OPERATING INSTRUCTIONS
FOR THE TYPE B CABLE LASHER

FIELD ADJUSTMENTS
The front and rear cable lamer should be adjusted with the fingers, as shown in Figure 47-P-314. Start with the turn which is to be locked. The outer should be as close to the strands as the cable will permit with freedom. There are six 1/4-20 flathead machine screws which secure the cable lamer assembly to the ends of the lasher. Five of them are 3/4" long and one is 5/8" long. The latter is placed directly over the beveled driving wheel. The 5/8" screw is to allow sufficient clearance between the bottom of the screw and the beveled roller. A 5/8" screw, if used here, will stifle the rubber driving wheel and will not give sufficient friction for the lasher to operate, efficiently. Important: To replace these screws exactly as originally installed.

FIG. 47-P-314

ADJUSTING BEVELED WHEELS
To obtain this adjustment, see Figure 47-P-332. Loosen the lock nut (detail 11) and adjust the threaded end (detail 10). This will move the beveled driving wheel close to the beveled bronze ring. Each of the beveled rubber driving wheels at each end of the lasher should be adjusted to the same tension in similar fashion.

FIG. 47-P-333

DRIVING WHEEL ASSEMBLIES
All rubber driving wheel assemblies should be aligned so that the wheels run true. The shaft assembly with six grooved rubber wheels should be adjusted so that the gear on the end of the drive shaft rotates without touching the head casting endwise. See Figure 47-P-316. All nuts and bolts should be set up tight after these adjustments. In ordering replacement parts as described, Figure and detail number should accompany the requisition in order for the factory to identify the parts. Do not attempt to make major repairs or adjustments as special tools and gauges are required.

FIG. 47-P-334

CLEANING AND OILING
Since there are needle and roller bearing throughout the lasher, the use of oil is unnecessary and even hazardous. If any grease or oil should get on the rubber driving wheels or any of the other driving wheels, the lasher will slip in operation. The beveled wheels should be kept free of all foreign matter such as dirt, grease, etc., and the lasher should be cleaned with an air gun or brush at least once a week when it is in constant use. When the lasher is not in use, it should be kept in the special cleaning area.

FIG. 47-P-314

IF LASHER SLIDES ON STRAND
If the lasher has a tendency to slide on the strand: (1) Check to see strand is properly seated in the grooves of both grooved strand wheels at each end of the lasher. (2) Check the contact tension of each of the beveled rubber driving wheels for contact with the bronze beveled ring at each end of the central drive section of the lasher as follows (see Figure 47-P-346): Each beveled rubber driving wheel on each end of the lasher should be adjusted by turning the grooved wheel assembly on the end of the shaft where the 5/8" nut is located. (The rotation of the lasher should first be locked with the locking bolt.) This allows the beveled driving wheel to slip on the beveled bronze ring when the tension load is applied to the end of the grooved wheel shaft assembly at the 5/8" nut end. This should be done at least four times with a tension load wrench (to make a complete rotation of the bevel wheel) to obtain an equal reading at 70-140 lbs. If proper tension cannot be secured with the adjust-ment wrench on the head of the lasher (detail 10), the beveled rubber driving wheel is excessively worn and should be replaced.

FIG. 47-P-314

GENERAL MACHINE PRODUCTS CO.
7th and WOOD STREETS • PHILADELPHIA 6, PA.
To meet the need for a quick-adjusting automatic aerial cable lasher, General Machine Products Company offers the Type B Cable Lasher. Thoroughly proven in the field, the Type B Cable Lasher is a compact, efficient device which assures tight, non-chafing lashing of sheathed aerial cable to the suspension strand.

Outstanding feature of the Type B Cable Lasher is its versatility, in that it will take cable from 1/4" diameter up to the maximum of 2 1/2" diameter. Made of aluminum alloy casting for maximum strength with minimum weight, the lasher has been designed with a low center of gravity which assures vibrationless operation. The streamlined housing, in which all parts are completely enclosed, means freedom from fouling in tree branches during the lashing operation.

