/32''$ to $19/32''$ also the gap at the primary contacts should be approximately $11/16''$ to $13/16''$ the arcing contacts have been set in the factory and no adjustment is provided. If enough material has been eroded away to make this clearance too small, the contacts should be replaced.

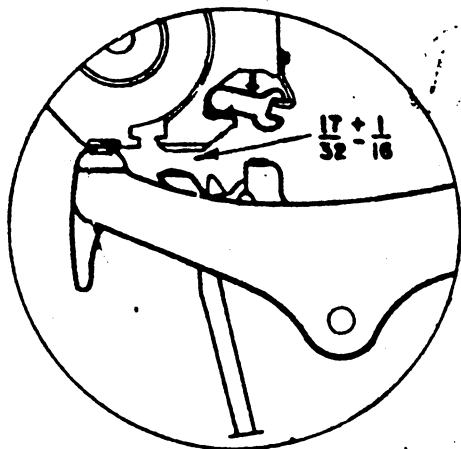


FIG. 3

Contact Gap

With the breaker tripped from the closed position, the gap between the primary contacts should be $4''$ or over. To increase this gap, close the breaker part way and remove a shim from under the two opening buffers located one on either side of the breaker frame on the inside near the top. Note: A change in this adjustment may require changes in the adjustment of the plunger rod in the mechanism as described later.

Latch Wipe (Fig. 5 and 6)

The wipe of the latch on the trip roller should be from $3/16''$ to $1/4''$. This can be determined easily by putting a film of grease on the latch, closing the breaker part way, and tripping. To adjust, add or remove washers under the head of the stop bolt located near the top of the latch on the trip coil frame.

Prop Clearance (Fig. 5 and 6)

With the breaker closed as far as possible with the manual handle, the clearance of the pin through the closing roller over the prop should be $1/32''$ to $3/32''$. This can be adjusted by dropping the closing coil and screwing the plunger rod into or out on the armature. Note: Two set screws are used to lock the plunger rod in position in the armature. If the

rod adjustment is changed, the rod must be spotted in the correct position and the set screws replaced.

Latch Clearance (Fig. 5 and 6)

The clearance between the trip latch and roller with the breaker open should be approximately $1/32''$. This can be adjusted by means of the stop bolt in the front of the mechanism frame near the bottom. The lock nut should be fastened securely if any adjustment has been made.

Plunger Clearance

With the breaker in the open position, there should be at least $1/8''$ clearance between the plunger and closing roller. To increase this clearance, the nuts used to limit the downward travel of the armature bottom plate should be lowered.

After the foregoing items have been checked and any adjustments that may have been required are completed, the breaker may be placed in service.

MAINTENANCE

Dependable service and safety of power distribution equipment is based on the unfailing performance of the circuit breaker.

To maintain such service, it is recommended that a definite schedule be set up and adhered to for the purpose of properly lubricating the wearing parts. A dependable and observing attendant can be expected to forestall mishaps by reporting loosened nuts, scored surfaces, and other evidences of possible trouble.

In addition, but at less frequent intervals periodic inspection should be made at which time the apparatus should be given such servicing as may be found desirable or necessary. In case of highly repetitive operation it is recommended that the first Periodic Inspection be made after not more than 500 operations to determine whether there has been any loosening up of parts. The interval between later Periodic Inspections should depend on operating conditions and should be determined by experience.

PERIODIC INSPECTION

At this time a thorough inspection should be made of all parts of the breaker and mechanism.

Contacts

After removing the box barriers, the contacts on the two outside phases can readily be inspected. The contacts on the center phase can be seen with the aid of a mirror and flashlight. If the contacts are in good condition, there is no need of removing the arc chute. If, however, the surfaces of the contacts need smoothing up with a fine file or sand paper, the arc chutes can be removed as described under the heading 'REPLACEMENT OF PARTS'.

Arc Chute

If the arc chutes are removed for contact maintenance, and are for any reason disassembled for inspection, the following points should be noted:

1. Scale formed over the surface of the chute must not be removed but loose particles collected in the muffler should be blown out.
2. Cracks which have formed in the fins of the arc chute are to be expected in ceramic materials of this type when subjected to the severe heat of an arc. These cracks do not interfere with the operation of the device in any way and should be disregarded. If the chute has had any mechanical injury due to dropping or accidental striking which has resulted in actual breaking off of fins, replacement of the chute is necessary.

Insulation Parts

The insulation parts on the breaker should be kept clean and dry. Smoke or dust collected between inspection periods should be wiped off, and if dampness is apparent, heaters should be installed to insure dryness.

Bushings

The surface of the bushings should be smooth and unscratched. If the insulation surface should become damaged, it should be well cleaned and then retouched with either 1170 clear varnish or 1202 (clear) or 1210 (brown) glyptal. Allow to dry smooth and hard.

