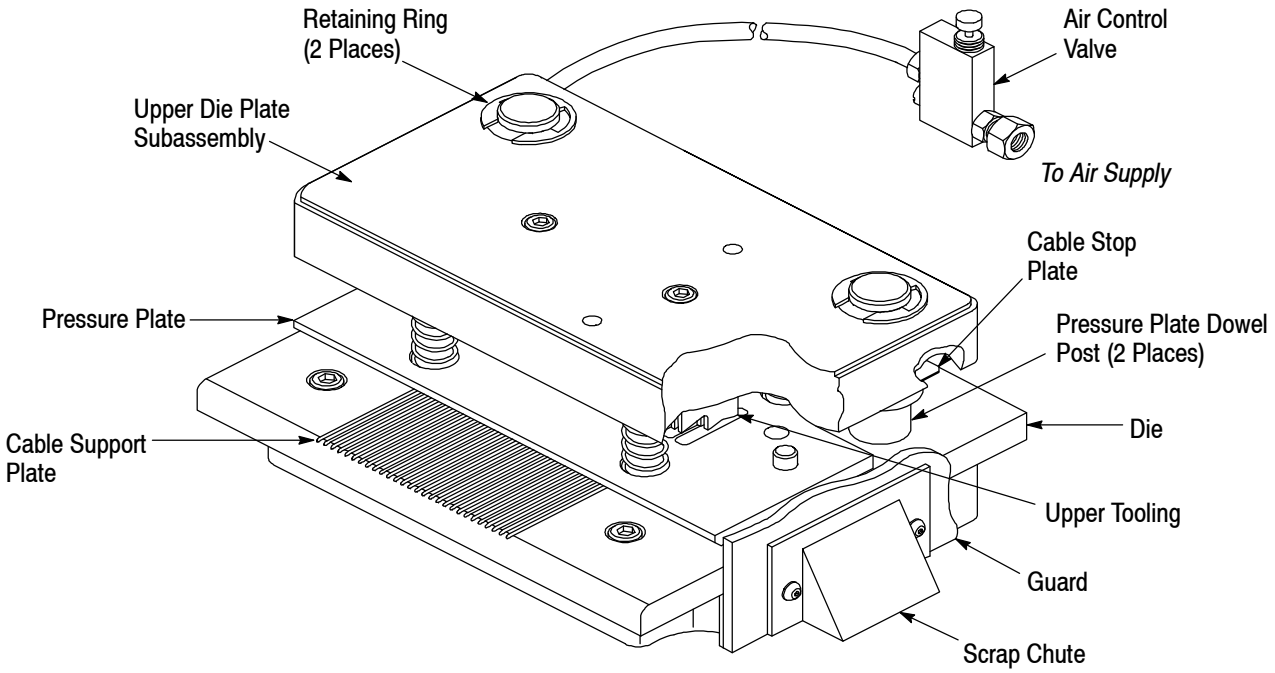



| RIBBON CABLE NOTCHER | CABLE | | CONNECTOR | | NOTCH (mm [in.]) | | |
|---|---|---|---|---|---|---|---|
| | CENTERLINE (mm [in.]) | SIZE (AWG) | TYPE | SIZE (Number of Positions) | WIDTH OF WEB REMOVED | LENGTH | |
| | | | | | | End | Feed Through |
| 854449-1 | 2.54 [.100] | 24-22 | AMPMODU*, MT, MTE | 2-28 | 1.27 [.050] | 10.92 [.43] | 20.32 [.80] |
| 854449-2 | 2.54 [.100] | 28-26 | AMPMODU, MT, MTE, MTA | 2-28 | 1.42 [.056] | | |
| 854449-3 | 3.96 [.156] | 24-18 | MTA | 2-24 | 1.80 [.071] | | |
| 854449-4 | 2.54 [.100] | 28-22 | MTA | 2-28 | 1.07 [.042] | | |

*Figure 1*

## 1. INTRODUCTION

Ribbon Cable Notcher 854449-[ ] is used to separate individual wires of ribbon cable for application onto the connectors listed Figure 1.

