SUPERSEDED BY 409–5860

AMP* Hydraulic Foot Pump No. 69325–3

409–1980
(was CM 1980)
15 DEC 93 Rev C

AMP

customer manual

AMP

AMP* Hydraulic Foot Pump No. 69325–3

customer manual

AMP Incorporated, Harrisburg, PA 17105 TOOLING ASSISTANCE CENTER 1–800–722–1111
This document is Engineering controlled per AMP Specification 102–21. It is subject to change and Technical Publications should be contacted for latest revision.

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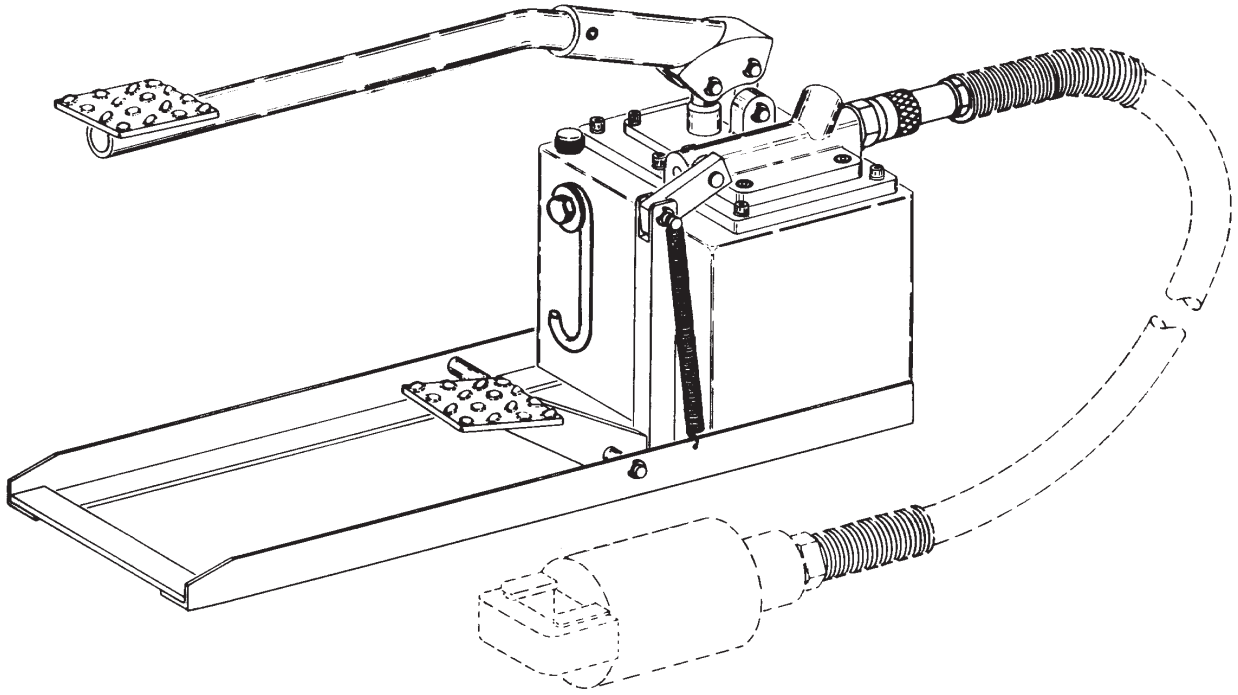

Frontispiece: Hydraulic Foot Pump 69325–3

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DANGER

SAFETY PRECAUTIONS PREVENT INJURY

Safeguards are designed into AMP tools to protect operators and maintenance personnel from hazards during normal tool operation. As with most tooling, certain precautions must be taken by the operator and repairman to avoid personal injury or damage to the tool. Carefully observe the following safety precautions, and those throughout the text, before and during operation of the tool:

- NEVER operate foot pump without having hose and crimping head attached.
- NEVER use brake fluid as a substitute for the recommended hydraulic fluid.
- NEVER operate foot pump with a damaged filter or without a filter.
- NEVER allow foot pump to remain under pressure for extended periods of time.
- Always attach protective plastic caps to head, hose, and foot pump when not in use.
- Ensure that breather hole in filler plug is open before operating foot pump.
- Ensure that latch pin has been inserted in head before operating foot pump.

TOOLING ASSISTANCE CENTER

CALL TOLL FREE 1–800–722–1111
(CONTINENTAL UNITED STATES AND PUERTO RICO ONLY)

GENERAL POLICY

All tools remain the property of AMP Incorporated. The customer shall have no title to the tool(s) and his interest shall be limited to the use of said tool(s) for the purpose indicated during the stated term.

No major change or modification shall be made without written consent of AMP Incorporated.

The customer shall be fully responsible for the maintenance of the tool(s) as described in this manual.

Each tool shall be returned in usable condition, reasonable wear and tear excepted. Before returning the tool, contact, AMP Incorporated, Harrisburg, Pennsylvania, and request instructions for shipping and disposition.

AMP Field Service Engineers are available to provide assistance when problems arise concerning use and maintenance of the tool. Contact AMP Service Products Business for applicable fees.

INFORMATION REQUIRED WHEN CONTACTING SERVICE PRODUCTS BUSINESS

AMP Service Products Business offers the **Tooling Assistance Center** as a means of providing technical assistance when required.

When contacting AMP Service Products Business by telephone regarding questions about the use or maintenance of a machine or tool, it is suggested that a person familiar with the tool be present with a copy of the manual to receive instructions. Many difficulties can be corrected in this manner.

When calling the Tooling Assistance Center, be ready with the following information:

1. Customer name
2. Customer address
3. Person to contact (name, title, telephone number and extension)
4. Person calling
5. Machine or Tool Number (and serial number if applicable)
6. Product part number (and serial number if applicable)
7. Urgency of request
8. Nature of problem
9. Description of inoperative component(s)
10. Additional information/comments that may be helpful

CONTENTS

ILLUSTRATIONS

1. INTRODUCTION

AMP Hydraulic Foot Pump 69325–3 (see Frontispiece) combines the convenience of a hand tool with the power of a bench machine. It is used primarily for low–volume production or at locations where electrical power sources are not readily available.

Heads and dies are available for use in this unit to crimp AMP terminals and splices, in wire ranges from No. 8 AWG to 1000 MCM. It should be noted that the crimping of terminals and splices in the 600 MCM to 1000 MCM range will require additional operator effort.

The foot pump can be used as a portable crimping unit. This type of operation provides a large working radius and accessibility to confined areas.

A complete line of precision–engineered heads and matched die sets are available from AMP Incorporated, Harrisburg, PA 17105. Hose assemblies, in four different lengths, are also sold separately. See Figure 4–1 for accessory part numbers.

NOTE *Measurements are in metric units [followed by U.S. customary units in brackets].*

When reading this manual, pay particular attention to DANGER, CAUTION, and NOTE statements.

DANGER *Denotes an imminent hazard that may result in moderate or severe injury.*

CAUTION *Denotes a condition that may result in product or equipment damage.*

NOTE *Highlights special or important information.*

Reasons for reissue are provided in Section 7, REVISION SUMMARY.

2. DESCRIPTION

2.1. Physical Description

The hydraulic foot pump features a two–speed hydraulic pumping unit. This unit will deliver 4.75 ml [.29 cu in.] per stroke at high pressure (up to 58608 kPa [8500 psi]), and 120.4 ml [7.35 cu in.] per stroke at 0 to 1379 kPa [200 psi] for fast ram advance and return. See Figure 2–1 for foot pump specifications.

