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TELETYPE COMPORATION
Skokie, Illinois, U.S.A.

INSTRUCTIONS FOR INSTALLING THE 324490
MODIFICATION KIT TO PROVIDE PAPER JAM
ALARM FOR MODEL 28 AND 35 FRICTION
FEED TYPING UNITS

1. GENERAL

- 1.01 The 324490 modification kit is used on the Model 28 and 35 friction feed typing units to sense malfunctions of the paper travel which result in paper jams due to buckling of the paper.
- 1.02 The 324490 modification kit is designed for use with the standard 8-1/2 inch wide paper and a friction feed typing unit.

Note: Maximum current carrying capacity of paper jam alarm circuitry is 1 ampere; at 30 volts inductive, 250 volts resistive. Customer supplied electrical components used to complete the paper jam alarm circuitry must not draw more than this.

- 1.03 This modification kit is not compatible with the 174043 paper feed failure alarm.
- 1.04 The 324490 modification kit consists of the following:

3	2034	Flat washer	1	150436	Bushing
5	2191	Lockwasher	2	151630	Screw
2	3598	Nut	1	151618	Screw
3	. 3599	Nut	1	15165 7	Screw
2	3624	Flat washer	1	151658	Screw
2	680 7	Setscrew	2	1569 7 1	Screw
4	7 002	Flat washer	3	195001	Insulator
2	90581	Collar	1	305058	Guide
2	9311 7	Lockwasher	1	324489	Mounting plate
3	110743	Lockwasher	1	324491	Operating lever
1	121244	Cable clamp	1	324492	Bail with guide
1	145899	Post	1	324494	Latchlever
			- 1	324495	Cable assembly with
					switches
			1	326712	Torsion spring

1.05 For parts ordering information other than those listed in the kit, see Teletype Bulletin 1149B.

2. THEORY OF OPERATION

2.01 The 324490 paper jam alarm modification kit consists of a wire bail which rests on the 150804 and 150826 paper fingers. The bail operates a switch operating lever which holds a pair of switches in the operated position. Bunching of the paper, because of a paper jam condition, lifts the wire bail and causes it to rotate and release the operating lever. The operating lever in turn releases the switches which causes the alarm circuitry to operate. As the

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switches have transfer type contacts, there is provision for suitable alarm and control circuits. The forward motion of the operating lever places it over the bail and latches it in the alarm condition until manually reset.

- 2.02 Release of the paper fingers latch during insertion of paper in the typing unit causes the bail to rotate and put the circuits in the alarm condition. When the paper fingers are restored to their operating position on the platen and the operating lever and bail reset manually, the alarm circuits are cleared.
- 3. INSTALLATION (Figure 1)
- 3.01 Remove and retain the 72468 spring.
- 3.02 Remove and retain the 151637 screw, 110743 lockwasher, 125802 flat washer, and 125011 flat washer.
- 3.03 Remove the 150685 shaft assembly, 151703 screw, 150826 paper finger and 150803 spring, 150804 paper finger and 150803 spring by withdrawing the shaft assembly to the right. Do not completely remove the shaft from the right side frame.
- 3.04 Insert a 90581 collar with 6807 setscrew, 145899 post, and the 326712 torsion spring on the 150685 shaft assembly, and into the right side of the 324492 bail with guide. The wire portion is to the front.
- 3.05 Install the 150804 paper finger and 150803 spring, the 150826 paper finger and 150803 spring. These parts have been retained in 3.03. Continue to push the shaft to the left. Install the 324494 latchlever and continue to push the shaft through the left side of the 324492 bail with guide and install a 90581 collar with 6807 setscrew. The 324492 bail with guide should be above the paper finger guides. Insert the 151703 screw previously retained.
- 3.06 Continue to push the 150685 shaft assembly to the left and into the hole in the left side frame.
- 3.07 Install the 151637 screw, 110743 lockwasher, 125802 flat washer, and 125011 flat washer. These parts were retained in 3.02.
- 3.08 Install the 72468 spring retained in 3.01.
- 3.09 Assemble the two switches (part of 324495 cable) to the 324489 plate using the 156971 screws, 93117 lockwashers, and the 3624 flat washers. Place a 195001 insulator between the switches, one between the inner switch and the plate, and one on the outside of the outer switch. (The larger dimensions of the insulators are placed to the terminal end of the switches and to the top to protect the wiring.)
- 3.10 Assemble the 324491 operating lever to the 324489 mounting plate using the 150436 shoulder bushing, 151630 screw, and 2191 lockwasher.
- 3.11 Fasten the plate with switches and lever to the outside of the left side frame of the typing unit with a 151658 screw, 2191 lockwasher, and 7002 flat washer using the hole at the upper rear corner of the frame. The 151658 screw is inserted from the inside of the left side frame, through the lower hole

of the mounting plate. Use a 7002 flat washer, 2191 lockwasher, and 3598 nut.