**NOTE**

*Dimensions in this instruction sheet are in millimeters [with inches in brackets]. Figures are not drawn to scale.*

The ribbon cable notcher is designed to be used with any one of the following power units:

— Manual Arbor Frame Assembly 58024-1 (408-6923)

**NOTE**

*This frame assembly is not recommended for use on connectors with more than 14 positions.*

— Pneumatic Applicator Frame Assembly 91112-2 (408-7763)

— 2700-lb Pneumatic Power Unit 312522-1 (409-5843) with Adapter Kit 854468-2 (408-9687)

— AMP-O-LECTRIC* Model "K" Terminating Machine 2-565435-2 or 565435-5 (409-5128) with Adapter Kit 854468-1 (408-9687)

**NOTE**

*Machine 565435-5 is no longer available for new applications, but can still be used for existing applications.*

For operation and adjustment of the power units, refer to the instruction sheet (408-series) or customer manual (409-series) included with the power unit.

Reasons for reissue of this instruction sheet are provided in Section 8, REVISION SUMMARY.

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### 1.1. European Regulatory Information

A technical file document, as required by the Supply of Machinery (Safety) Regulations 1992, has been prepared for Ribbon Cable Notcher 854449-[ ] for use with Pneumatic Applicator Frame Assembly 91112-2 and 2700-lb Pneumatic Power Unit 312522-1. These components are CE approved only when used in conjunction with each other, and are *not* approved separately. Refer to Product Drawing 356767 for Declaration of Conformity.

### 1.2. Noise Level

The noise level generated by the combination of the ribbon cable notcher and the following power units are:

| POWER UNIT | NOISE LEVEL RANGE (dB) |
|---|---|
| Pneumatic Applicator Frame Assembly 91112-2 | 82-88 |
| 2700-lb Pneumatic Power Unit 312522-1 | 86-90 |

Noise levels generated by periodic depression of the air control valve are in the range of 104 to 106 dB.

## 2. DESCRIPTION

The ribbon cable notcher consists of a cable support plate, pressure plate, upper tooling, die scrap chute, air control valve, upper die plate subassembly, and cable stop plate. See Figure 1.

The cable support plate provides initial alignment of the ribbon cable in the notcher. The pressure plate aids in positioning the cable during the notching process. The upper tooling and die notches the cable. The scrap chute and air control valve is used for scrap removal. The cable stop plate positions the cable for end notching.

## 3. PRESSURE PLATE ADJUSTMENT

Due to dimensional variations in ribbon cable, it *might* be necessary to adjust the height of the pressure plate. Four brass laminated shims (0.051 [.002] per lamination) have been provided to adjust the height of the pressure plate. The ribbon cable should fit snugly under the pressure plate with a slight drag and no side-to-side movement. If adjustment to the pressure plate is required, refer to Figure 2, and proceed as follows:

1. Remove the guard. Remove the retaining rings and upper die plate subassembly.

2. Carefully remove the upper tooling and compression springs.

3. Remove the pressure plate and curved spring washers.

4. Peel and place shims under the curved spring washers as necessary. Both curved spring washers must have an equal amount of shims.

5. Re-assemble the notcher, making sure that the compression springs are properly seated in the counterbores.

## 4. INSTALLATION AND REMOVAL (Manual Arbor Frame and Pneumatic Applicator Frame)

Refer to the instructions included with the corresponding adapter kit for installation and removal of the notcher for the pneumatic power unit and the terminating machine.

