



INSTRUCTIONS

This manual contains important
warnings and information.
READ AND KEEP FOR REFERENCE.

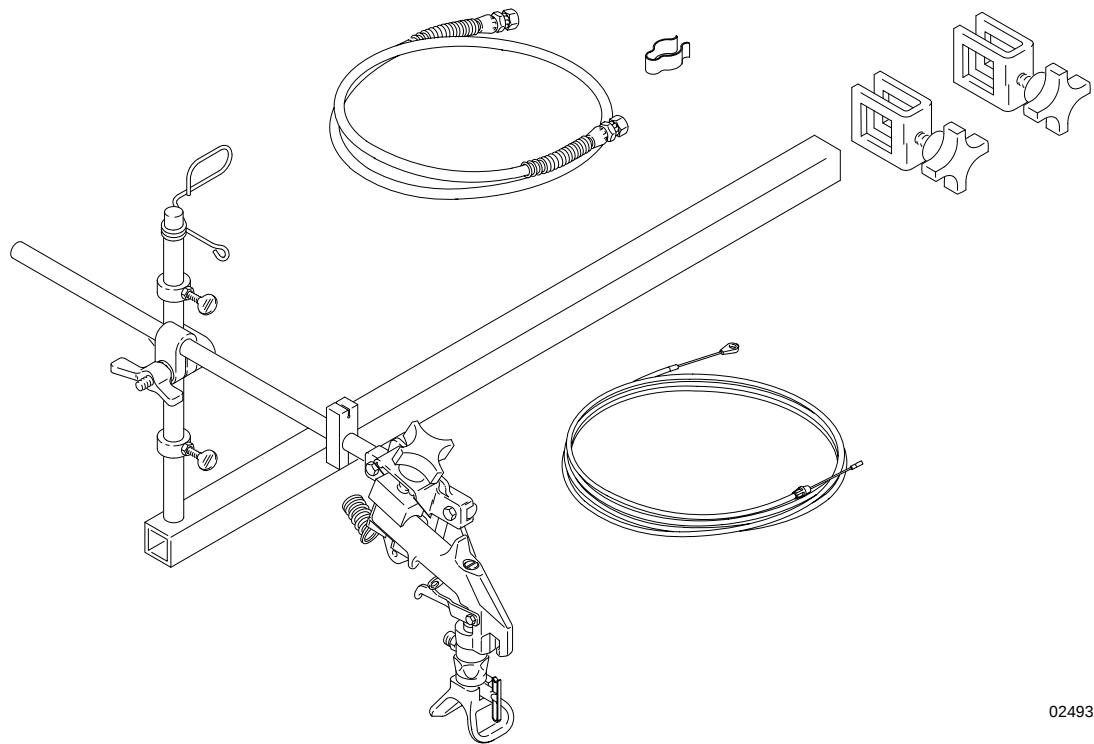
For the LineLazer™ Gasoline Powered Airless Linestrippers

Second Gun and Hose Kit

3000 psi (21.0 MPa, 210 bar) Maximum Working Pressure

Model 224-097

Includes Size 319 LineLazer Tip
and Size 517 SwitchTip™



02493A

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Symbols

Warning Symbol



This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.

Caution Symbol



This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the corresponding instructions.

Pressure Relief Procedure

! WARNING



INJECTION HAZARD

Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the **Pressure Relief Procedure** whenever you:

- are instructed to relieve the pressure,
- stop spraying/dispensing,
- check or service any of the system equipment,
- or install or clean the spray tip/nozzle.

1. Engage the gun safety latch.
2. Turn the ON/OFF switch to OFF.

3. Flip the pressure control switch to OFF.
4. Disengage the gun safety latch. Hold a metal part of the gun firmly to the side of a grounded metal pail, and trigger the gun to relieve pressure.
5. Engage the gun safety latch.
6. Open the pressure drain valve, having a container ready to catch the drainage. Leave the valve open until you are ready to spray again.
7. Disconnect the spark plug cable.

If you suspect that the spray tip or hose is completely clogged, or that pressure has not been fully relieved after following the steps above, very slowly loosen the hose coupling or fitting to relieve pressure gradually, then loosen completely. Now clear the tip or hose.

[illegible]

How to Disengage and Engage the Trigger Cable

⚠ WARNING

The gun is remotely triggered with the dual gun selector on the handle bar.