Mechanism

Careful inspection should be made to check for loose nuts or bolts and broken cotter pins. The latch surface should be inspected for wear and the surfaces of the rollers should be inspected for chipping or other evidences of damage. Lubrication should be done in accordance with the instructions under the heading "LUBRICATION".

LUBRICATION

During assembly at the factory, all wearing parts and bearing surfaces on both the breaker and mechanism have been coated with a film of medium soft lubricating and rust resisting greases. All main bearing surfaces such as the prop face are lubricated with G.E. Lubricant D50H1C (Lubriplate #110); Roller bearings with G.E. Ball Bearing Lubriplate D50H1E; Pivots of the contact arms with G.E. Lubricant #5485 (Socony-Vacuum #323).

STANDARD OIL DURAPLEX #1
In case of an overhaul or repair where the breaker and mechanism parts have been disassembled, it is recommended that these greases (or similar) which are available in 1 lb. or 5 lb. cans, be used.

REPLACEMENT OF PARTS

Before maintenance or replacement of contacts, the arc chutes must be removed.

Arc Chute Removal (Fig. 7)

Chutes may be removed by loosening the three upper coil bolts (Fig. 4) removing the lower bolt on the secondary connection (Fig. 3) raising the chute to clear the locking notch, and sliding the chute off

of the upper blow out coil assembly. If necessary the two bolts at the top tying the side braces together should be removed. To remove plastic cover over bolt heads turn counterlockwise, using gas pipe pliers. These covers are lightly spotted with glyptal to retain. If broken these should be replaced at the first opportunity.

Primary Contacts

The primary contacts are designed to carry the normal load current with a minimum amount of heating and are provided with an inlaid block of silver to minimize the effects of wear. The stationary contacts consist of fingers mounted along with associated springs and stop plate on the support casting carried by the rear bushing. The fingers may be replaced individually, or as is usually the case, the assembled casting may be replaced.

The movable primary contact is carried on the blade hinged at the front bushing. To replace because of wear or because of burning on the intermediate contact also carried by the blade, the following steps should be followed:

- (a) Remove the dust cover from the top of the booster cylinder.
- (b) Remove the cotter pins in the pin fastening the lower end of the operating rod to the primary contact blade and slide the pin through the holes in the arcing contact side flanges.
- (c) Remove the bolt, springs and thimbles at the blade hinge being careful not to lose the rings between the arcing contact and primary contact blades.
- (d) Close the breaker part way with the maintenance operating lever and withdraw the contact blade and puffer assembly.

Reassemble the replacement parts making certain that the rings are replaced between the primary contact and arcing contact side flanges and that all cotter pins are replaced. If a new hinge bolt has been used, or if it seems desirable for any other reason, the pressure at the hinge joint should be checked by measuring with a spring balance the force required to swing the contact arm. This torque should be between 40 and 60 pound-inches.

Intermediate Contacts

The movable part of the intermediate contacts is carried by the primary contact blade and may be replaced as described under Primary Contacts. The Stationary intermediate contact is the lower face of the primary finger support casting as previously described under Primary Contacts.

Arcing Contacts

The movable arcing contact is hinged at the front bushing and is removed along with the Primary Contact Blade as previously described under Primary Contacts.

The stationary arcing contact is carried by the first section of the upper arc runner. To remove this, the lead fastening the first blowout coil to the primary contact castings should be removed, and the bolts passing through the lower end of the rear bushing to support the runner assembly should be removed. With the upper runner assembly removed, the first section of the runner can be replaced. On reassembly of the runner assembly or the bushing, care must be taken to replace all insulation in the proper position.

RENEWAL PARTS

It is recommended that sufficient renewal parts be carried in stock to enable the prompt replacement of any worn, broken, or damaged parts. A stock of such parts minimizes service interruptions

caused by breakdowns, and saves time and expense. When continuous operation is a primary consideration, more renewal parts should be carried, the amount depending upon the severity of the service and the time required to secure replacements.

A complete list of renewal parts is contained in Renewal Parts Bulletin GEF-3543. Those parts subject to wear in ordinary operation, and to damage or breakage due to possible abnormal conditions, are marked as recommended renewal parts.

Ordering Instructions

When ordering renewal parts, address the nearest General Electric sales office, specify the quantity required, and give the catalog number from the renewal parts bulletin.