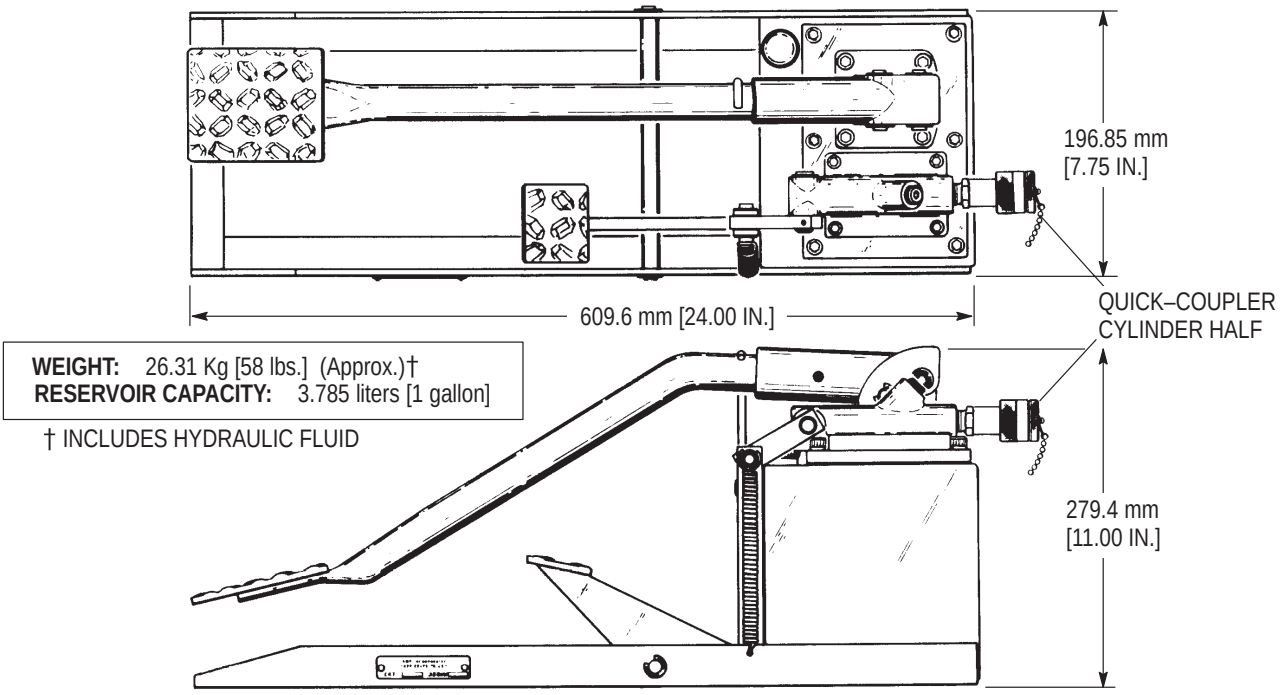

Figure 2–1. Foot Pump Specifications

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The pump is shipped with hydraulic fluid in the reservoir. Refer to Section 5, INSPECTION/ADJUSTMENTS AND MAINTENANCE, for refilling instructions. If additional fluid is required, it is essential that the proper grade of high–quality hydraulic fluid be used. Recommended hydraulic fluids and manufacturers of high–grade fluid for use in the foot pump are listed in Figure 2–2.

CAUTION *DO NOT use brake fluid.*

HYDRAULIC FLUID	MANUFACTURER
COSMOLUBRIC● No. 1500	E.F. Houghton & Co.
CLAVUS‡ 27	Shell Oil Co.
Duro 160	Sinclair Refining Co.
HAVOLINE▲ 10	Texaco Inc.
GARGOYLE ARCTIC C◆	Mobile Oil Co.

● COSMOLUBRIC is a trademark of E.F. Houghton & Co.
‡ CLAVUS is a trademark of Shell Oil Co.
▲ HAVOLINE is a trademark of Texaco Inc.
◆ GARGOYLE ARCTIC C is a trademark of Mobil Oil Co.

Figure 2–2. Recommended Hydraulic Fluids

2.2. Functional Description (Figure 2–3)

On the intake stroke (up–stroke) of two–section piston (H and L), hydraulic fluid is drawn from the reservoir (K) and into intake line (A). See Detail A of Figure 2–3. The fluid flows past low–pressure intake poppet (B) into the low–pressure chamber, and it flows past high–pressure intake poppet (F) into the high–pressure chamber.

On the pressure stroke (down–stroke) of two–section piston (H and L) hydraulic fluid in the low–pressure chamber is directed through spool (C), past outlet poppet (D), and through outlet valve (J) to the crimping head. See Detail B of Figure 2–3. Simultaneously, the hydraulic fluid in the high–pressure chamber is directed through high–pressure outlet poppet (G), past outlet poppet (D), and through outlet valve (J) to the crimping head. This action causes the moving die to close, holding the terminal or splice in crimping position.

When approximately 1379 kPa [200 psi] is developed (see Detail C of Figure 2–3), hydraulic fluid from the high–pressure chamber will cause outlet poppet (D) to shift spool (C), allowing low–pressure hydraulic fluid to be discharged into reservoir (K). High–pressure hydraulic fluid continues to flow through high–pressure outlet poppet (G), past outlet poppet (D) and outlet valve (J), and into the crimping head, completing the crimp.

The high–pressure system has a pressure relief valve (M) which is set at the factory to release at between 5516 and 57918 kPa [8000 and 8400 psi]. If the pressure buildup in the high–pressure system exceeds this setting, pressure relief valve (M) will open, causing the hydraulic fluid to be discharged into reservoir (K).

CAUTION *DO NOT alter the setting of the pressure relief valve.*

Depressing the return pedal advances plunger (P) which opens poppet (X). See Detail D of Figure 2–3. When poppet (X) opens, hydraulic fluid returns from the crimping head to reservoir (K), but only for as long as the return pedal is depressed.