To reduce the risk of an injection injury due to remotely triggering the gun by accident, always disengage the trigger cable from the block before handling the gun. See Fig. 2, Detail A. **THE GUN WILL TRIGGER BRIEFLY WHEN RELEASING THE CABLE!** Before you remove the gun from the holder, engage the gun's trigger safety latch.

⚠ CAUTION

Keep the seat in the trigger cable block (48) and the end of the cable jacket clean at all times to be sure the trigger cable functions properly.

To disengage the cable, grasp the cable (402) behind the block (A). Pull the cable back 1/2 inch (13 mm) and then out of the block. **THE GUN WILL TRIGGER BRIEFLY!**

To engage the cable, slide the cable (402) into the block (A), making sure the end of the cable jacket seats firmly in the seat of the block. **THE GUN WILL TRIGGER BRIEFLY!**

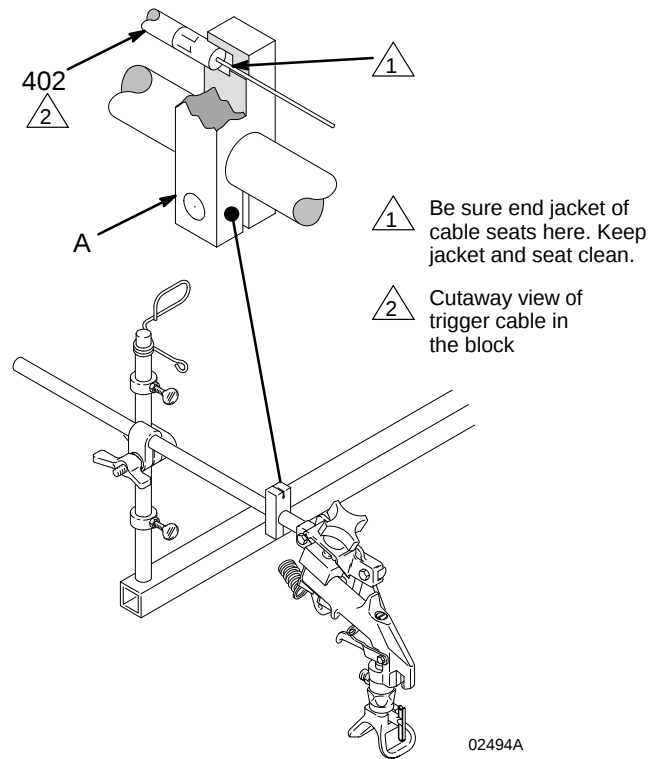


Fig. 1

Second Gun Kit Installation

NOTE: Fig. 2, which shows the second gun (outside gun) being mounted on the pump side of the cart, represents the installation at step 3.

NOTE: If you want to switch the gun assemblies to the other side of the unit at this time, see **To mount the guns on the engine side of the cart** on page 6 before installing the second gun kit.

1. Disengage the cable (402) from the block (A) of the unit's existing gun. See Fig. 1. Engage the trigger safety.
2. Loosen the carriage clamps (D, E). Slide the carriage bar (B) off the cart.
3. For mounting the second gun bar on the pump side of the cart: Slide a clamp (405A) onto the carriage bar (B) as shown in Fig. 2. Slide the carriage bar through the pump-side carriage clamp (D) and into the center of the cart. Now slide another clamp (405B) onto the carriage bar as shown in Fig. 2.

For mounting the second gun bar on the engine side of the cart: Follow Step 3, except slide the carriage bar through the engine-side carriage clamp (E) and the into the center of the cart. The knobs of the clamps (405A, 405B) must face back toward the handle bars.

4. Slide the carriage bar (B) through the opposite carriage clamp. Tighten the carriage clamps (D, E).
5. Slide the second gun bar (404) far enough into the carriage bar that the clamp (405B) engages the bar. Position the clamps (405A, 405B) over the notches (C) in the carriage bar (B) and tighten the clamps.

NOTE: For stable gun operation, the second gun bar (404) has a maximum recommended extension from the carriage bar of about 11–1/4" (286 mm).

6. Disconnect the trigger cable from the second gun at the screw (34). See Fig. 2, Detail B.
7. Unscrew the filter's second outlet cap (J). Screw the hose (403) onto the filter nipple.