***Pressure Plate Adjustment***

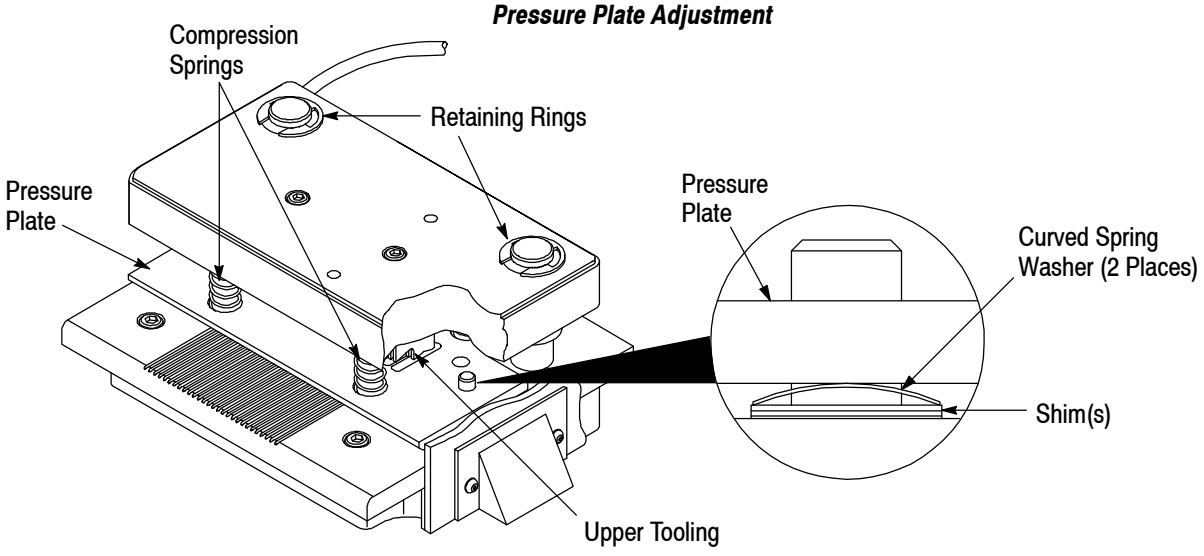



*Figure 2*

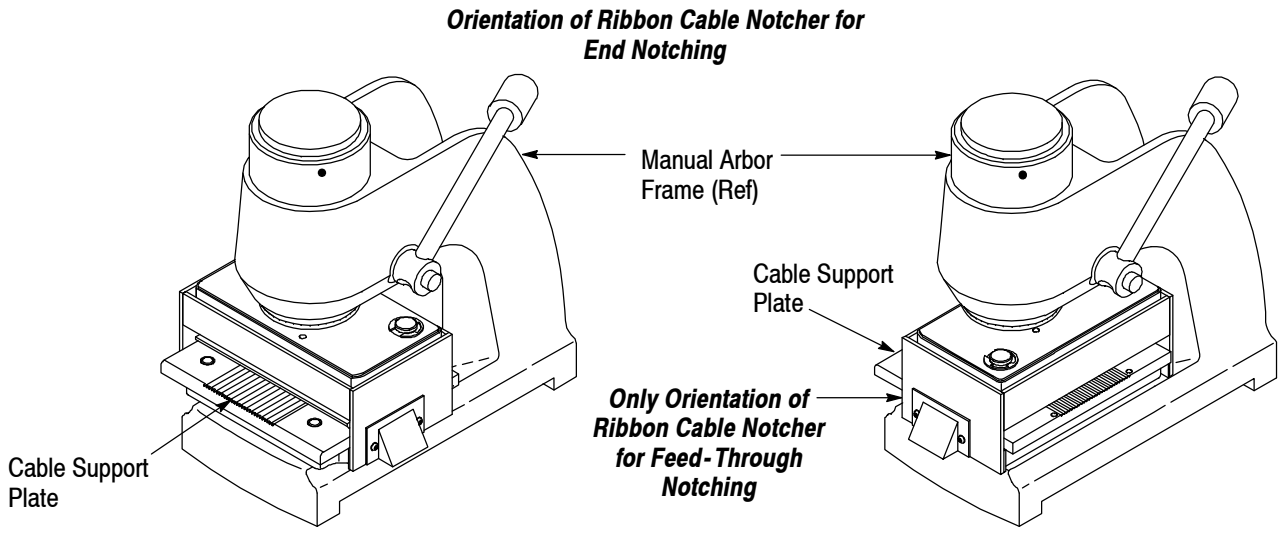



*Figure 3*

### 4.1. Installation

1. Raise the ram to the top of its stroke.

2. Remove the four socket head cap screws from the underside of the notcher.

3. Place the notcher on the base of the frame, oriented according to type of notching. Refer to Figure 3. Install the four socket head cap screws onto the notcher from the underside of the frame.

