

604-TYPE TOOLS
(TAPE SPLICERS)
REQUIREMENTS AND ADJUSTING PROCEDURES

1. GENERAL

- 1.01 This section covers the Nos. 604A, 604B, 604C, 604D, and 604E tools.
- 1.02 This section is reissued to include the Nos. 604D and 604E tools and to cover the grounding of splicer dollies.
- 1.03 The Nos. 604A and 604D tools are used for splicing perforated tape and the No. 604B tool is used for splicing unperforated tape. The No. 604E tool is used for splicing both perforated and unperforated tape. These tools are used in accounting centers of the AMA system. The No. 604C tool is used for splicing unperforated tape in central offices. The tools operate from a power source of 110 volts ac or dc, and each includes the adhesive tape weight and trimming weight.
- 1.04 Reference shall be made to Section 020-010-711 covering general requirements and definitions for additional information necessary for the proper application of the requirements listed herein.
- 1.05 Before making any adjustment on a 604-type tool, remove the power plug or circuit fuses.
- 1.06 A satisfactory splice between two lengths of KS-13887 perforator tape is provided when a uniform bond between the common surfaces of these tapes is obtained over the entire area covered by the KS-13981 heat sealing tape.

2. REQUIREMENTS

- 2.01 Cleaning: The splicing surface of the heater and anvil shall be cleaned when necessary, in accordance with approved procedures.
- 2.02 Alignment of Heater and Anvil
- (a) The heater shall be centered on the anvil in the splicing position so that the sides of the two coincide approximately.
- Gauge by eye.
- (b) With the KS-13887 perforator tape in splicing position, the ends of the heater shall project beyond the edges of the tape.
- Gauge by eye.

2.03 Pressure of Sealing Tape Clip Against Anvil: Figs. 1(A), 2(A), and 3(A) - The pressure of the sealing tape clip against the anvil shall be

Min 60 grams
Max 100 grams

Use the No. 79C gauge.

2.04 Position of Sealing Tape Clip on Anvil: Figs. 1(B), 2(B), and 3(B) - The sealing tape clip shall bear approximately flat on the anvil.

Gauge by eye.

2.05 Clearance Between Sealing Tape Clip and Downstop Screw: Figs. 1(C), 2(C), and 3(C) - There shall be a clearance between the sealing tape clip and the tip of the downstop screw, but this clearance shall not exceed 0.015 inch.

Gauge by eye.

2.06 Sealing Tape Guide

(a) Fig. 4(A) - The KS-13981 sealing tape shall be positioned by the tape guide so that it lies approximately centrally along the length of the anvil when the tape is drawn across the anvil.

Gauge by eye.

(b) Fig. 4(B) - The sealing tape guide lever shall move freely.

Gauge by eye and feel.

2.07 Heater Arm Movement: With the heater arm approximately 30 degrees to the base, the force required to move the handle downward shall be

Test - Min 175 grams
- Max 300 grams
Readjust - Min 200 grams
- Max 275 grams

Use the No. 79B gauge.

To check this requirement, apply the gauge vertically at the center of the handle.