8. Remove the guide clamp screw (F).
9. Snap the cable bushing (H) into the fluid plate (G). Route the trigger cable (402) parallel with the main gun cable, separating the guide clamp (F) to feed the cable through it. Install and tighten the guide clamp screw (F). Rout the cable through the cable (K) and to the second gun.
10. Slide the hooked end of the cable (402) through the hole (M) in the lever plate (L). Rotate the hook and slide it back until it hooks on the plate. See Fig. 2, DETAIL A.
11. Reconnect the trigger cable to the second at the screw (34). Torque the screw to 15 in-lb (1.7 N•m), and then back it off 1/16 to 1/8 turn and tighten the jam nut (99) while holding the screw (34). Be sure the plate (94) moves freely.
12. Install the clip (401) to hold the cable onto the frame.
13. Connect both trigger cables to the blocks (A). See page 4. Now adjust the cable tension. See page 8.
14. Do not install the spray tip until the system is primed. See your complete LineLazer manual for the startup procedure.

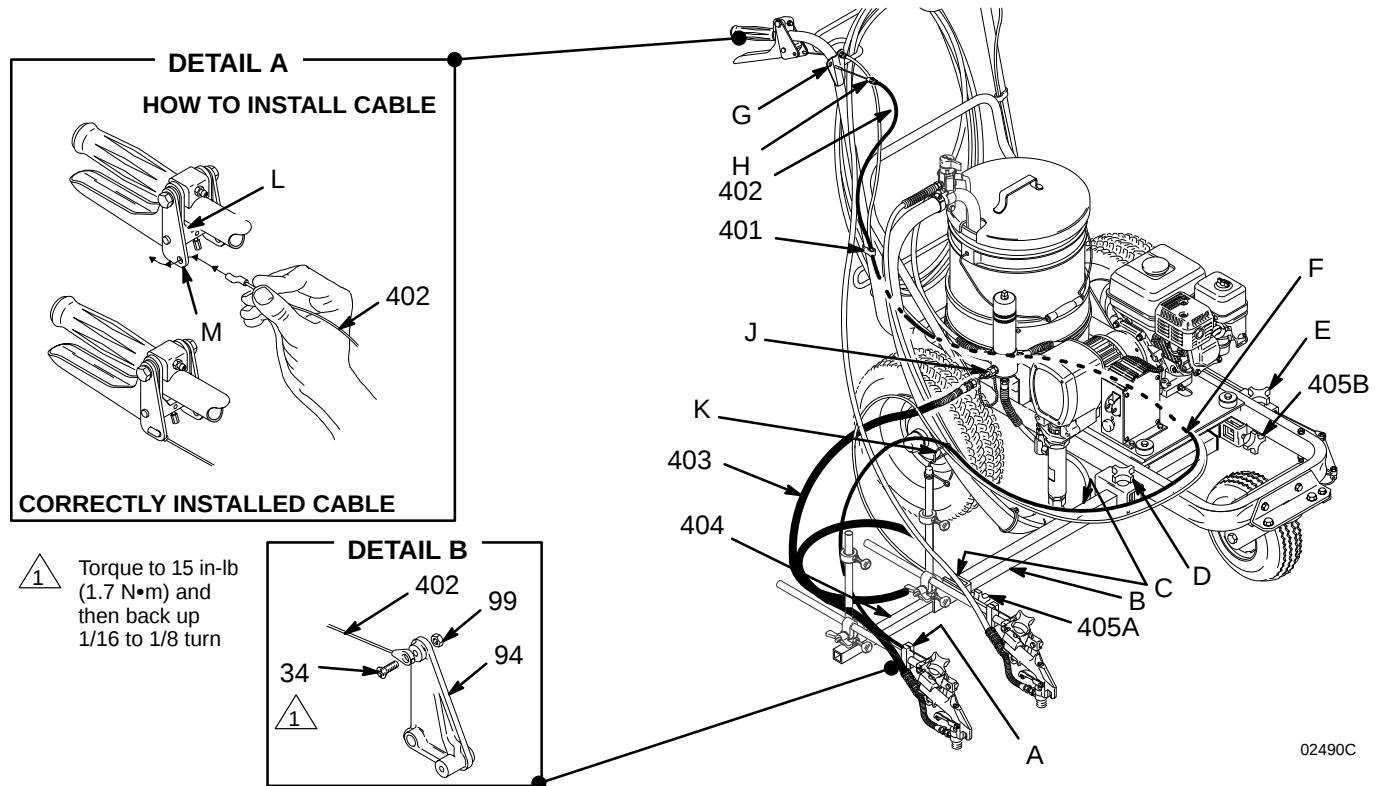


Fig. 2

Adjust Simultaneous Gun Triggering

! WARNING

To risk the risk of a fluid injection injury, always disengage the trigger cable to the gun(s) before moving or adjusting the guns or gun arms. See page 4.