4. Set the ram height on the frame: 69.8 [2.75] for end notching or 65.8 [2.59] for feed–through notching. For procedure, follow the instructions included with the frame.

### 4.2. Removal

1. Remove the four socket head screws from the underside of the notcher.

2. Slide the notcher out from the base of the frame.

## 5. OPERATION

**CAUTION**

*To avoid personal injury, make sure that the guard is in place when operating the notcher.*

### 5.1. End Notching

**CAUTION**

*Make sure that the ram height is set at 69.8 [2.75].*

1. Loosen the two socket head screws securing the cable stop plate, and locate the cable stop plate against the dowel posts. Tighten the screws.

2. Place the cable on the cable support plate, and align the cable with the flutes of the plate.

3. Slightly press down on the cable (to keep the cable aligned with the flutes in the plate), and slide the cable into the notcher until it butts against the cable stop plate. Refer to Figure 4.

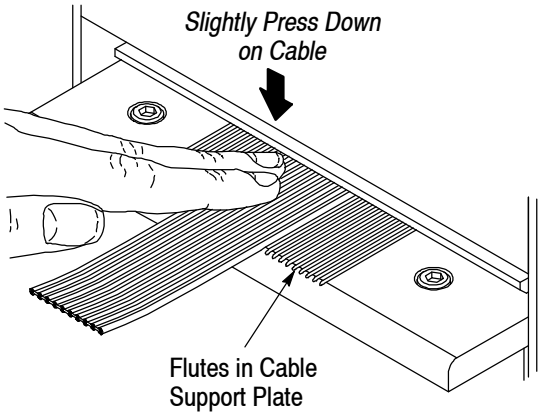



*Figure 4*

4. Cycle the power unit.

5. Remove notched end of cable by pulling the cable straight back and out of the notcher.

6. Refer to Figure 5, and inspect the cable according to the specifications listed in Figure 1.

### 5.2. Feed-Through Notching

**CAUTION**

*Make sure that the ram height is set at 65.8 [2.59].*

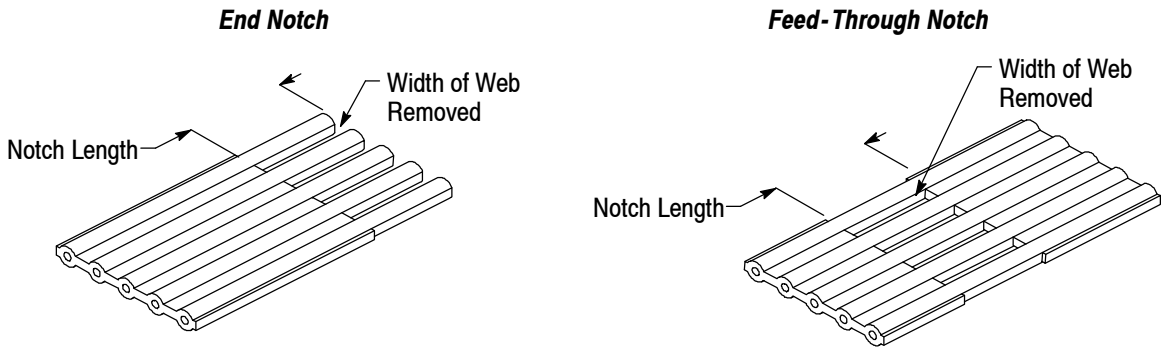



*Figure 5*

**CAUTION**

*Make sure that the notcher is oriented in the power unit as shown in Figure 3.*

1. Remove the two socket head screws securing the cable stop plate, and remove and store the cable stop plate.

**CAUTION**

*DO NOT bend or otherwise damage the cable stop plate during removal.*

2. Place the cable on the cable support plate, and align the cable with the flutes of the plate.

3. Slightly press down on the cable (to keep the cable aligned with the flutes in the plate), and slide the cable into the notcher until desired length. Refer to Figure 4.

4. Cycle the power unit.

5. Advance the cable to the location of the next notch.

6. Remove the cable by pulling the cable either straight front or back and out of the notcher.

7. Refer to Figure 5, and inspect the cable according to the specifications listed in Figure 1.

### 5.3. Scrap Removal

The frequency of scrap removal will depend on the number of notches.