It is also provided with two cable lifting arrangements, one at each end, adjustable to lash the cable snugly to the strand or allow for a positive separation because of span clamps, suspension clamps, etc. The machine uses either .091 or .061 lashing wire.

Two deeply-grooved rubber strand wheels are employed, located on opposite ends of the cable lasher, so as to provide continuous driving power to the rotating drum during its travel along the strand. The splining drum operates on 10 sealed ball bearing surfaces. Twenty-four ball bearings and five needle bearings provide easy operation, and there is a back-tensioning device so that practically no slack will occur in the lashing when tension on the pulling bridle is temporarily relieved. A convenient locking bolt on the side locks the drum in alignment with the openings in the housings, permitting the cable lasher to be applied to the cable and strand at any point on the cable. The strand will be correctly positioned in the pulley grooves.

A removable ring-pusher on the forward end enables temporary supports to be safely pushed ahead to the next pole for easy removal after lashing is completed.

Quick adjustment for various sized cables
Uses various sized lashing wire
Automatic operating
Non-chafing; always tight

Continuous power to drum
Light-weight, rugged construction
Easy to operate
Built for long life in hard service

TENSIONING PULLEY

REVOLVING UNIT

REAR CABLE ROLLER AND LATCH

LASHING WIRE
- .091 or .061 galvanized steel
- Diameter of coil 2"
- Weight 7 3/8 lbs.
- Length 330-360 feet
- Tensile strength 550 lbs.

CATALOG NO. 7019-2
All steel parts are cadmium plated; other metal parts are made of non-corrosive metals.
Price, complete with lashing bridle and instruction manual . . . . . . . . . . . . . . . on application

CATALOG NO. 6981-1
Cable lasher comes packed in sturdy fiber carrying case 22" x 14" x 14".
Price of heavy-duty carrying case . . . on application

DISTRIBUTED BY GRAYBAR ELECTRIC COMPANY, INC., IN OVER 100 PRINCIPAL CITIES
OPERATION

1. Remove lasher from case. Open case cover by loosening wing nut on case latch.
2. Cut and remove coil binding at loop as inside of coil. Cut and remove opposite binding.
3. Cut off inside loop of wire and unwind about one foot of wire from inside of coil. Loosel end should emerge from face side of coil.
4. Place coil in magazine with face side toward cover. Feed inside end of wire from center of coil through hose in cover. Close cover and tighten wing nut tightly.
5. Cut remaining two bindings and remove them. Tighten wing nut.
6. Thread lashing wire around snubbing pulleys as indicated by marking lines. Terminate end of wire by wrapping it several times around pulleys to prevent loose end from dangling.
7. Front cable lifter should be kept open, and the drum in the indexed and locked position as removed from the lasher case.
8. Close rear cable lifter and adjust it to lowest position. Adjust rear vertical rollers to widest position.
9. Strand tensioning roller should be in open position.
10. Open rear cable lifter and place lasher on strand.
11. Engage strand tensioning roller by rotating lever forward, then swinging it back and end of its travel. This locks lasher on strand. When roller is engaged, lever is parallel to strand.
12. Close rear cable lifter roller and adjust lifter so that end of cable will be from 1/8 to 1/4 inch from underside of strand. Raise large cables off roller when making adjustment. Adjust vertical cable rollers to clear cable approximately 1/2 inch. These adjustments need not be changed as long as same diameter cable is being lashed.
13. Pull out sufficient lashing wire and terminate on strand about one foot from rear of lasher.
14. Close front cable lifter and attach towing link snap hook to pulling plate.
15. Before transferring around pole, temporarily terminate lashing wire on pole, pull out sufficient wire for final terminating and cut off.
16. Open front cable lifter and move lasher forward or backward until drum locks. Open rear cable lifter.
17. Connect towing ring snap hook to suspension strand in next span.
18. Release strand tensioning roller to unlock lasher from strand.
19. Raise lasher from strand and transfer to strand in next span.
20. Disconnect towing ring snap hook and proceed as instructed in step 11.