1. Align the front of the guns by adjusting the gun arms. See page 6.
2. Position the dial gun selector to trigger both guns. See page 8.

3. Start the sprayer, using water, or spray on cardboard. Trigger the guns to see if the lines begin at the same time and place.

If one gun triggers before the other gun, reduce the cable tension of the gun that triggers first. See **Trigger cable tension adjustment** on page 8.

If one line starts in front of the other, adjust the position of the guns. See page 6.

Trigger the guns to recheck the adjustments.

Positioning the Gun Arm Assembly

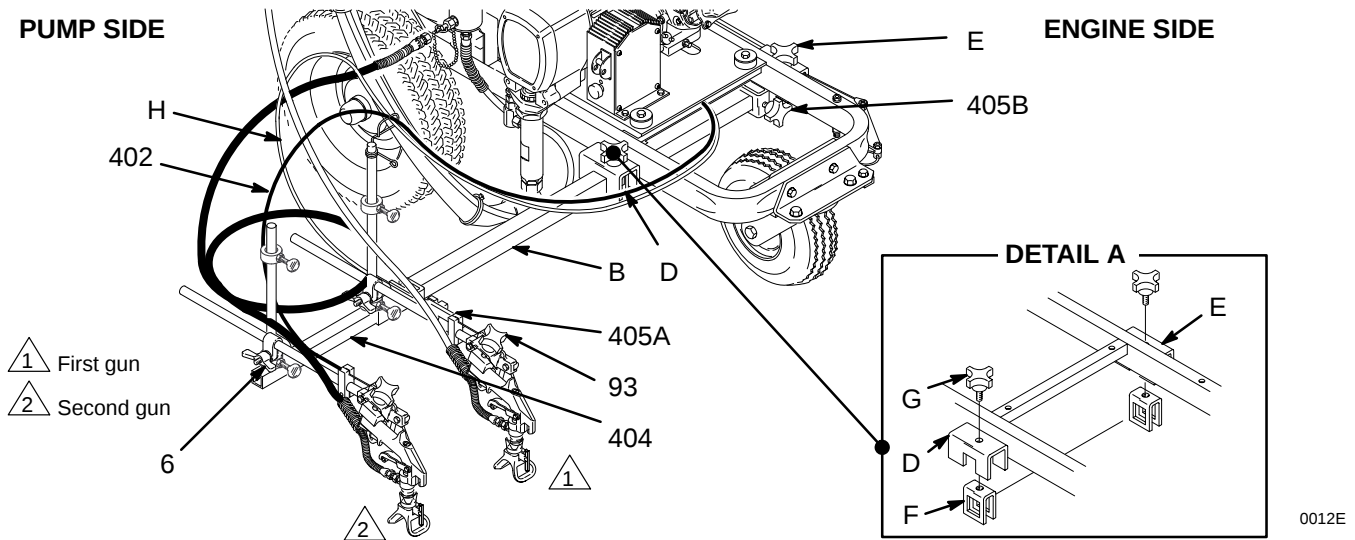


Fig. 3

Whenever you move the guns

Disengage the cables (402, H) first. See page 4. Do not kink the trigger cables. Pull out more of the 50 ft. (15 m) hose, if necessary.

⚠ WARNING

Do not kink the cables, which could prevent them from properly triggering and untriggering the guns.

After moving the guns, reposition the tip guard so it is parallel to the ground and its "wings" face the front and back of the unit. Disengage the gun trigger safety latch and engage the cable (402, H).

Vertical position of the first or second gun

Loosen the post/arm clamp (6) and move the gun up or down. Tighten the clamp. Engage the trigger cable.

NOTE: Two collars (187, 188) are located above and below each gun. The collars can be adjusted to provide stops for preset spray width positions for each gun.

Horizontal position of the first gun

Method 1: Disengage the cable (H). Loosen the carriage clamps (D, E) and slide the carriage bar (B) left or right, so the gun will be outside the tire path. Tighten the clamps. Engage the cable (402).