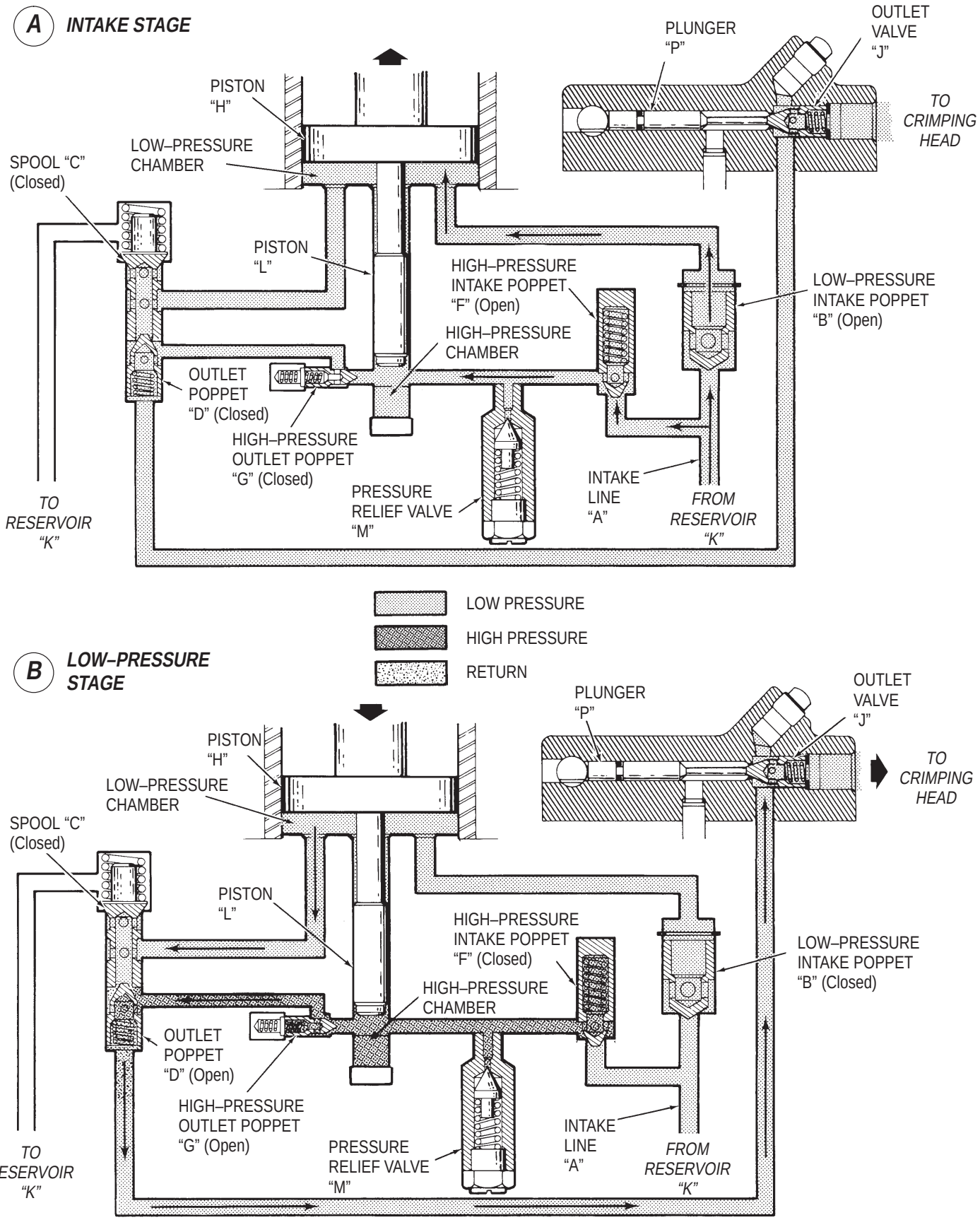

Figure 2–3. Functional Hydraulic Schematic (Sheet 1 of 2)

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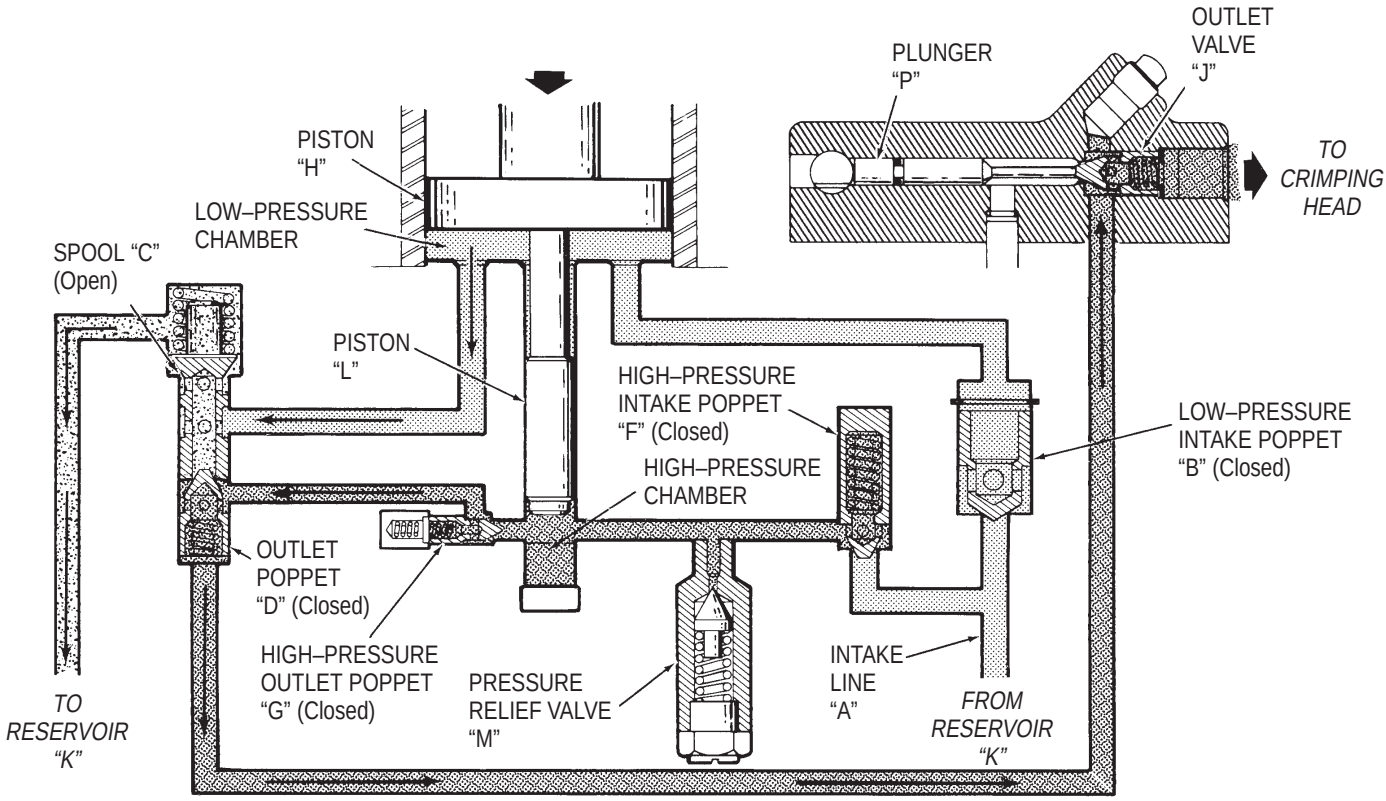
C ***HIGH–PRESSURE STAGE***



D ***PRESSURE RELEASE STAGE***

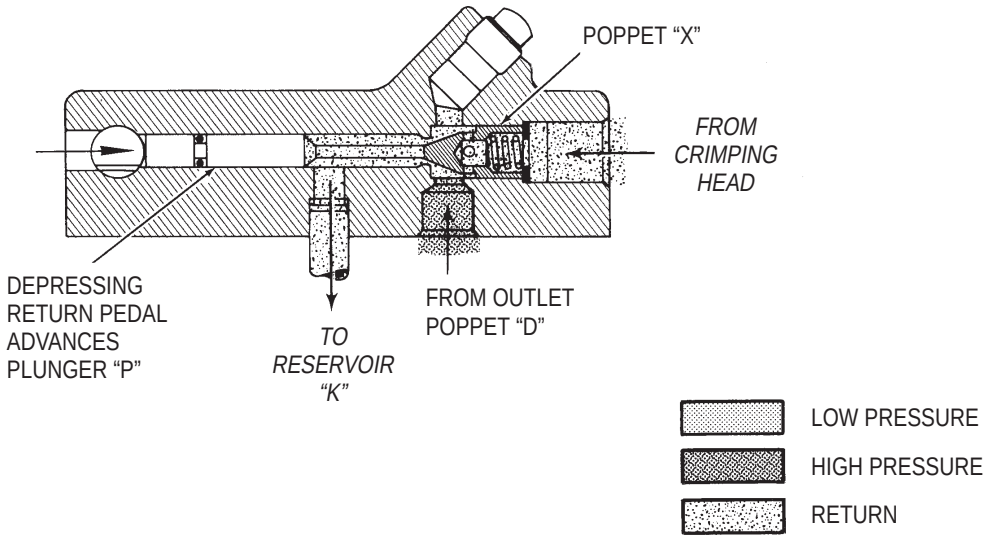


Figure 2–3. Functional Hydraulic Schematic (Sheet 2 of 2)