- 3.12 Route the white wire of the 324495 cable to the main receptacle on the right side frame. Cut the wires to length and connect to the desired terminals. Attach the cable with the 121244 cable clamp, a 151618 screw, 2191 lockwasher, 7002 flat washer, and 3598 nut to the page printer side frame to keep the 324495 cable secure. Tie the cable to the tie rod and side frame as necessary. (Customer must supply own alarm circuitry.)
- 3.13 Attach the 324494 latchlever to the 324492 bail with guide with a 151630 screw, 2191 lockwasher, and 7002 flat washer.
- 3.14 On Model 35 remove paper guide on cabinet cover, and discard. Attach 305058 guide, with 2034 flat washer, 110743 lockwasher, and 3599 nut.

4. ADJUSTMENTS AND LUBRICATION

 $\underline{\text{Note:}}$ For standard adjustments and lubrication procedures, refer to Teletype Bulletin 217B.

- 4.01 Make the standard paper finger adjustment right and left.
- 4.02 Make the following new adjustments.
- 4.03 COLLAR Adjustment

Requirement

There should be some to 0.010 inch gap between the right-hand collar and the right side frame. With the torsion spring operating freely there should be some clearance between it and the guide bail and the collar. With the bail to the right there should also be some to 0.015 inch gap between the left collar and the bail. The latchlever is to clear the head of the 151658 mounting screw.

To Adjust

Adjust the right-hand collar and tighten the setscrew. Adjust the left-hand collar to meet the necessary requirements, and tighten the setscrew.

4.04 CONDITIONING Adjustment

Requirement

Loosen the switch plate mounting screws and rotate the switch and operating lever to a position where they do not interfere with the latch-lever.

4.05 WIRE BAIL Adjustment

Requirement

The wire bail should just rest on the paper over most of its formed length.

To Adjust

Bend the wire bail to meet the requirement.

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4.06 <u>SWITCH POSITION</u> Adjustment

Requirement

With the wire bail held against the paper and the operating lever latched behind the latchlever, there should be 0.035 inch to 0.065 inch between the top of the latchlever and the top of the operating lever. The operating lever should depress the switch plungers sufficiently to operate the switches.

To Adjust

Position the switch plate by means of the mounting screws and tighten. Adjust the latchlever on the guide bail, and tighten the screw.

- 4.07 Lubrication: Place a drop or two of KS7470 oil on the following places:
 - (a) Bail pivots and operating lever pivot
 - (b) Point of contact of bail with lever
 - (c) Point of contact with switch buttons

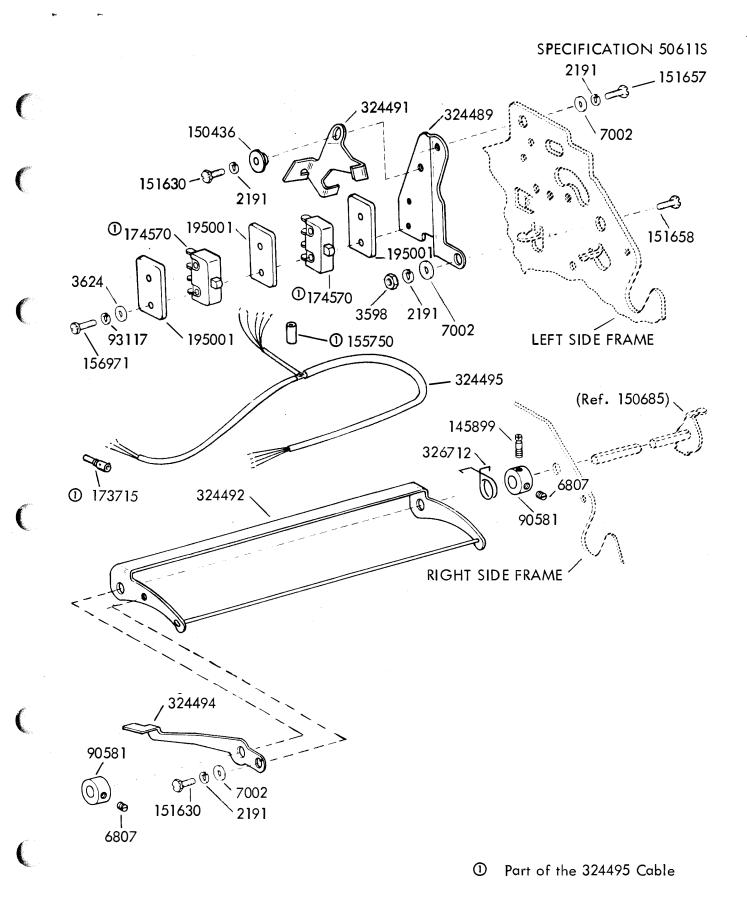
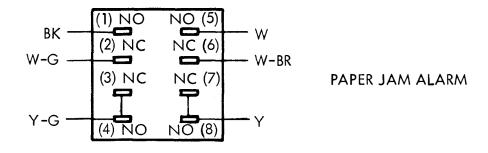


Figure 1



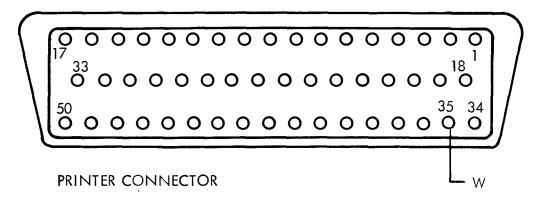


Figure 2 - Wiring Instructions for Paper Jam Alarm