Method 2: Disengage the cable (402). Loosen the arm clamp (6) and rotate the gun out to the side. Tighten the bolt. Engage the cable (402).

NOTE: Use methods 1 and 2 to obtain the maximum distance of one gun from the unit, which is helpful when spraying around obstacles.

Horizontal position of the second gun

Method 1: Disengage the cable (402). Loosen the clamps (405A, 405B). Slide the second gun bar (404) horizontally as desired, but be sure both small clamps engage the second gun bar. Tighten the clamps. Engage the cable (402).

Method 2: Disengage the cable (402). Loosen the post/arm clamp (6) and rotate the gun out to the side. Tighten the bolt. Engage the cable (402).

NOTE: Use methods 1 and 2 together to obtain the maximum distance of 33-1/2" (851 mm) between the center of two guns.

To mount guns on the engine side of the cart

1. For both guns, disengage the cable (402, H) and engage the trigger safety lever. See Fig. 4.
2. Loosen the gun holder knobs (93) and remove the guns. Lay the guns out of the way.
3. Remove the knobs (G) on both carriage clamps (D, E); The carriage bar (B) and extension clamps (F) will drop down.
4. Lift the front tire and rotate the carriage bar 180° under the cart and to the other side of it.
5. Position the carriage bar below the carriage clamps (D, E). Align the holes in the top of the extension clamps (F) with the holes in the carriage bar clamps and install the knobs (G). See Fig. 3, DETAIL A.
6. Loosen the post/arm clamps (6) and rotate the gun arms (G) forward. Tighten the clamps.
7. Install the guns. See page 7. Note to which gun and position on the dual gun selector each of the cables (402, H) goes. Route the hoses and cables carefully to prevent kinking. Position the tip guards. Engage the cables (402, H).

How to Mount the Gun in the Gun Holder

WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 2.

1. **Relieve the pressure.**
2. Disengage the trigger cable. See page 4. Disengage the gun's trigger safety lever (J).
3. Loosen the gun holder knob (93).
4. Position the gun so the gun trigger is resting on the remote trigger lever (H).
5. Be sure that the gun is mounted straight and then tighten the knob (93) firmly.
6. Engage the trigger cable. See page 4.

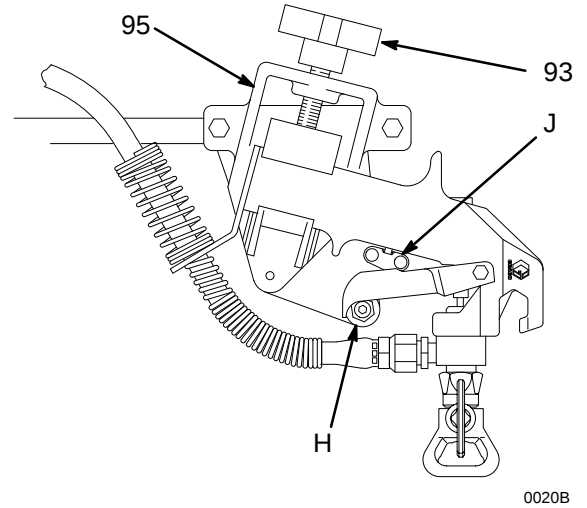


Fig. 4

Trigger Cable and Dual Gun Selector Operation

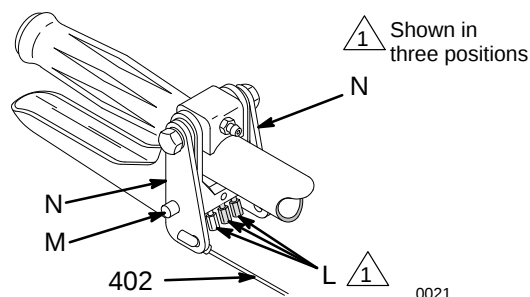


Fig. 5

In a two-gun operation, the second gun cable (402) is black with a light red cover at each end, and trigger from the pump side (or outside) position of the dual gun selector (L).

CAUTION

Always note to which gun and position on the dual gun selector (L) each of the cables goes so that the correct gun is triggered.

To trigger just one gun, move the selector (L) left or right, depending on how your cables are routed to the guns, until the spool (M) protrudes through the plate. You may need to move the plate (N) a little to get the spool through it.

To trigger both guns, center the selector (L).