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3. OPERATION

CAUTION *DO NOT operate foot pump without having hose and crimping head attached. Refer to Figure 3–1.*

3.1. Preparation

1. Check level of hydraulic fluid in reservoir, and add fluid if required. Refer to Paragraph 5.2.
2. Protective caps are put on crimping heads and hose fittings to prevent dirt from entering the hydraulic system. Ensure that caps are placed on head and hose fittings when they are disassembled.

CAUTION *Never store foot pump without having head or protective cap attached to the hose fittings.*

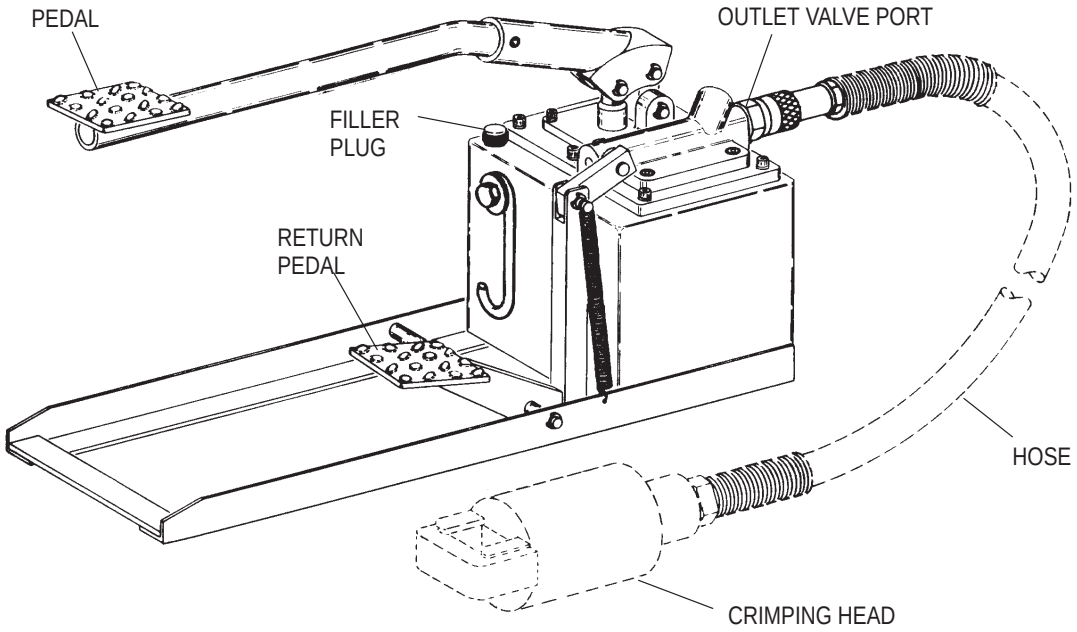


Figure 3–1. Foot Pump Preparation 91–212

3.2. Attaching Crimping Head to Hose and Hose to Foot Pump

CAUTION *Always depress return pedal when connecting or removing hose couplings or crimping heads.*

To attach the crimping head proceed as follows:

1. Thoroughly clean coupling area of hose assembly and crimping head.
2. Remove protective caps.
3. Mate coupling halves and tighten collar. (Refer to Figure 3–2.)

To attach foot pump to hose proceed as follows:

CAUTION *Depress return pedal while connecting coupling halves.*

1. Thoroughly clean coupling area of hose assembly and foot pump.
2. Remove protective caps.
3. Mate coupling halves and tighten collar. (Refer to Figure 3–2.)
4. After the hose has been attached to head and pump, bleed all air from the hydraulic system. Refer to Paragraph 5.3.

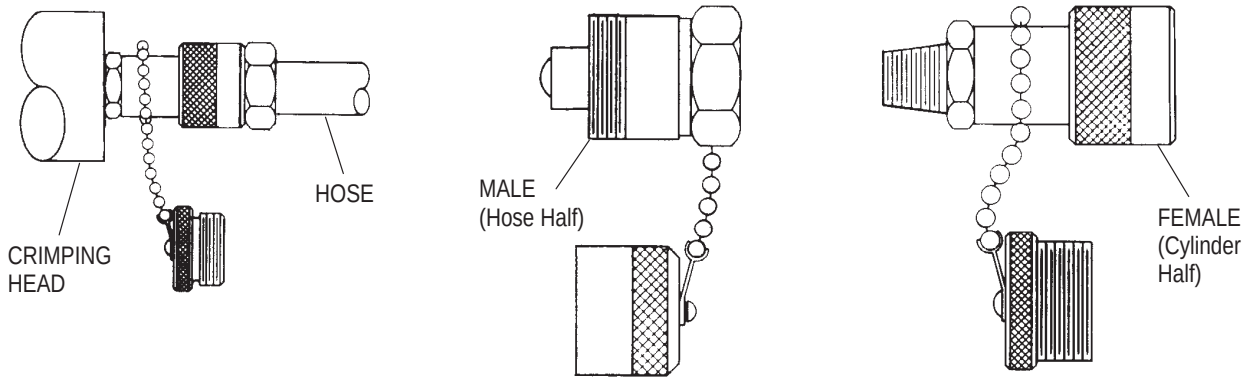


Figure 3–2. Crimping Head Coupling Attachment 91–214

3.3. Insertion of Crimping Dies

The instruction materials packaged with the dies give detailed instructions for die insertion, die adjustments, and die removal when the dies are used with crimping heads as listed. Insert required crimping dies as instructed.

NOTE *All listed die numbers are for complete die sets except for those identified as nests or indenters for SOLISTRAND* connectors. The interchangeability of nests and indenters for SOLISTRAND connectors requires that these dies be identified separately.*

3.4. Operating Procedure

1. Be certain that crimping dies are properly installed in head. Refer to instruction material packaged with crimping dies for die insertion instructions.

2. Place terminal or splice in crimping dies. Refer to instruction material packaged with crimping dies for exact terminal or splice location in dies.

CAUTION *BE SURE latch pin has been fully inserted before operating pump.*

3. Pump pedal to activate unit. Continue pumping pedal until ram moves up and holds terminal or splice firmly in place. A sudden decrease in effort required to push pedal down will be observed during the initial buildup of pressure.

4. Insert stripped wire into terminal or splice.

5. Continue pumping until pressure relief valve is activated. A slight decrease in effort required to push pedal down, accompanied by a SNAPPING sound, indicates that maximum required crimping pressure has been reached and that crimp is now complete.

6. Press and hold return pedal. Ram in crimping head will return to DOWN position, and crimped terminal or splice can be removed.