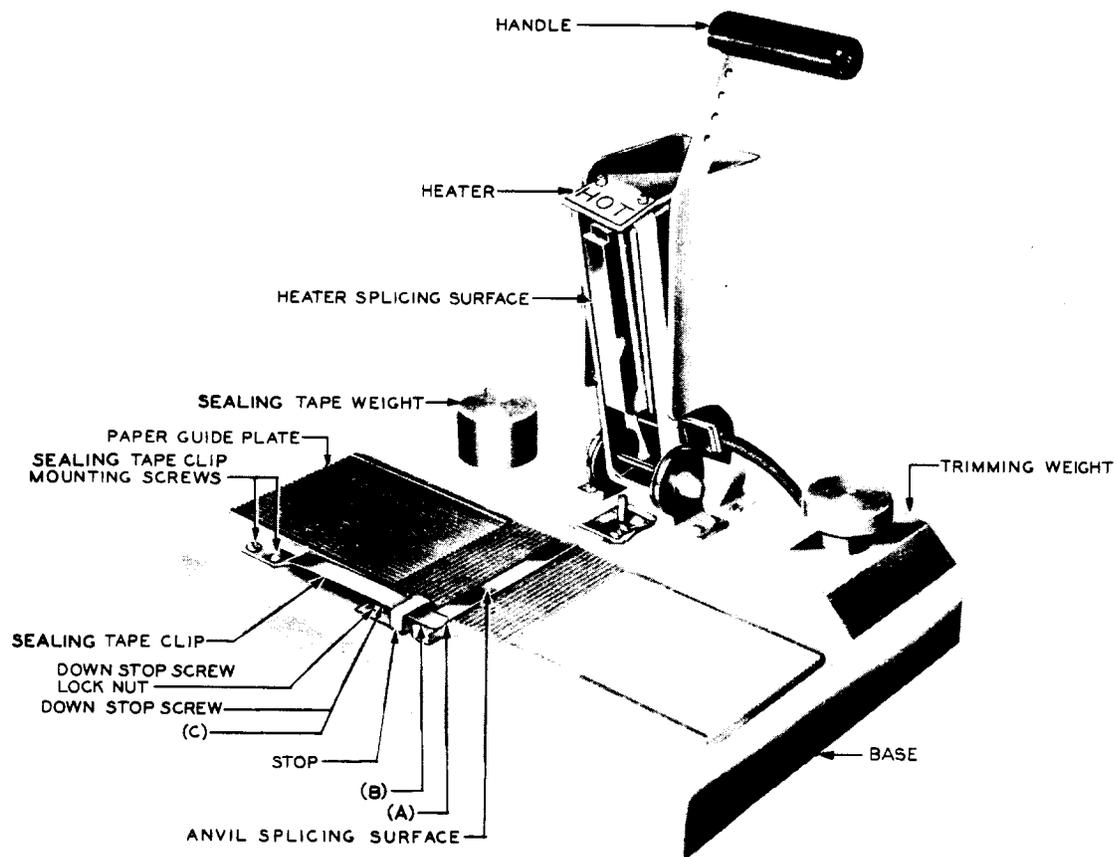


Fig. 1 - Nos. 604A and 604D Splicers (No. 604D Splicer Illustrated)