CAUTION

A loose cable prevents the gun from being fully triggered, which causes premature wear of the gun needle. A tight cable prevents the gun from being fully untriggered, which results in dripping and premature tip wear. Follow the steps at right if adjustment is needed.

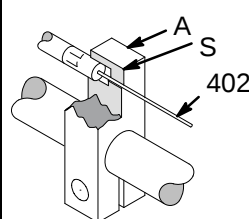
Trigger cable tension adjustment (Fig. 6)

WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 2.

1. **Relieve the pressure.**
2. Be sure the gun is properly mounted in the holder as instructed in Step 4 under **How to Mount the Gun in the Gun Holder** on page 7.
3. Pull the actuator lever (94) forward and hold it. Lift up on the gun trigger (T) until there is slight resistance. Visually check to see if there is about 1/32 to 1/16 in. (1–2 mm) gap between the trigger lever (H) and where the gun trigger touches the bar.
4. To adjust the tension, loosen the screw in the block (P). Slide the block forward to increase the gap and backward to decrease the gap. Tighten the screw.
5. Recheck the gap and continue adjusting as needed.

CAUTION



Do not allow the cable (402) to rub against the outside edges of the slot (S) in the block (A), to prevent premature wear of the cable. Rotate the block slightly to eliminate rubbing.

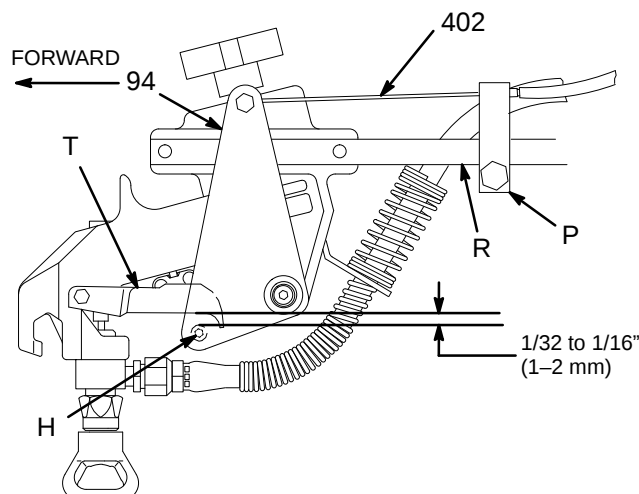
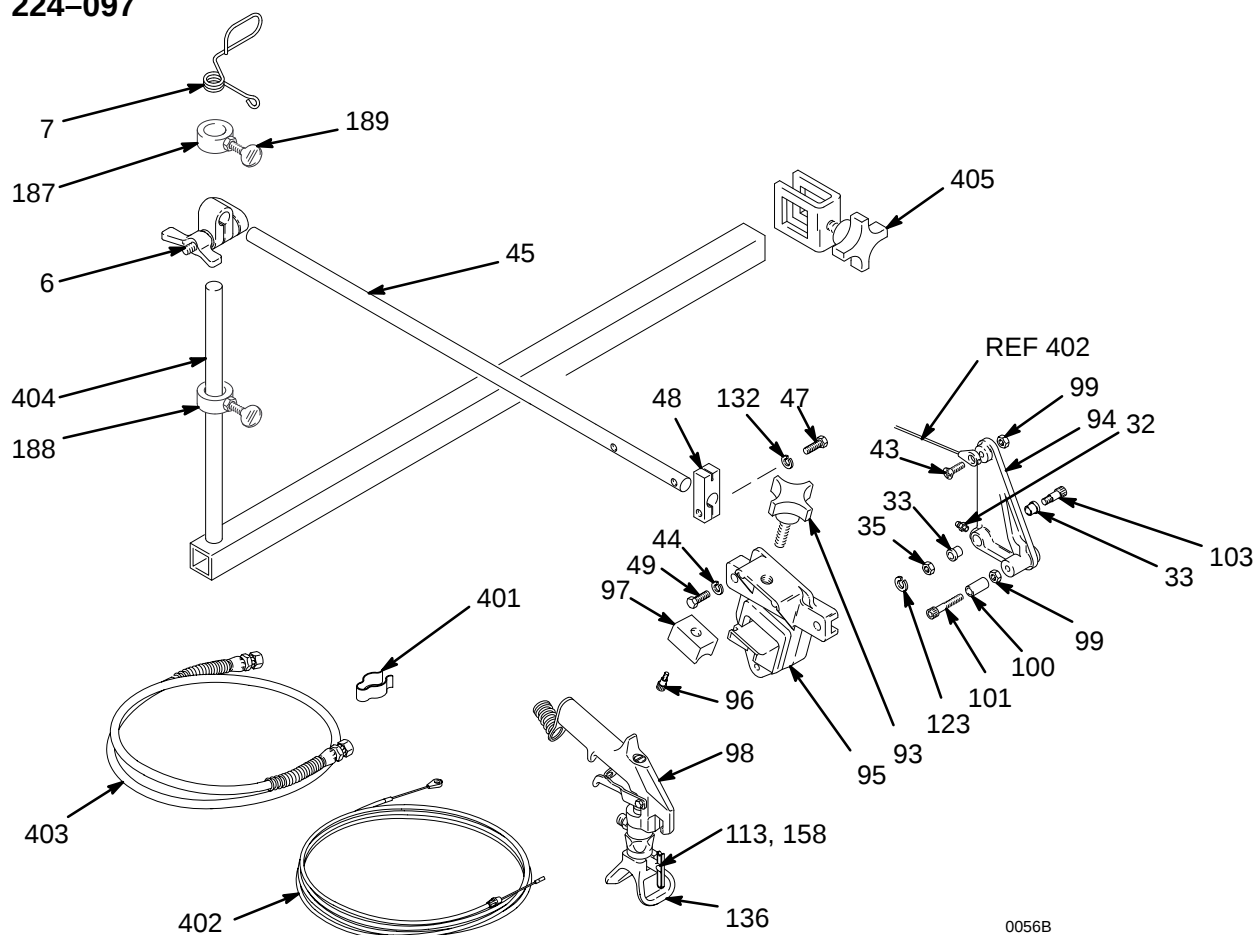