NOTE *Hold return pedal long enough to allow ram to move down just enough to remove crimped terminal or splice.*

7. To make additional crimps, as required, repeat Steps 2 through 6.

CAUTION *DO NOT allow foot pump to remain under pressure for extended periods of time.*

4. ACCESSORIES

4.1. Crimping Heads

The foot pump uses interchangeable crimping heads. Each crimping head uses interchangeable crimping dies (with the exception of crimping head No. 69069, which has integral dies designed for that particular head). The products to be crimped in each head are listed in the instructions covering the head.

4.2. Crimping Dies

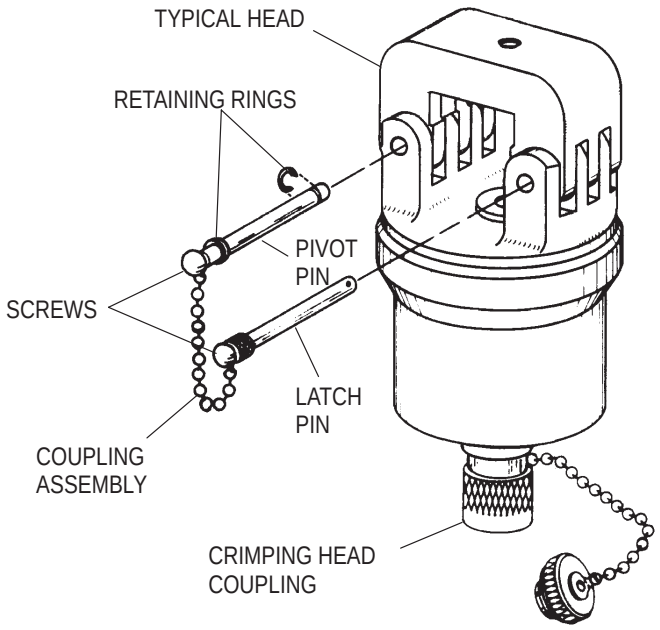
Each crimping head, except as noted in the preceding paragraph, uses interchangeable crimping dies designed for that particular head. The instructions packaged with the dies give complete information.

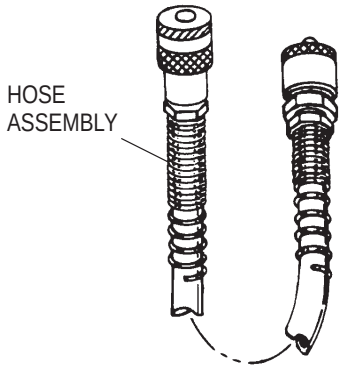
4.3. Latch Pin Kit

Latch pin kits are available as accessories for the crimping heads as listed and shown in Figure 4–1. This kit was designed to eliminate the possibility of misplacing the standard latch pin furnished with the head.

4.4. Hose Assemblies

Hoses are sold separately as accessories and are available in different lengths, which are listed with the part numbers in Figure 4–1.





HEAD NUMBER	LATCH PIN KIT NUMBER	HOSE ASSEMBLY NUMBER	
		PART NUMBER	LENGTH m [ft]
69051	69709	59909–3	.914 [3]
69065	69709–2	59909–7	2.134 [7]
69066	69709–3	1–59909–5	14.572 [5]
69067	69709–4	2–59909–1	6.401 [21]

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Figure 4–1. Foot Pump Accessories

5. INSPECTION/ADJUSTMENTS AND MAINTENANCE

DANGER *Before performing any maintenance, MAKE SURE that the air supply is turned "OFF".*

5.1. Troubleshooting

The foot pump is thoroughly tested before it leaves the factory, and it should be in excellent operating condition when it reaches the user. However, damage may occur during shipment. While unpacking the foot pump, carefully inspect it for damage. If damage is evident, file a claim against the carrier and notify AMP Incorporated, Harrisburg, PA.

If, at any time, the pump does not function properly, the troubleshooting chart (Figure 5–1) and the rest of the material in Section 5 should be used to locate and correct the trouble. (Refer to Figure 6–1 for parts identification.)

If the problem cannot be corrected with the aid of the troubleshooting chart, contact your local AMP Field Service Engineer or AMP Incorporated, Harrisburg, PA 17105.

SYMPTOM	CAUSE	REMEDY
1. Foot pump does not develop pressure.	Low hydraulic fluid level.	Fill reservoir. Refer to Paragraph 5.2.
	Loose pump body fittings.	Tighten pump body fittings. Refer to Paragraph 5.6.
	Improper seating of poppets.	Correct poppet seating. Refer to Paragraph 5.7.
2. Foot pump does not develop high pressure.	High–pressure poppets (15 and 46) or spool (28) not seating properly.	Correct poppet seating. Refer to Paragraph 5.7.
3. Foot pump does not develop full crimping pressure.	Pressure relief valve not functioning properly.	Check pressure relief valve. Refer to Paragraph 5.4. Replace if necessary.
4. Slow die return.	Dirt or foreign matter in hydraulic system.	Replace damaged filter. Refer to Paragraph 5.5.
	Dirt or foreign matter in spool or poppets.	Check poppets. Refer to Paragraph 5.7.
	Weak piston return spring in.	Remove crimping head and refer to separate instruction sheet for the crimping head.
5. Pump does not draw fluid from reservoir.	Low hydraulic fluid level.	Fill reservoir. Refer to Paragraph 5.2.
6. Pedal feels "spongy" when pumped.	Air in hydraulic system.	Bleed air from hydraulic system. Refer to Paragraph 5.3.

Figure 5–1. Troubleshooting Chart

5.2. Filling the Reservoir

To check fluid level:

1. Use a clean cloth to remove all dust and grit from area around filler plug. See Figure 3–1.
2. Remove filler plug, and check fluid level by measuring depth with a clean rod or screwdriver. Fluid level should be approximately 25.4 mm [1.0 in.] to 38.1 mm [1.50 in.] from top of filler hole.

NOTE *Minimum fluid level to provide proper operation is approximately 38.1 mm [1.50 in.] from bottom of reservoir.*

3. If fluid level is satisfactory, replace filler cap. If fluid level is too low, add fluid.

To add fluid:

1. Use a clean cloth to remove all dust and grit from area around filler plug. See Figure 3–1.
2. Remove filler plug, and insert a clean funnel, with filter, into filler hole.
3. Fill reservoir with recommended hydraulic fluid. See Figure 2–2.
4. Replace cap and be certain that breather hole in cap is open.

5.3. Bleeding Air from the Hydraulic System

If air gets into the hydraulic system (indicated by a “spongy” action of the pedal when it is pumped), the air should be removed as follows:

NOTE *Foot pump should always be elevated above crimping head when bleeding air from hydraulic system.*

1. Depress return pedal.
2. Pump pedal several times to fill hydraulic pump.
3. Release return pedal.
4. Pump pedal until ram (moving die holder) advances.
5. Depress return pedal to remove air from the hydraulic system.
6. Repeat Steps 4 and 5 about three times to ensure that all air is removed from hydraulic system.
7. Check hydraulic fluid supply after bleeding the system. Fill if necessary. Foot pump is now ready for use.