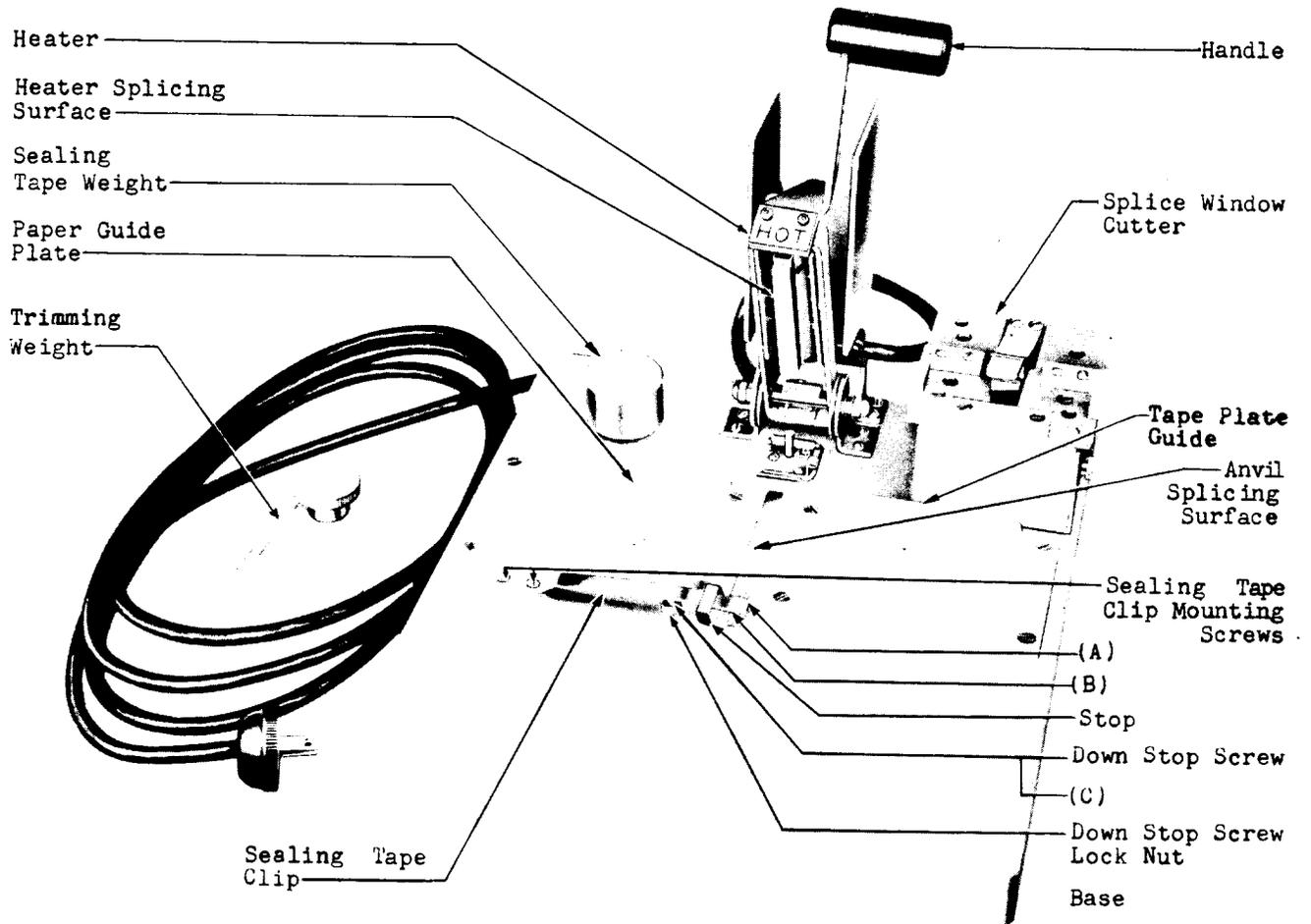


Fig. 2 - Nos. 604B and 604C Splicers

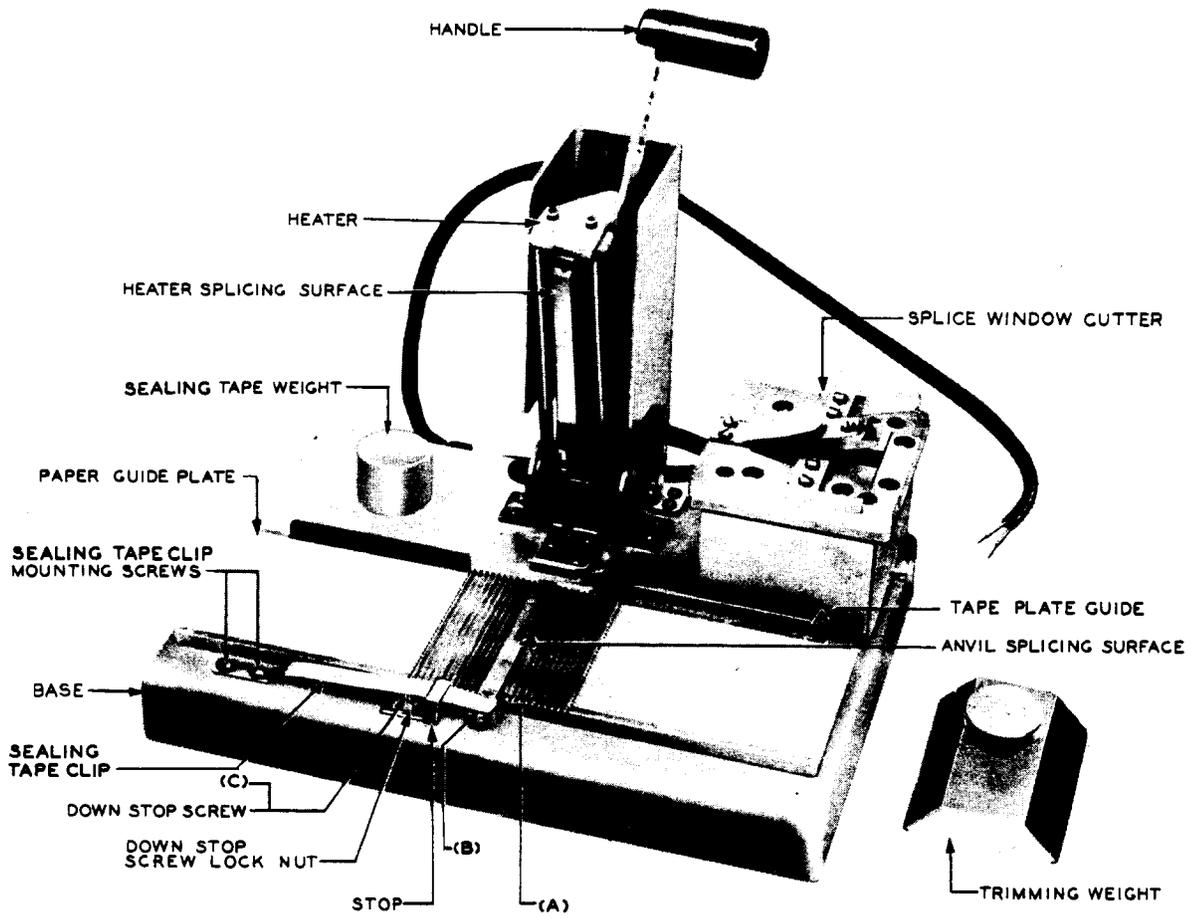


Fig. 3 - No. 604E Splicer

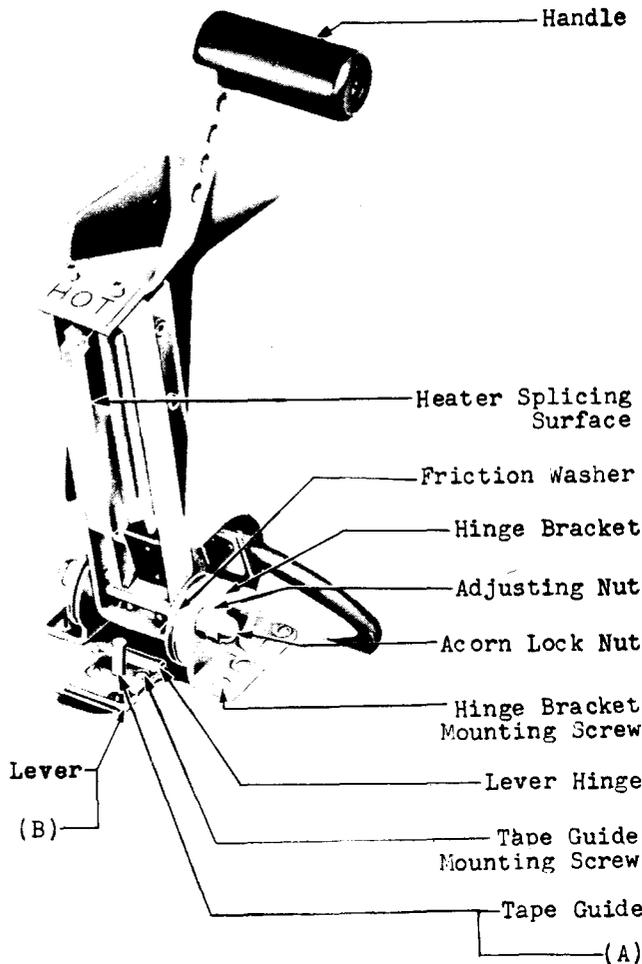


Fig. 4 - Heater and Tape Guide Assembly

2.08 Heater Operation: The heater after being preheated for 10 minutes from a 110-volt ac or dc power source shall make a satisfactory splice in the KS-13887 perforator tape using KS-13981 sealing tape, when the heater is held down firmly on the overlap for

Min 5 sec
Max 6 sec

Use the KS-3008 stop watch or equivalent.

Splice Window Cutter (Nos. 604B, 604C, and 604E Splicers)