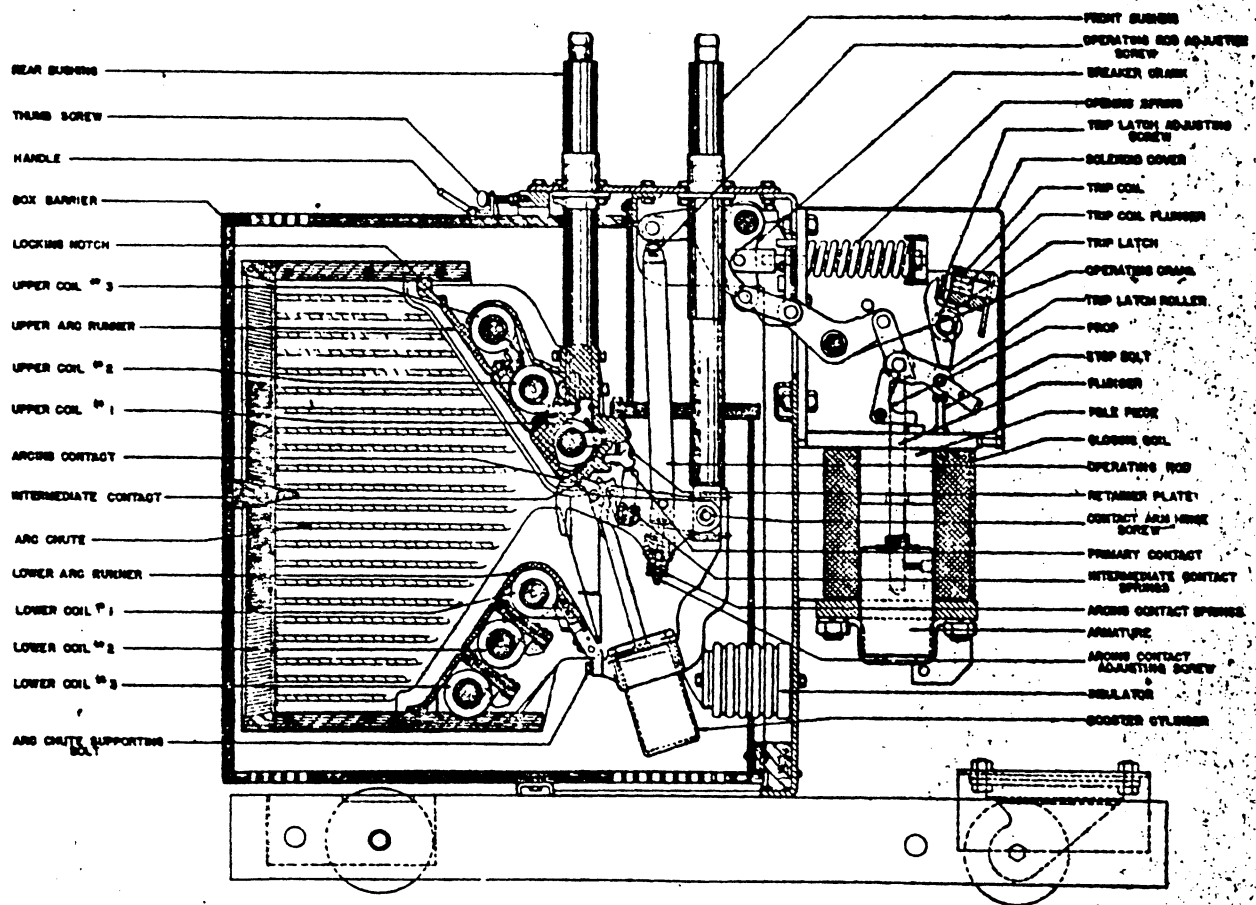


FIG. 4

CROSS SECTION VIEW OF AM-15-250-1, AM-15-250-2 AND AM-15-150-0 MAGNE-BLAST BREAKER SHOWN IN CLOSED POSITION

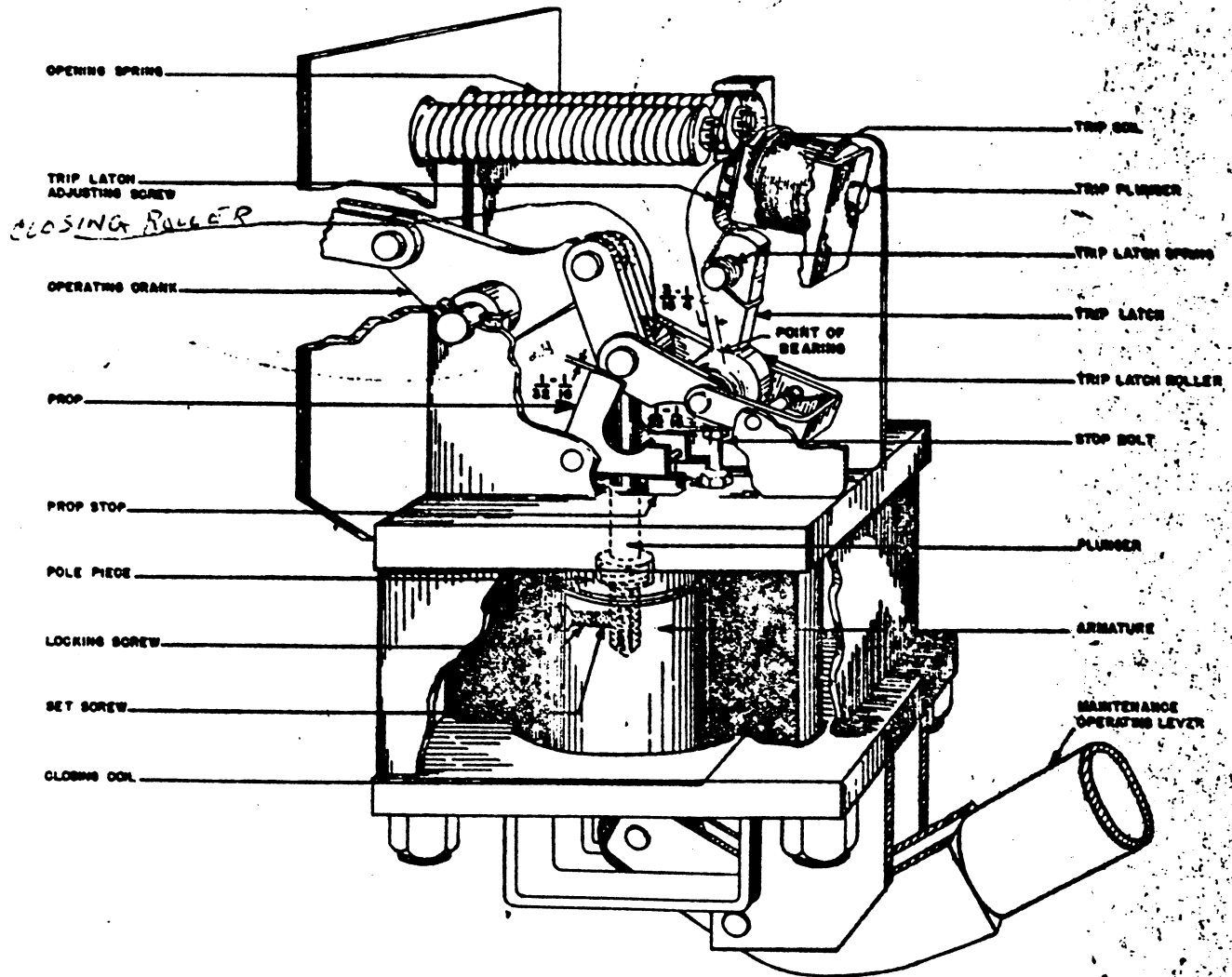


FIG. 5

CUTAWAY VIEW OF MS-11 SOLENOID MECHANISM SHOWN IN CLOSED POSITION

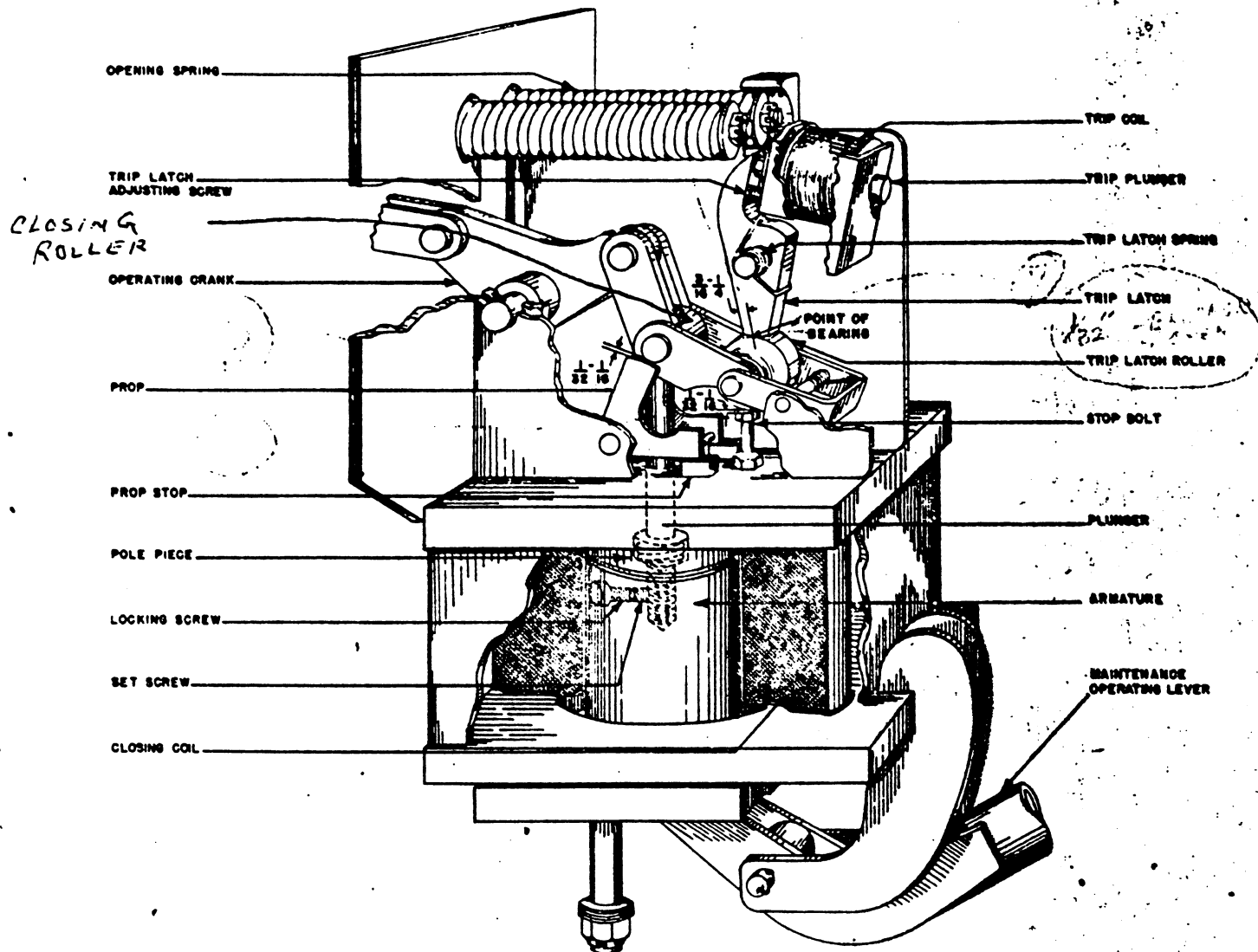


FIG. 6
CUTAWAY VIEW OF MS-12 SOLENOID MECHANISM
SHOWN IN CLOSED POSITION

IF YOU REQUIRE SERVICE

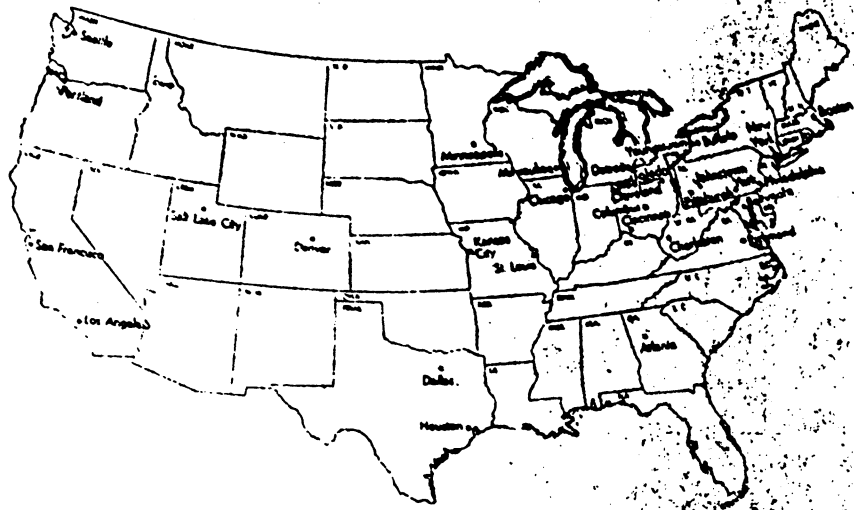
IF AT ANY TIME you find it necessary to repair, recondition, or rebuild your G-E apparatus, there are 29 G-E service shops whose facilities are available day and night for work in the shops or on your premises. Factory methods and genuine G-E