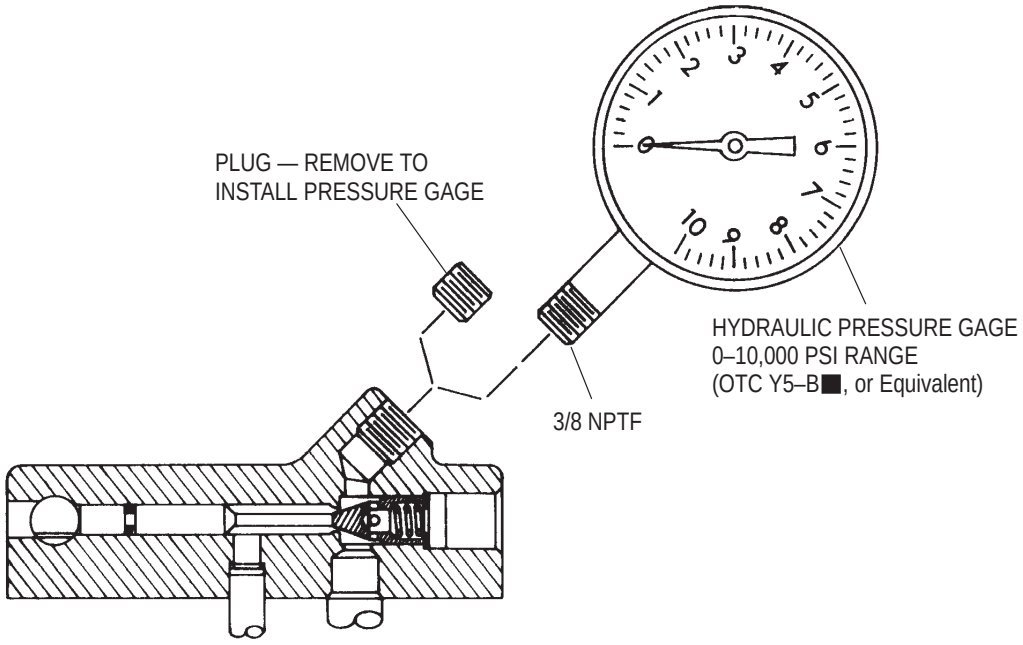
5.4. Pressure Relief Valve Checkout Procedure

NOTE *This procedure should be performed with crimping head and hose attached.*

The pressure relief valve is preset at the factory to open at 5516 to 57918 kPa [8000 to 8400 psi]. This valve should be checked periodically, depending on use. Proceed as follows:

CAUTION *Depress return pedal while removing pipe plug.*

1. Remove pipe plug and install gage. See Figure 5–2.



■ MANUFACTURED BY OWATONNA TOOL CO., OWATONNA, MINNESOTA 55060

Figure 5–2. Installing Pressure Gage

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2. Pump pedal until the bypass is activated. A slight decrease in effort required to depress pedal, accompanied by a SNAPPING sound indicates that maximum required crimping pressure has been reached.

3. Take pressure reading to ensure that pressure is within acceptable range.

4. Depress RETURN PEDAL to release all hydraulic pressure from pump.

5. Remove gage and replace pipe plug.

CAUTION *No attempt should be made to alter the setting of the pressure relief valve. If the valve does not open at the required pressure, it should be replaced.*

5.5. Filter Screen Maintenance

All hydraulic fluid entering the hydraulic system must pass through the filter screen. The filter screen prevents dirt and any other foreign matter in the reservoir from entering the hydraulic system.

The foot pump should never be operated with a dirty filter screen, a damaged filter, or without a filter screen. The reservoir and filter screen should be cleaned periodically, and the hydraulic fluid replaced, to ensure operating efficiency. New filter screens can be obtained from AMP Incorporated. (Refer to Section 6, PARTS LIST AND EXPLODED VIEW DRAWING.)

If the foot pump does not operate at a consistent speed, the problem may be caused by a dirty or damaged filter screen.

A. Cleaning Filter Screen

To clean filter screen (numbers in parentheses refer to part identification numbers in Figure 6–1):

1. Disconnect return pedal spring (65).

2. Remove retaining ring (1) and slide return pedal pivot pin (69) out of link (64).

3. Remove six pump assembly screws (70), holding reservoir cover (20) to reservoir (59), and carefully lift pump assembly from reservoir.

4. Remove retaining ring (9), band (10), and filter screen (11). See Figure 5–3.

5. Clean filter screen in solvent.

6. Replace filter screen, band, and retaining ring.

7. Carefully lower pump assembly into reservoir.

CAUTION *Care MUST BE taken to prevent damage to filter screen. DO NOT operate foot pump with a damaged filter screen or without a filter screen.*

8. Insert and tighten pump assembly holding screws.

9. Slip pivot pin through return pedal links and replace retaining ring.

10. Connect return pedal spring. Foot pump is now ready for use.

B. Replacing Filter Screen

To replace filter (numbers in parentheses refer to part identification numbers in Figure 6–1):

1. Remove pump assembly from reservoir as described in Steps 1 through 3 of Paragraph 5.5,A.

2. Remove retaining ring (9), band (10), and filter screen (11). See Figure 5–3.

3. Install new filter screen and replace band and retaining ring.

4. Re–assemble pump assembly and assemble linkage as described in Steps 7 through 10 of Paragraph 5.5,A.

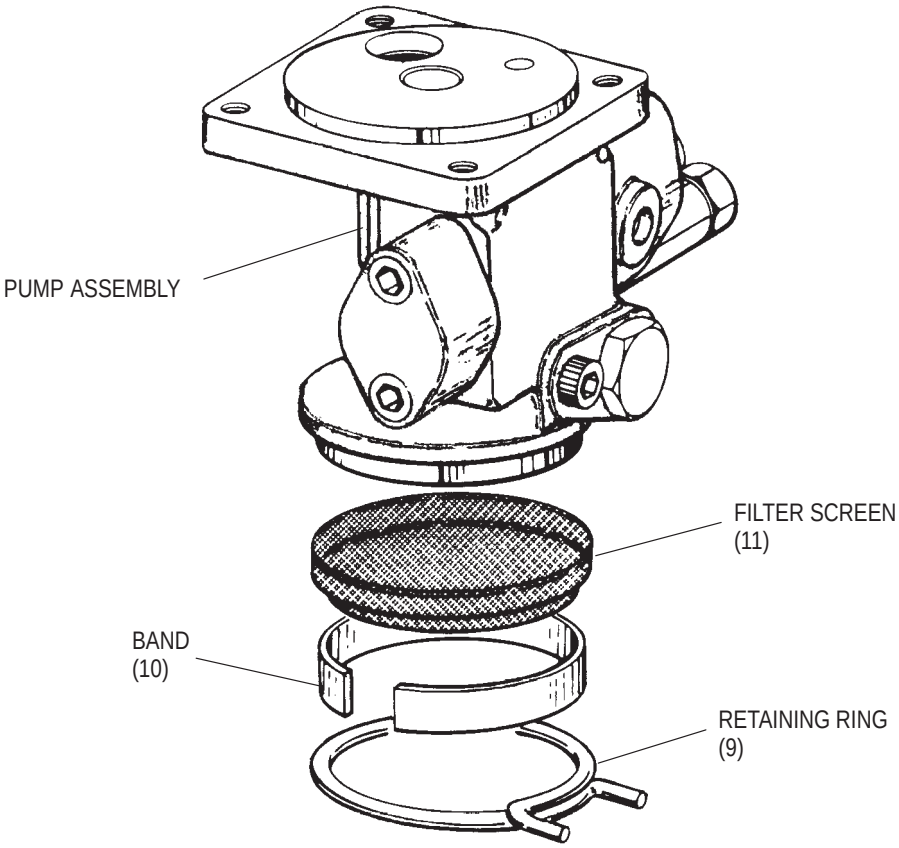

Figure 5–3. Maintaining Filter 91–217

5.6. Pump Maintenance (Refer to Figure 6–1)

If the foot pump does not develop pressure, the trouble may be caused by loose pump body fittings. To tighten these fittings, proceed as follows:

1. Disconnect hydraulic hose from foot pump.
2. Disconnect return pedal spring (65) and remove retaining rings (1) and pin (69) out of link (64).
3. Remove six pump assembly screws (70), holding reservoir cover (20) to reservoir (59), and carefully lift pump assembly from reservoir.
4. Tighten the four pump body assembly screws (18).
5. Remove retaining ring (9), band (10), and filter screen (11), and then tighten screws (32) and (45).
6. Replace filter screen (11), band (10), and retaining ring (9).
7. Carefully insert pump assembly into reservoir; replace and tighten six pump assembly holding screws (70).
8. Re–assemble return pedal linkage and attach return spring.
9. Actuate foot pump to determine if pump will develop pressure. If foot pump does not function properly, check poppet maintenance (Paragraph 5.7).