Fig. 6

Second Gun and Hose Kit Model 224-097



Ref No.	Part No.	Description	Qty.
6	114-029	CLAMP, arm support	1
7	188-135	GUIDE, cable	1
32	100-846	FITTING, lubrication	1
33	111-016	BEARING, flanged	2
34	111-230	SCREW, mach, flhd, 1/4-20 x 1"	1
35	100-015	NUT, hex, 1/4-20	1
44	100-016	LOCKWASHER, 1/4"	2
45	181-734	ARM, support	1
47	100-101	CAPSCREW, hex hd, 3/8-16 x 1"	2
48	186-699	BLOCK, mounting cable	1
49	100-021	CAPSCREW, hex hd, 1/4-20 x 1"	2
93	181-818	KNOB	1
94	186-747	LEVER, actuator	1
95	188-452	HOLDER, gun	1
96	108-483	SCREW, shoulder, sch, 1/4 x 3/8"	1
97	181-795	JAW, clamp	1
98	235-459	FLEX GUN <i>See manual 308-235 for parts</i>	1
99	101-345	NUT, hex, ham, 1/4-20	2
100	108-535	BEARING, sleeve	1

Ref No.	Part No.	Description	Qty.
101	107-445	CAPSCREW, sch, 1/4-20 x 1-1/2"	1
103	111-045	SCREW, shoulder, sch, 5/16 x 1"	1
113	LLT-319	LineLazer Tip, Size 319	1
123	110-755	WASHER	1
132	100-133	LOCKWASHER, 3/8"	1
136	220-422	RAC IV Dripless TIP GUARD	1
158	221-517	SwitchTip, Size 517	1
187	113-975	COLLAR, screw, set	2
188	100-077	NUT, hex; 5/16-18 unc	2
189	100-220	SCREW, thumb; 5/16	2
401	178-342	CLIP, spring	1
402	111-155	CABLE, remote trigger, color-coded	1
403	224-068	HOSE, 1/4" ID, cpld 1/4-18 npsm(f) 6-1/2' (1.2 m) grounded, spring guards	1
404	224-096	BRACKET, support, extension	1
405	224-071	CLAMP, extension	2

Flex Gun Repair Kit 235-474	
Includes needle, gasket, diffuser/seat	

Manual Change Summary

The arm support clamp (Ref. 6) was changed from 111-817 to 114-029.

Ref. Numbers 187 to 189 were added to the manual.

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The Graco Warranty

Graco warrants all equipment listed in this manual which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. With the exception of any special extended or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, gas engines, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

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Graco Phone Number

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1-800-367-4023 Toll Free.

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