renewal parts are used to maintain the original performance of your G-E apparatus. If you need parts only, immediate shipment of many items can be made from warehouse stock.

The services of our factories, engineering divisions, and sales offices are also available to assist you with engineering problems. For full information about these services, contact the nearest service shop or sales office listed below:

APPARATUS SERVICE SHOPS

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 *Baltimore 30, Md. 920 E. Fort Ave.
 Boston—Medford 55, Mass. Mystic Valley Pkwy.
 Buffalo 11, N. Y. 318 Urban St.
 Charleston 28, W. Va. 306 MacCortle Ave., S.E.
 Chicago 80, Ill. 849 S. Clinton St.
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 Cleveland 4, Ohio 4966 Woodland Ave.
 Columbus, Ohio 213 Cozzens St.
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 Denver 5, Colo. 3353 Larimer St.
 Detroit 2, Mich. 5950 Third Ave.
 Houston 20, Texas 5534 Harvey Wilson Drive
 Johnstown, Pa. 841 Oak St.
 Kansas City 8, Mo. 819 E. 19th St.
 Los Angeles 1, Calif. 6900 Stanford Ave.
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 Seattle 4, Wash. 3422 First Ave., S.
 Toledo 4, Ohio 1 So. St. Clair St.
 York, Pa. 54 N. Harrison St.
 Youngstown 5, Ohio 272 E. Indianola Ave.

*Convenient G-E Renewal Parts Center for over-the-counter purchases of industrial parts, located at same address.