**DANGER**

*Compressed air used for scrap removal must be reduced to less than 206.8 kPa [30 psi]. Effective chip guarding and personal protective equipment (including eye protection) must be used.*

1. Connect the air control valve to a suitable air supply.

2. Periodically depress the air control valve button to remove scraps. Depress the button for a maximum of two seconds.

## 6. MAINTENANCE AND INSPECTION

### 6.1. Daily Maintenance

It is recommended that each operator be responsible for the following four steps of daily maintenance:

1. Remove dust, moisture, and outer contaminants with a clean, soft brush or a soft, lint-free cloth; or clean the notcher with compressed air.

**DANGER**

*Compressed air used for cleaning must be reduced to less than 206.8 kPa [30 psi]. Effective chip guarding and personal protective equipment (including eye protection) must be used.*

2. Make sure that the upper tooling is in place and secure.

3. Lubricate the upper tooling dowel pins and pressure plate dowel posts daily with an extreme pressure (EP) lithium grease or equivalent. DO NOT lubricate excessively.

**NOTE**

*For location of components, refer to the drawing included with the notcher.*

4. When not in use, store the notcher in a clean, dry area.

### 6.2. Periodic Inspection

Regular inspection should be performed by quality-control personnel. A record of scheduled inspections should remain with the notcher or be supplied to personnel responsible for notcher. Though recommendations call for at least one inspection a month, the frequency should be based on amount of use, working conditions, operator training and skill, and established company policies.

### 6.3. Visual Inspection

1. Remove all lubrication and accumulated film by immersing the dies in a suitable commercial degreaser that will not damage the dies.

2. Make certain all components are in place.

3. Check all surfaces for wear. Replace worn parts.

4. Inspect the upper tooling and dies for flattened, chipped, or broken areas.

## 7. REPLACEMENT AND REPAIR

**NOTE**

*For location of parts and replacement component part numbers, refer to the drawing included with the notcher.*

Replacement parts are listed in Figure 6. Parts other than those listed should be replaced by Tyco Electronics to ensure quality and reliability. Order replacement parts through your representative, or call 1-800-526-5142, or send a facsimile of your purchase order to 717-986-7605, or write to:

CUSTOMER SERVICE (038-035)
TYCO ELECTRONICS CORPORATION
PO BOX 3608
HARRISBURG PA 17105-3608

**REPLACEMENT PARTS**

| PART NUMBER | DESCRIPTION | QTY PER NOTCHER |
|---|---|---|
| 854438-1 | PLATE, Pressure, 2.54 [.100] | 1 |
| 854443-1 | PLATE, Pressure, 3.96 [.156] | 1 |
| 23846-7 | SPRING, Compression | 4 |
| 854435-1 | SUBASSEMBLY, Upper Die Plate | 1 |

*Figure 6*

### 7.1. Upper Tooling Replacement

1. Disconnect power from the power unit.

2. Remove the notcher from the power unit.

3. Remove the two socket head screws securing the upper tooling to the upper die plate subassembly. Remove the retaining ring, upper die plate subassembly, and upper tooling. Note orientation of upper tooling.

4. Remove the pressure plate and the four compression springs.

5. Locate the cable stop plate against the pressure plate dowel posts. Secure the cable stop plate with the two socket head cap screws.

6. Place new upper tooling onto the upper die plate subassembly, and insert, but do not tighten, the socket head cap screws. Slide the upper die plate subassembly onto the pressure plate dowel pins.

**NOTE**

*Make sure that the upper tooling is properly oriented.*

7. *Gently* lower the upper die plate subassembly until the upper tooling is fully engaged in the die. Tighten the two socket head cap screws that secure the upper tooling. Remove the upper die plate subassembly.

8. Re-install the pressure plate, compression springs, and upper die plate subassembly.

**NOTE**

*Make sure that the compression springs are properly seated in their counterbores.*

### 7.2. Repair

For customer repair service, contact a representative at 1-800-526-5136.

## 8. REVISION SUMMARY

Revisions to this instruction sheet include:

- Updated instruction sheet to corporate requirements