LUBRICATION

The following parts require daily lubrication with SAE 10 or 20 automotive engine oil.
(a) Shaft of rear strand roller wheel
(b) Post and roller of front cable lifter
(c) Hinge of pulling plate
(d) Horizontal shaft and vertical shaft of strand tensioning roller
(e) Latch and roller of rear cable lifter
(f) Front brake release arm, cam contact surface

The following parts require monthly lubrication with SAE 10 or 20 automotive engine oil.
(g) Shaft and thread of rear vertical cable rollers
(h) Shaft and threads of rear cable lifter
(i) Latch pivot and hinge of wire magazine cover

PLACING INTO LASHER CASE

Front cable lifter should be all the way open and the drum in the locked position before placing the lasher into its case. Keep the lasher in the carrying case at all times when not in use.

REPLACEMENTS AND REPAIRS

Vertical cable roller assembly, strand roller and strand roller shaft can be obtained for replacement from the manufacturer. For all other repairs, including replacement of the rubber drive wheels, lasher should be returned in its lasher case to the manufacturer.

TYPE C CABLE LASHER

- Enables crew to install approximately one mile of cable a day
- Precision-built for trouble-free operation
- Holds two 1200 ft. coils of .045 lashing wire at one loading
- Can be operated from ground by one man
- Compact, lightweight, rugged
- Eliminates damage from rings, reduces maintenance costs
- Continuous, even spiral wrapping lashes cable tightly to strand, provides greater bearing contact

GENERAL MACHINE PRODUCTS CO.
7th and WOOD STREETS • PHILADELPHIA 6, PA.
The C Cable Lasher is the last word in a sturdy, lightweight, entirely automatic cable lasher which will lash all cables up to 1 3/4" in diameter. General Machine Products Company is proud to offer this popular model for the discriminating user who insists on a precision tool with ease of operation. Three simple steps and only a few seconds prepare the machine for the run. One loading with two coils of stainless steel lashing wire will last a whole day. Lashing is smooth and effortless, requiring a minimum of pulling load from the ground or parallel to the strand. There is a minimum of slippage on wet or icy strands; the lashing is always smooth, tight and uniform.

Automatic features include the fingertip-operated, all-range strand tensioning device; the self-registering drum lock; the two way brake to prevent back roll and the center-feed non-rotating wire coil.

Made of high-strength aluminum alloy casting, the lasher incorporates sealed-for-life precision ball bearings, stainless steel bearing plates and the reliable, direct gear drive that never needs adjustment.

Catalog No. 7143-2

The C Cable Lasher is used for securing aerial cables, 1 3/4" and less in diameter, to suspension strands 5/16" to 7/16" in diameter with a spiral lashing of .045" stainless steel lashing wire. Lashing may be successfully accomplished on strands of smaller sizes under certain conditions.

The lasher consists essentially of a rotatable drum and a carriage which also provides the mounting for a driving mechanism, cable lifters, cable and strand rollers, a brake, and a pulling attachment. The two magazines of the rotatable drum accommodate two 1200 ft. coils of .045" wire. Two sets of pulleys serve to guide and tension the wire in the lashing operation.

Parts are made of heat treated, high-strength aluminum, bronze, and cadmium plated steel.

The lasher employs sealed-for-life ball bearings on all vital shafts as well as on the rotatable drum. Other moving parts are mounted in Oilitite bushings.

Two rubber strand drive wheels are mounted in the forward part of the carriage and a small trailer wheel is located in the rear. Driving is accomplished by direct gearing. The rear cable lifter roller is adjustable vertically. The front cable lifter, together with the pulling plate, is opened by pressing a latch. When in the open position, this locks the drum automatically when its cable slot registers with the slots in the carriage. The drum is free to revolve when the front cable lifter is closed. Both the front and rear cable lifters are held in the open position by means of a toggle device.

The pulling rope may be attached to one of three holes in the pulling plate or to one of the eyes on the side of the front carriage. Choice of attaching points depends on the angle of the towing line.