5.7. Poppet Maintenance (Refer to Figure 6–1)

If the foot pump does not develop pressure, and the hydraulic fluid level (Paragraph 5.2) is satisfactory, and all pump body fittings (Paragraph 5.6) are properly tightened, check the condition of poppets and poppet seats.

A. Pump Disassembly

1. Disconnect hydraulic hose from foot pump. Place plastic caps on hose fittings.
2. Disconnect return pedal spring (65) and remove retaining rings (1) and pin (69) from link (64).
3. Remove six pump assembly screws (70), holding reservoir cover (20) to reservoir (59), and carefully lift pump assembly from reservoir.
4. Remove retaining ring (9), band (10), and filter screen (11). See Figure 5–3.
5. Disconnect hydraulic fluid line (17) from valve body (44) and cover plate (20). This step is necessary only when checking outlet poppet.

B. Outlet Poppet

1. Loosen holding screws (7) and (26) and remove end caps (8 and 27) from valve body (44).
2. Remove springs (4 and 29) and poppet (3) and gently tap out spool (28) using a brass rod.
3. Check mating surfaces of poppet (3) and spool (28). If poppet or spool is damaged (nicked or burred), it should be replaced.
4. Inspect for and remove any foreign matter from poppet (3), spool (28), and valve body (44).

NOTE *If valve body is damaged, foot pump should be returned to AMP Incorporated for repair or replacement.*

5. Use new O–rings (5 and 24) and back–up washers (6 and 25) when re–assembling spool (28) and poppet (3).
6. To re–assemble, first install spool (28), spring (29), and end cap (27). Insert and tighten holding screws (26).
7. Insert poppet and gently tap poppet to seat poppet in spool, using a brass rod and hammer.
8. Place spring (4) in poppet and replace end cap (8). Insert and tighten holding screws (7).

CAUTION *DO NOT replace filter screen until all poppets have been checked.*

C. High–Pressure Inlet Poppet

1. Remove cap screw (30), washer (31), spring (4), and poppet (3).
2. Check mating surfaces of poppet (3) and valve body (44).
3. Inspect for and remove any foreign matter from poppet (3) and valve body (44).

NOTE *If valve body is damaged, foot pump should be returned to AMP Incorporated for repair or replacement.*

4. Damaged (nicked or burred) poppets should be replaced with new poppets. (Refer to Section 6, PARTS LIST AND EXPLODED VIEW DRAWING.)
5. Insert poppet (3), spring (4), and washer (31). Insert and tighten cap screw (30).

D. High–Pressure Outlet Poppet

1. Remove cap screw (12), washer (13), spring (14), and poppet (15).
2. Check mating surfaces of poppet (15) and valve body (44).
3. Inspect for and remove any foreign matter from poppet (15) and valve body (44).

NOTE *If valve body is damaged, foot pump should be returned to AMP Incorporated for repair or replacement.*

4. Damaged (nicked or burred) poppets should be replaced with new poppets. (Refer to Section 6, PARTS LIST AND EXPLODED VIEW DRAWING.)
5. Insert poppet (15), spring (14), and washer (13). Insert and tighten cap screw (12).

E. Low–Pressure Inlet Poppet

1. Loosen holding screws (18) and separate valve body (44) and cylinder (41).
2. Remove retaining ring (42) and slide poppet (43) from valve body.
3. Inspect for and remove foreign matter from poppet and valve body.
4. If poppet is damaged (nicked or burred), it should be replaced. (Refer to Section 6, PARTS LIST AND EXPLODED VIEW DRAWING.)

NOTE *If valve body is damaged, foot pump should be returned to AMP Incorporated for repair or replacement.*

5. Insert poppet (43), install retaining ring (42), and re–assemble valve body (44) and cylinder (41).

F. Pump Re–Assembly

1. Connect hydraulic fluid line (17) to valve body (44) and cover plate (20).
2. Replace filter screen (11), band (10), and retaining ring (9).
3. Carefully insert pump assembly into reservoir; replace and tighten six pump assembly holding screws (70).
4. Re–assemble return pedal linkage and attach return spring.

6. PARTS LIST AND EXPLODED VIEW DRAWING

This section contains a parts list and exploded view drawing of AMP Hydraulic Foot Pump No. 69325–3. (Refer to Figure 6–1, Sheets 1, 2, and 3.)

When ordering replaceable parts, be sure to specify the correct part number, description, and quantity required. Refer to Section 4 for accessory part numbers.

7. REVISION SUMMARY

Revisions to this document include:

Per EC M–3154:

- Added caution information to Paragraphs 3.2 and 5.4

Per EC 0990–0252–93:

- New format
- Added metric conversions
- Added Section 7, REVISION SUMMARY

ITEM NO.	AMP PART NUMBER	DESCRIPTION	QTY
1	1– 21112–7	RING, Retaining	11
3	5–306171–9	POPPET	3
4	3–306172–0	SPRING, Poppet	2
5	21053–7	O–RING, .500 in. OD x .375 in. ID x .063 in. W	2
6	21050–7	WASHER, Backup, Leather, .500 in. OD x .375 in. ID x .063 in. W	2
7	21001–6	SCREW, Cap, Skt Hd, 1/4–20 UNC x 1.000 in. L	2
8	3–306172–1	CAP, End (Retainer)	1
9	3–306172–2	RING, Retaining	1
10	3–306172–3	BAND	1
11	3–306172–4	SCREEN, Filter	1
12	3–306172–5	SCREW, Cap (Special)	1
13	3–306172–6	WASHER, Soft Copper, 7/16 in. D x 5/16 in. D x 1/32 in. Thk	6
14	3–306172–7	SPRING	1
15	3–306172–8	POPPET	1
16	3–306172–9	ELBOW, Male 45°	1
17	4–306172–0	TUBING	1
18	3– 21001–0	SCREW, Cap, Skt Hd, 5/16–16 UNC x 3.500 in.	4
19	1–306171–1	ADAPTER, Male	1
20	4–306172–3	COVER, Reservoir	1
21	4–306172–4	GASKET	1
22	4–306172–5	SPACER	1
23	306171–5	COUPLING, Pipe	2
24	1– 21053–0	O–RING, .688 in. OD x .500 in. ID x .094 in. W	1
25	1– 21050–0	WASHER, Backup, Leather, .688 in. OD x .500 in. ID x .094 in. W	1
26	21001–7	SCREW, Cap, Skt Hd, 1/4–20 UNC x 1.250 in. L	2
27	4–306172–6	CAP, End (Retainer)	1
28	4–306172–7	SPOOL, Valve	1
29	4–306172–8	SPRING	1
30	4–306172–9	SCREW, Cap (Special)	1
31	6–306171–1	WASHER, Soft Copper, 3/4 in. OD x 19/32 in. ID x 1/32 in. Thk	2
32	1– 21001–5	SCREW, Cap, Skt Hd, 5/16–18 UNC x .375 in. L	1
33	5–306172–2	VALVE, Pressure Relief	1
34	5–306172–3	PINS, Pivot	3
35	5–306172–4	LINK	1
36	5–306172–5	RING, Wiper	1
37	5–306172–6	HEAD, Cylinder	1
38	5–306172–7	GASKET	1
39	5–306172–8	PISTON	1
40	5–306172–9	SPRING, Piston Return	4