2.09 Alignment of Paper Guide Stop Surfaces: Fig. 5(A) - The paper guide stop surfaces shall be in alignment with each other.

To check this requirement, insert a piece of normally folded KS-13887 perforator tape into the splice window cutter and check that both stop surfaces of the paper guides lie along the folded edge of the paper.

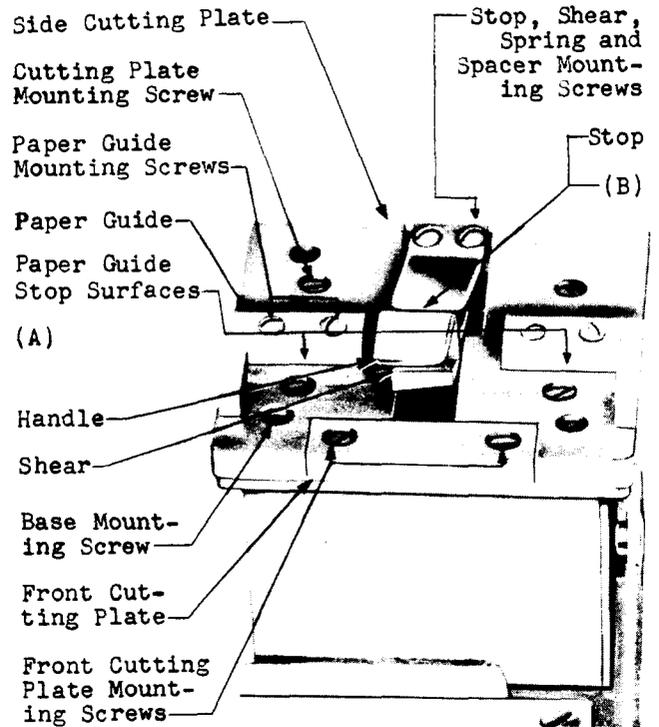


Fig. 5 - Splice Window Cutter (Nos. 604B, 604C, and 604E Splicers) (No. 604B Splicer Illustrated)

2.10 Position of Shear: Fig. 5(B) - In the normal position of the splice window cutter, the shear shall be held firmly against the stop.

Gauge by eye and feel.

2.11 Operation of Shear: The shear shall move freely throughout its stroke and shall cut a clean rectangular opening in the folded edge of the KS-13887 perforator tape.

Gauge by eye.

2.12 Grounding of Splicer Dolly: The dollies on which the Nos. 604B, 604C, and 604E splicers are mounted shall be grounded when a 3-conductor cord is used between the power outlet and the tool or dolly.

Use the No. 716C receiver and the 2W17A cord with a No. 365 clip on one lead of the cord and a No. 411B pick on the other lead, or equivalent.

To check, connect the No. 365 clip to a battery supply terminal and apply the No. 411B pick to the frame of the dolly. Listen for the click in the receiver which indicates that the dolly is grounded.