The lasher is equipped with an automatic brake which releases when the front cable lifter is open, also when the pulling plate is moved back against its stops. The C Cable Lasher weighs approximately 33 lbs. without lashing wire. The carrying case weighs approximately 25 lbs. Prices on request.
1. Remove lasher from case.
2. Cut and remove coil binding holding the looped end of the wire at center (inside end) of coil.
3. Cut and remove opposite binding. Do not cut the other two bindings.
4. Pull out looped end of wire until first turn is tight against binding, and cut off loop. Pull out about one foot of wire from inside of coil. Loose end should emerge from face side of coil.
5. Cut off loop on outside end of lashing wire to prevent snarling.
6. If coils are installed aloft, see that strand-tensioning roller is engaged under strand, rear cable lifter is closed, pulling plate gate is open and rotating drum is locked.
7. Loosen wing nut on cover latch and open latch. Cover will open automatically.
8. Place coil in magazine. Face of coil should be toward open side of magazine. Position coil with the two coil bindings in recesses. Feed the loose (inside) end of wire from center of coil through throat in cover.
9. Close cover, latch, and tighten wing nut until cover contacts coil lightly.
10. Cut the two remaining bindings and remove them.
11. Tighten wing nut as far as it will go by hand. Do not use pliers.
12. Thread lashing wire around snubbing pulleys in the direction of indicating arrows and wind free end of lashing wire several times around pulleys to keep loose ends from dangling.
13. Pulling plate gate in front of lasher should be left open and drum in blocked position as removed from lasher case.
14. Open rear cable lifter, adjust it to lowest position and close it.
15. Adjust rear vertical rollers to widest opening.
16. Strand-tensioning roller should be in open position, swing against side of aluminum housing. This is done by pressing down on lever projecting up through cover of generator and turning it so that lever is in crosswise position.
17. Raise lasher by means of hand-motion attached to handle.
18. Open rear cable lifter and place lasher on strand.
19. Engage strand-tensioning roller by pressing lever all the way down and turning it counterclockwise, allowing it to rise. When roller is in engaged position, the end of its supporting casting is caught in the grooved danger on inside of aluminum casting of generator housing.
20. Raise cable to strand, close rear cable lifter and let cable rest on roller. Estimate amount roller should be raised to elevate cable to within 1/4 of strand. Lift cable slightly, open cable lifter, lower cable clear of opening and turn adjusting knobs on top of threaded post until lifter is raised the desired amount. Raise cable and close lifter. Then adjust position of vertical rollers to contact sides of cable. These adjustments need not be changed as long as the same diameter cable is being lashed.
21. Pull out sufficient lashing wire for terminating and clamping wire to strand at least two feet behind lasher.
22. Close pulling plate gate and attach tucking ring snap hook to pulling plate.
23. Before transferring around pole, temporarily terminate lashing wire near pole, pull out sufficient wire for final tightening and cut off.
24. Open pulling plate gate all the way.
25. Move lasher forward or backward along strand until drum locks.
26. Connect tucking ring snap hook to suspension strand in next span and open rear cable lifter.
27. Press down strand-tensioning roller lever and turn it clockwise.
28. Raise lasher from strand and transfer to strand in next span.
29. Disconnect tucking ring snap hook and proceed as instructed in Step 19.

**LUBRICATION**

When lasher is in actual use, the following parts require daily lubrication with SAE 10 or 20 Automotive engine oil: shaft and vertical post of strand tensioning roller.

The following parts require weekly lubrication with SAE 10 or 20 Automotive engine oil:
(a) Shafts and threads of rear vertical cable rollers.
(b) Threads, shaft, latch and roller of rear cable lifter.
(c) Post, roller and latch of pulling plate gate.
(d) Drum lock pin and linkage pivot pins.
(e) Latch post and hinge of wire magazine cover.

**PLACING INTO LASHER CASE**

Pulling plate gate should be all the way open and the drum in the locked position before placing the lasher into its case. Keep the lasher in the carrying case at all times when not in use.

**REPLACEMENTS AND REPAIRS**

Vertical cable roller assembly, strand roller and strand roller shaft can be obtained for replacement from the manufacturer. For all other repairs, including replacement of the rubber drive wheels, lasher should be returned to its lasher case to the manufacturer.
The D Cable Lasher is the latest word in a sturdy, lightweight, entirely automatic cable lasher which will lash all cables up to 3/4" in diameter. General Machine Products Company is proud to offer this new model for the discriminating user who insists on a precision tool with ease of operation. Three simple steps and only a few seconds prepare the machine for the run. Lashing is smooth, tight and effortless; requiring a minimum of pulling load from the ground or parallel to the strand. A new tensioning device assures traction on strand far superior to any previous models.