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 Cedar Rapids, Iowa. 203 Second St., S.E.
 Charleston 28, W. Va. 306 MacCortle Ave., S.E.
 Charlotte 1, N. C. 200 S. Tryon St.
 Charlottesville, Va. 123 E. Main St.
 Chattanooga 2, Tenn. 832 Georgia Ave.
 Chicago 80, Ill. P.O. Box 5970A, 840 S. Canal St.
 Cincinnati 2, Ohio. 215 W. Third St.
 Cleveland 4, Ohio. 4966 Woodland Ave.
 Columbia 23, S. C. 1225 Washington St.
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 Davenport, Iowa. 511 Pershing Ave.
 Dayton 2, Ohio. 118 W. First St.
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 Harrisburg, Pa. 229 N. Second St.
 Hartford 3, Conn. 410 Asylum St.
 Houston 1, Texas. 1312 Live Oak St.
 Indianapolis 4, Ind. 110 N. Illinois St.
 Jackson, Mich. 120 W. Michigan Ave.
 Jackson 1, Miss. 203 W. Capital St.
 Jacksonville 2, Fla. 700 E. Union St.
 Jamestown, N. Y. 2 Second St.
 Johnson City, Tenn. 334 E. Main St.
 Johnstown, Pa. 841 Oak St.
 Kansas City 6, Mo. 105 W. Fourteenth St.
 Knoxville 08, Tenn. 602 S. Gay St.
 Lansing 68, Mich. 215 So. Grand Ave.
 Lincoln 8, Neb. 1001 "O" St.
 Little Rock, Ark. 103 W. Capital Ave.
 Los Angeles 54, Calif. 212 N. Vignes St.
 Louisville 2, Ky. 455 S. Fourth St.
 Madison 3, Wisc. 16 N. Carroll St.
 Manchester, N. H. 875 Elm St.
 Medford, Ore. 205 W. Main St., P.O. Box 1349
 Memphis 3, Tenn. 8 N. Third St.
 Miami 32, Fla. 25 S.E. Second Ave.
 Milwaukee 3, Wisc. 940 W. St. Paul Ave.
 Minneapolis 3, Minn. 12 S. Sixth St.
 Mobile 13, Ala. 54 St. Joseph St.
 Nashville 3, Tenn. 234 Third Ave., N.
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 New Haven 6, Conn. 129 Church St.
 New Orleans 12, La. 837 Gravier St.
 New York 22, N. Y. 570 Lexington Ave.
 Niagara Falls, N. Y. 253 Second St.
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 Oakland 12, Calif. 409 Thirteenth St.
 Oklahoma City 2, Okla. 119 N. Robinson St.
 Omaha 2, Nebr. 409 S. Seventeenth St.
 Pasco, Wash. 421 W. Clark St.
 Peoria 2, Ill. 410 Main St.
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 Phoenix, Ariz. 303 Luhrs Tower
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 Portland 7, Ore. 920 S.W. Sixth Ave.
 Providence 3, R. I. Industrial Trust Bldg.
 Raleigh, N. C. 336 Fayetteville St.
 Reading, Pa. 31 N. Sixth St.
 Richmond 17, Va. 700 E. Franklin St.
 Riverside, Calif. 3808 Main St.
 Roanoke 11, Va. 202 S. Jefferson St.
 Rochester 4, N. Y. 89 E. Ave.
 Rockford, Ill. 110 S. First St.
 Rutland, Vt. 38 1/2 Center St.
 Sacramento 14, Calif. 626 Fourth Building
 Saginaw, Mich. 128 N. Franklin St.
 St. Louis 2, Mo. 112 N. Fourth St.
 Salt Lake City 9, Utah. 200 S. Main St.
 San Antonio 5, Texas. 310 S. St. Mary's St.
 San Diego 1, Calif. 861 Sixth Ave.
 San Francisco 6, Calif. 235 Montgomery St.
 San Jose, Calif. 409 Bank of America Bldg.
 Savannah, Ga. 4 E. Bryan St.
 Seattle 4, Wash. 710 Second Ave.
 Shreveport 93, La. 803 Jordan St.
 Sioux City 13, Iowa. 307 Sixth St.
 Sioux Falls, S. D. 321 1/2 S. Phillips Ave.
 South Bend 11, Ind. 112 W. Jefferson Blvd.
 Spokane 8, Wash. S. 162 Post St.
 Springfield, Ill. 607 E. Adams St.
 Springfield 3, Mass. 1387 Main St.
 Stockton, Calif. 11 So. San Joaquin St.
 Syracuse 2, N. Y. 113 S. Salina St.
 Tacoma 1, Wash. 1019 Pacific Ave.
 Tampa 6, Fla. 1206 North A St.
 Toledo 4, Ohio. 420 Madison Ave.
 Trenton 8, N. J. 214 E. Hanover St.
 Tulsa 3, Okla. 320 S. Boston Ave.
 Utica 2, N. Y. 258 Genesee St.
 Washington 3, D.C. 806 Fifteenth St., N.W.
 Waterbury 89, Conn. 111 W. Main St.
 Waterloo, Iowa. 206 W. 4th St.
 Wheeling, W. Va. 40 Fourteenth St.
 Wichita 2, Kan. 200 E. First St.
 Williamston, N. C. City Hall
 Wilmington, Del. 1326 N. Market St.
 Worcester 8, Mass. 507 Main St.
 York, Pa. 56 N. Harrison St.
 Youngstown 5, Ohio. 272 E. Indianola Ave.