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3. ADJUSTING PROCEDURES

3.001 List of Tools, Gauges, and Materials

<u>Code or Spec No.</u>	<u>Description</u>
<u>Tools</u>	
325B	Adjuster
417A (2 req)	1/4-inch and 3/8-inch Hex. Open Double-end Flat Wrench
→ 716C	Receiver (Equipped with 2W21A cord, No. 365 clip, and No. 411B pick) or Equivalent
→ R-2958	5/64-inch Allen Setscrew Wrench
-	6-1/2-inch P-Long-nose Pliers
-	3-inch Cabinet Screwdriver
-	4-inch Regular Screwdriver
-	9/32-inch and 11/32-inch Open-end Wrench (J. H. Williams & Co. No. 1108 wrench)
<u>Gauges</u>	
74D	Thickness Gauge Nest
79B	0-1000 Gram Push-Pull Tension Gauge
79C	0-200 Gram Push-Pull Tension Gauge
KS-3008	Stop Watch or Equivalent
<u>Materials</u>	
↖ KS-13887	Perforator Tape
KS-13887	Tape Perforated With Splice Pattern
↙ KS-13981	Heat Sealing Tape
-	Gem Safety Single-edge Razor Blade

3.01 Cleaning (Rq 2.01)

(1) Failure to make a satisfactory splice may be caused by foreign matter on the heater or anvil resulting from the sealing tape becoming burned on the splicing surfaces and forming an enamel-like substance. Clean the heater and anvil with a Gem-type safety razor blade, peeling the foreign matter from the surfaces with strokes of the razor blade. In doing this, hold the blade as flat as possible.

3.02 Alignment of Heater and Anvil (Rq 2.02)

(1) Pull the heater down on the anvil. Slightly loosen the four screws which hold the heater hinge brackets to the base with the 3-inch cabinet screwdriver. Move the heater into the required position. Tighten screws securely.

3.03 Pressure of Sealing Tape Clip Against the Anvil (Rq 2.03)

(1) Adjust the pressure of the sealing tape clip by bending the clip near the base with the offset end of the No. 325B adjuster.

3.04 Position of Sealing Tape Clip on Anvil (Rq 2.04)

(1) Adjust the sealing tape clip so that it rests flat on the anvil by bending the clip near the center with the offset end of the No. 325B adjuster.

3.05 Clearance Between Sealing Tape Clip and Downstop Screw (Rq 2.05)

(1) To adjust the downstop screw, proceed as follows. On the No. 604A splicer, slide the splicer out from the table and on the Nos. 604B and 604C splicers, remove the splicer from the portable splicing table by removing the four splicer mounting screws and washers with the 4-inch regular screwdriver. On the No. 604D splicer, remove the control panel mounting screws using the 4-inch regular screwdriver and remove the panel from the reel table. Tip the control panel so that the splicer mounting screws are accessible and then remove the screws using the 4-inch regular screwdriver. Remove the splicer from the control panel. On the No. 604E splicer, the downstop screw is accessible without removing the splicer from the mounting. On all splicers, loosen the downstop screw locknut with the J. H. Williams & Co. No. 1108 wrench and then reaching under the base of the splicer, turn the screw as required with the 5/64-inch Allen setscrew wrench. Hold the screw with the wrench and tighten the locknut securely. On the No. 604A splicer, slide the splicer back into position. On the No. 604B or No. 604C splicer, remount the splicer on the table. On the No. 604D splicer, remount the splicer on the control panel and remount the control panel on the reel table.

3.06 Sealing Tape Guide (Rq 2.06)

(1) To adjust the tape guide on the No. 604A splicer, slide the splicer

out from the table to obtain access to the nuts on the tape guide mounting screws, and on Nos. 604B and 604C splicers, remove the splicer from the portable splicing table by removing the four splicer mounting screws and washers with the 4-inch regular screwdriver. On the No. 604D splicer, remove the control panel mounting screws using the 4-inch regular screwdriver and remove the panel from the reel table. Tip the control panel so that the splicer mounting screws are accessible and then remove the screws using the 4-inch regular screwdriver. Remove the splicer from the control panel. On the No. 604E splicer, the tape guide mounting screws and associated nuts are accessible without removing the splicer from the mounting. Loosen the three tape guide mounting screws and nuts with the 3-inch cabinet screwdriver and the No. 417A wrench. Move the tape guide so that the tape falls centrally along the length of the anvil. Tighten the tape guide mounting screws securely. On the No. 604A splicer, slide the splicer back into position. On the No. 604B or No. 604C splicer remount the splicer on the table. On the No. 604D splicer remount the splicer on the control panel and remount the control panel on the reel table.