Automatic features include the fingertip-operated, all-range strand tensioning device; the self-registering drum lock; the two way brake to prevent back roll and the center-feed non-rotating wire coil.

Made of high-strength aluminum alloy casting, the lasher incorporates sealed-for-life precision ball bearings, steel bearing and a positive direct gear drive that never needs adjustment.

The D Cable Lasher is used for securing aerial cables up to 3/4" in diameter to suspension strands 1/4" to 1/2" in diameter. The D model lashes two or more cables to a single suspension strand provided that the diameter of the cable assembly does not exceed 3 inches. Wherever extra strength is desired double-feed lashing wires may be used. In this case, where the lashing wire is fed from both sides simultaneously, the distance between spacial lays will be approximately halved.

The lasher consists essentially of a rotatable drum and a carriage which also provides the mounting for the driving mechanism, cable lifter, cable and strand rollers, an automatic ratchet-type brake, and a pulling attachment. The two magazines of the rotatable drum accommodate a 1200 ft. coil of .045" wire each. Two sets of pulleys serve to guide and tension the wire in the lashing operation.

Maximum traction is provided by forcing the strand into the groove of the two driving pulleys by means of a tensioning device actuated through a system of levers. This feature provides uniform traction regardless of the angle between the pulling line and the strand.

Parts are made of heat treated, high-strength aluminum, bronze, and cadmium plated steel. The lasher employs sealed-for-life ball bearings on all vital shafts as well as on the rotatable drum. Other moving parts are mounted in Ollite bushings.

Two rubber drive wheels are mounted in the forward part of the carriage and are geared directly to the rotatable drum. A small trailer wheel supports the rear end of the lasher on the strand. Two vertical adjustible rollers (spring mounted to prevent jamming) center the cable in the opening of the machine. The rear cable lifter roller is adjustable vertically to accommodate cables of various diameters and is held in the open position by a spring catch.

The front pulling plate gate automatically latches in the open position and locks the rotatable drum, when the cable opening in the carriage and the drum are aligned. When the pulling plate gate is closed the drum is free to revolve.

The towing rope may be attached to one of three holes in the pulling plate. Choice of attaching holes depends on the angle of the towing line. The lasher is equipped with an automatic brake which releases when the front cable lifter is open, also when the pulling plate is moved back against its stops.

The D Cable Lasher weighs approximately 43 lbs. without lashing wire. The carrying case weighs approximately 32 lbs.

Prices on request.
COMPONENTS OF E CABLE LASHER

A  COUNTERBALANCE ASSEMBLY
B  CABLE GUIDE AND FRAME
C  BRAKE AND PULLEY ASSEMBLY
D  HYDRAULIC BRAKE CONTROLS
E  MAIN FRAME
F  FOOT POST
G  SNATCH BLOCK
H  HYDRAULIC JACK
I  CABLE REEL BRAKE
J  STRAND REEL MOUNTING AND BRAKE ASSEMBLY
K  POSITIONING COLLARS
L  NOSE SHEAVE
M  TURNBUCKLE
N  STRAND TENSIONER
O  MOUNTING FOR CABLE LASHER

Cable by the mile...

with the

E CABLE LASHER

by GENERAL MACHINE PRODUCTS COMPANY, INC.

- Prelashes cable on the ground
- Continuous, even spiral wrapping
- Lower installation cost
- Lashes and positions cable and strand at one time
- Places up to 30 miles of cable a day
- Tension automatically controlled
- Reduces pole climbing—2 trips instead of 4
The E Cable Lasher is the fastest, most efficient equipment available for prelashing and hanging cable up to 1½" in diameter. Cable reel, strand wire reel and C Cable Lasher unit are mounted on the trailer and the lashing operation is done on the ground before the cable is hung. A winch line pulls the cable and strand through the C Cable Lasher, then hauls the prelashed cable into position on the poles.