Hawaii W. A. Ramsey, Ltd., Honolulu

Canada: Canadian General Electric Company, Ltd., Toronto

APPARATUS DEPARTMENT, GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y.

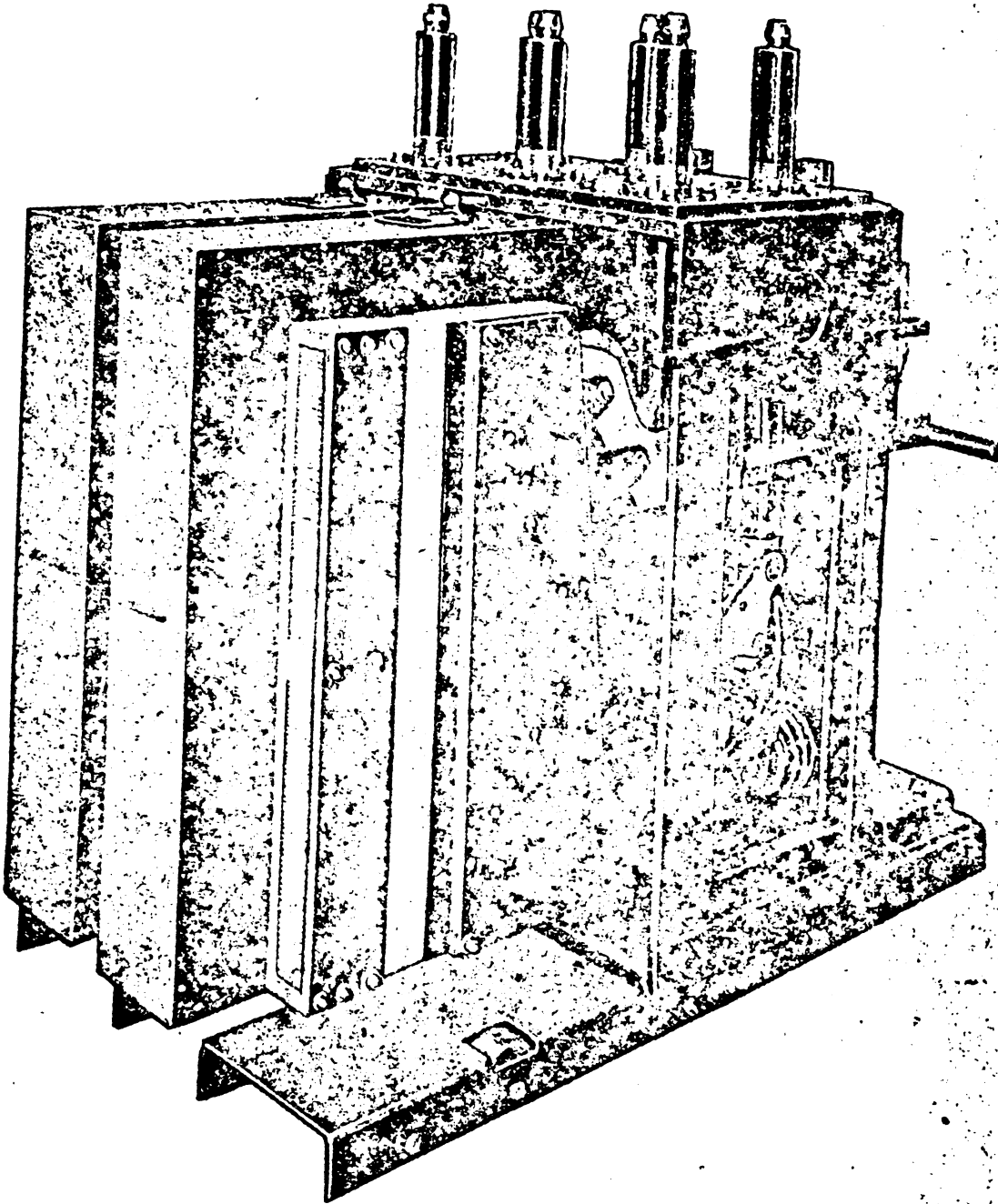


FIG. 7
MAGNE-BLAST AIR CIRCUIT BREAKER, TYPE AM-15-250-1 WITH ONE BOX
BARRIER REMOVED

- (11) Any observed dust, dirt or foreign material in the main frame area of the main contacts may now be vacuumed away.. note and record on check sheet 1A.
- (12) Visually and physically inspect front operating mechanisms, manual trip plunger, open-close indicator, operation counter, trip latch, note and record conditions on check sheet 1A.
- (13) Clean and regrease closing roller, trip bearing, trip pawl, surfaces. Note and record on check sheet 1A.
- (14) Position breaker at the local test station and attach or plug in test station wiring harness.
- (15) Electrically close breaker and visually observe internal mechanism's operation breaker, breaker should close. Note and record on check sheet 1A.
- (16) With the thin film of GE red grease on the trip pawl bearing, open breaker and observe wipe pattern on bearings outer surface (max 1/4"). Note and record on check sheet 1A.
- (17) If wipe is more than tolerance, readjust travel of trip pawl, regrease and repeat above procedures. Note and record on check sheet 1A.
- (18) Reinstall front cover, clean and regrease control buss stabs (light film). Note and record on check sheet 1A.
- (19) Regrease right side grounding blade. Note and record on check sheet 1A.
- (20) Testing: See attached sheet.
- (21) Inspect and observe the condition of the breaker compartment. Note condition on check sheet 1A.
- (22) Visually and physically check all bolts, roll pins, gears, sprockets, chain, note conditions on check sheet 1A.
- (23) Regrease sprockets, chain, gears, ground blade receptacle. Note and record on check sheet 1A.
- (24) Vacuum breaker compartment of any foreign material, dust, dirt, etc.
- (25) To observe shutter assembly's proper operation, use extreme caution. Caution live electrical components above shutter assembly!

- (26) Standing away, observe shutters operation and note record on check sheet 1A.
- (27) Any abnormalities, notify operations and your supervisor.