(2) To adjust the lever so that it moves freely, pry up the lever at each side of the lever hinge with the 3-inch cabinet screwdriver.

3.07 Heater Arm Movement (Rq 2.07)

(1) Loosen the two hinge bracket screws on one side of the heater with the 3-inch cabinet screwdriver so that the bracket is free to move. While holding one acorn locknut with the No. 417A wrench, loosen the other acorn locknut with the other No. 417A wrench. Turn the adjusting nut adjacent to the loosened acorn nut to adjust the pressure of the hinge bracket against the friction washers. Tighten the acorn locknut and the hinge bracket screws securely.

3.08 Heater Operation (Rq 2.08)

(1) If the heater does not make a satisfactory splice, replace the heater unit as covered in Section 076-133-801 covering this apparatus.

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3.09 Alignment of Paper Guide Stop Surfaces (Rq 2.09)

(1) Loosen the paper guide mounting screws and position the paper guides so the

outside edges are approximately parallel to the outside edges of the cutting plates. Insert a piece of folded KS-13887 perforator tape and check that both stop surfaces of the paper guide lie along the folded edge of the paper. Tighten the mounting screws securely.

3.10 Position of Shear (Rq 2.10)

(1) Remove the stop, shear, spring, and spacer mounting screws with the 3-inch cabinet screwdriver and remove the parts. Adjust the spring by increasing the bend with the long-nose pliers. If the spring is broken or cracked, replace it as outlined in Section 076-133-801 covering this apparatus. Assemble the stop, shear, spring, spacer, and mounting screws before mounting these parts on the base of the splice window cutter. Turn the mounting screws two or three turns into the base plate. Operate the shear and insert the 0.002-inch blade of the No. 74D gauge between the front plate and the front of the shear. Bring the shear against the gauge and tighten the mounting screws securely.

3.11 Operation of Shear (Rq 2.11)

(1) To adjust one of the side cutting edges, loosen the two side cutting plate mounting screws with the 4-inch regular screwdriver and the paper guide mounting screws with the 3-inch cabinet screwdriver. Operate the shear and slide the plate toward or away from the shear as required. Tighten the plate mounting screws securely. Position the paper guide so that it is approximately parallel to the edge of the cutting plate and the stop surface of one paper guide is in alignment with the corresponding surface of the paper guide. Tighten paper guide mounting screws securely.

(2) To adjust the front cutting edge, loosen the front cutting plate mounting screws with the 4-inch regular screwdriver. Operate the shear and insert the 0.002-inch blade of the No. 74D gauge between the front edge of the shear and the front plate. Slide the plate against the gauge while exerting a force in the same direction on the shear to take up play in the shear bearing. Tighten the front plate securely.

Note: If the front cutting plate cannot be moved sufficiently to obtain the 0.002-inch clearance between this plate and the adjacent edge of the shear, move the shear in accordance with 3.10(1).

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3.12 Grounding of Splicer Dolly (Rq 2.12)

(1) If the splicer dolly is not grounded when the 3-conductor cord is connected to the power outlet, examine the connection of the ground conductor to the plug and to the dolly or splicer. If connections are faulty, correct them.

(2) If the connections are satisfactory, check the continuity of the ground conductor. If the ground conductor is defective, replace the cord as described in Section 076-133-801.

(3) If the trouble is due to neither (1) nor (2) above, the terminal in the power outlet is not grounded. In this case take necessary steps to ground this terminal.