The E Cable Lasher makes it possible, for the first time, to do most of the work on the ground, thus reducing the number of times a crew is required to climb a pole. The result is much faster, safer and more economical installation of cable and supporting strand wire.

The operation consists of feeding the cable and strand wire to the C Cable Lasher which lashes the cable tightly to the strand with a uniform spiral lashing of stainless steel wire. As the cable and supporting strand wire are lashed together, a winch line on a forward truck hauls the cable into position on the cable blocks located on the poles.

The tension of the cable and the suspension strand is controlled at the time they are lashed together and positioned. Before prelashing was possible, the strand was positioned and tensioned prior to hanging the cable, then the lashing was done after the strand and cable had been placed in position on the poles. With the E Cable Lasher, the cable tension is controlled by the Cable Reel Brake Unit as the cable passes through the C Lasher, and the Strand Tensioner and Lasher Mounting Unit tension the suspension strand at the same time.

The lashing unit (C Cable Lasher) will handle all cables up to 1½" in diameter and suspension strand of 5/16" to 7/16" diameter. The lashing wire is of .045 stainless steel.

A five-man crew operating the E Cable Lasher can prelash and hang about 3,000 feet of cable in one continuous operation; about 10 miles of cable in one day... safely and efficiently. By means of a handy-talkie, one member of the crew, stationed at the trailer, can keep in constant contact with the lineman who is following and controlling the cable-and-strand as it passes over rollers on each pole along the way; as well as with the pull-in truck half a mile up the line.

All the assembly units which make up the E Cable Lasher are precision-built for trouble-free operation and are made of quality materials.

### COMPONENTS OF COMPLETE PRELASHING UNIT

<table>
<thead>
<tr>
<th>KEY</th>
<th>ITEM</th>
<th>CATALOG NUMBER</th>
<th>USE</th>
<th>SUGGESTED MINIMUM REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>E Lasher</td>
<td>7403</td>
<td>Trailer mounted equipment</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>C Cable Leader</td>
<td>7404</td>
<td>Prevents twisting of cable and strand</td>
<td>2 (1 spare)</td>
</tr>
<tr>
<td>3</td>
<td>B Counterbalance</td>
<td>7421</td>
<td>Mounted on reel trailer to compensate for weight of E Lasher equipment</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>C Cable Lasher</td>
<td>7142</td>
<td>Lashes cable to strand with lashing wire</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>B Cable Block Frame</td>
<td>7406</td>
<td>For end poles of pull</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>C Cable Block Frame</td>
<td>7406</td>
<td>In-line poles (corners up to and including 3-foot pull)</td>
<td>28</td>
</tr>
<tr>
<td>7</td>
<td>D Cable Block Frame</td>
<td>7406</td>
<td>Light inside corners (4-foot to and including 8-foot pull)</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>E Cable Block Frame</td>
<td>7406</td>
<td>Heavy inside corners (pull over 8 feet)</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>F Cable Block Frame</td>
<td>7406</td>
<td>All outside corners (4-foot pull and over)</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>E Cable Block</td>
<td>7405</td>
<td>Sheave for all frames (E and F frames require 2 blocks)</td>
<td>42</td>
</tr>
<tr>
<td>11</td>
<td>D Strand Shifter</td>
<td>7407</td>
<td>For transferring at in-line poles</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>E Strand Shifter</td>
<td>7407</td>
<td>For transferring at corner poles</td>
<td>2</td>
</tr>
<tr>
<td>13</td>
<td>B Cable Guard</td>
<td>7422</td>
<td>For cable protection at each pole</td>
<td>1 per pole</td>
</tr>
<tr>
<td>14</td>
<td>Handy Talkie (not supplied by B.M.P. Co.)</td>
<td></td>
<td>For communication between trailer, truck and patrolman</td>
<td>4 (1 spare)</td>
</tr>
<tr>
<td>15</td>
<td>Strand Reel Trailer (not supplied by B.M.P. Co.)</td>
<td></td>
<td>Lasher may be mounted on it by competent machine shop or maintenance department</td>
<td>1</td>
</tr>
</tbody>
</table>