- (28) Visually and physically inspect all electrical connections in breaker compartment and their components, TB's, fuse blocks, etc.
- (29) Reposition breaker in its compartment fully inward and check racking elevator, clutch assembly will raise up and down. Breaker is now in its proper "raise" position. Note and record on check sheet 1A.
- (30) Record breaker type, device, serial number, operation counter reading on check sheet 1A.
- (31) close and latch door

SD1

- ① ② ③
⑤ ⑦
④ ⑥

SD1

- 1 - TB/8
2 - TB/7
3 - TB/6
4 - AS/4
5 - AS/5
6 - PS/2
7 - PS/1

SD2

- 1 - AS/6
2 - AS/8
3 - AS/7
4 - AS/10
5 - AS/9
6 - AS/12
7 - AS/11

SD2

- ① ② ③
⑤ ⑦
④ ⑥

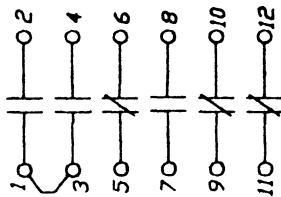
IB

1	5
2	6
3	7
4	8

IB

- 1 - TC/1
2 - TC/2
3 - CC/1
4 - CC/2
5 - AS/2
6 - SD1/3
7 - SD1/2
8 - SD1/1

AS

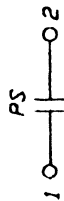


AS

- 1 - AS/3
2 - TB/5
3 - AS/1
4 - SD1/4
5 - SD1/5
6 - PS/2
7 - SD2/1
8 - SD2/3
9 - SD2/2
10 - SD2/5
11 - SD2/7
12 - SD2/6

PS (PLUNGER SWITCH)

- 1 - SD1/7
2 - SD1/6
2 - AS/6



- 1 - TB/3
2 - TB/4



- 1 - TB/1
2 - TB/2



9870 Crescent Park Drive
West Chester, OH 45389

Power Distribution Services, Inc.

TITLE CB WIRE DIAGRAM

DATE 5/22/92

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN INCHES
TOLERANCES UNLESS OTHERWISE SPECIFIED

STANDARD TOLERANCES

FRACTIONS ± 1/32
X.X ± .005
X.XX ± .010
ANGLE ± 2°
CONCENTRICITY ± 0.005 IN

FOR NASA LEVITS

CHECKED BY:

DATE

USED ON GE AM-75-250

DRAWING NO. A-8537-J-01

SCALE 1/4"

SHEET 3

AM 7.5 – 250 CHECKSHEET 1ABREAKER TYPE _____
SERIAL # _____OPERATION COUNTER
READING _____DATE: _____
NAMES: _____

STEP	OBSERVED CONDITION	FACTORY TOLERANCES	ADJUSTMENTS	REPAIRS	COMMENTS
1		visual			
2		visual			
3		bearings			
4					
5					
6		main cntcts			
7		rem. cntcts			
8		arc chutes			
9		cls. mech			
10		trip free			
11					
12		cnct adj			
13	rec. on 3A	resis. reading			
14					
15	rec. on 3A	resis. reading			
16		vacuum			
17		regrease			
18					
19					
20					
21					
22		brg grease			
23					
24					
25		elec close			
26		trip paw wipe			
27					
28					
29					
30		ground blade			
31					
32		brkr compartment			
33		cabnt mechs			
34		regrease mechs			
35					
36					
37					
38					
39					
40					
41					
42					
43		shutter assy			
44					
45					
46					
47		brkr position			