Figure 6–1. Parts List and Exploded View for Foot Pump Assembly No. 69325–3 (Sheet 1 of 3)

ITEM NO.	AMP PART NUMBER	DESCRIPTION	QTY
41	6–306172–0	CYLINDER	1
42	1– 21047–0	RING, Retaining	1
43	6–306172–2	POPPET	1
44	6–306172–3	VALVE BODY	1
45	6–306172–4	SCREW, Cap (Special)	1
51	39447	NAME PLATE	1
52	4–306172–2	PEDAL, Pressure	1
53	7–306172–2	LATCH	1
54	5– 21029–1	PIN, Slotted Spring .250 in. Dia x .500 in. L	1
55	7–306172–4	PEDAL CASTING	1
56	311471–1	COUPLER, Quick, Cylinder–Half	1
59	3–306170–0	RESERVOIR	1
60	8–306172–0	PIN, Pivot	1
61	7–306172–8	PIN, Pivot	1
62	21007–4	SETSCREW, Socket, Plain Cap Pt, 1/4–20 UNC x .375 in. L	1
63	3–306170–1	PEDAL, Pressure Release	1
64	8–306172–1	LINK	1
65	8–306172–2	SPRING	1
66	21108–9	WASHER, Plain Flat, .885 in. OD x .334 in. ID x .071 in. Thk	1
67	1– 21015–4	SCREW, Cap, Hex Hd. 5/16–18 UNC x .500 in. L	1
68	6–306172–7	WASHER	1
69	8–306172–3	PIN, Pivot	1
70	21001–4	SCREW, Cap, Skt Hd, 1/4–20 UNC x .750 in. L	10
71	314900–1	WASHER, Copper, .380 in. OD x .250 in. ID	10
72	314901–1	GASKET	1
73	314902–1	FILLER PLUG, Assembly	1
75	6–306172–5	LINK	1
76	6–306172–6	PIN, Retaining	1
77	21029–5	PIN, Slotted Spring .187 in. Dia x .750 in. L	1
78	6–306172–8	VALVE BODY, Directional	1
79	6–306172–9	PLUNGER	1
80	21053–3	O–RING, .313 in. OD x .188 in. ID x .063 in. W	1
81	2–306171–5	TUBING	1
83	22102–3	PLUG	1
84	6–306171–0	SPRING	1
85	25002–5	RING, Retaining	1
86	1–21048–8	RING, Retaining	2

Figure 6–1. Parts List and Exploded View for Foot Pump Assembly No. 69325–3 (Sheet 2 of 3)

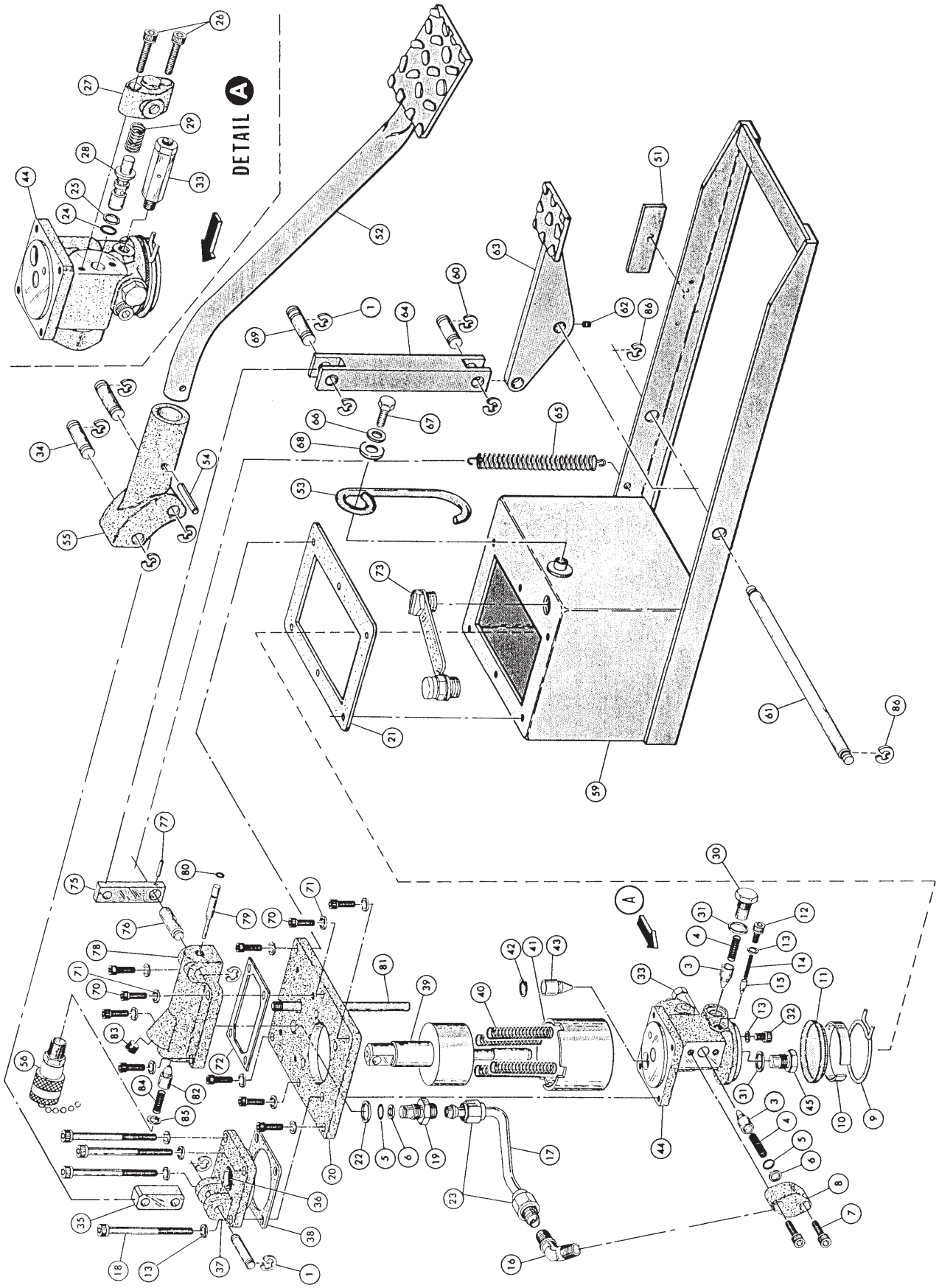

Figure 6–1. Parts List and Exploded View for Foot Pump Assembly No. 69325–3 (Sheet 3 of 3) 93–256