INSTRUCTIONS FOR INSTALLING A MODIFICATION KIT ON A MODEL 28 PRINTER TO PROVIDE HORIZONTAL TABULATION AND HORIZONTAL TABULATION TRANSMITTER DISTRIBUTOR CONTROL OR TRANSFER CONTROL AT 60, 75 OR 100 WPM

*The following modification kits are covered in this specification: 152903, 154780, 154781, 157508, 157515, 157516, 157526, 157527, 157535, 157536, 163174 through 163180, 164476, 178172.

The following chart pertains to Bell System only:

Unit	Teletype Code	Bell System Code
Typing Unit	LP5 and up	28A and up

1. GENERAL

a. The following modification kits when installed on a Model 28 Printer provide horizontal tabulation on upper case "G" or "BLANK" and transmitter distributor control:

Modification Kit No. (Includes 154780 or 164476 Modification Kit)	Unit Used With 10 Spacers per inch	Unit Used With 12 Spacers per inch (154792 Modification Kit, Specification 5872S)	Horizontal Tab on Upper Case
154781	LK4 with LP4 through LP9 inclusive		G
157535	LP10 and up		G
157536	LP10 and up		BLANK
163174		LP4 to LP9	G
163175		LP10 and up	G
163176		LP10 and up	BLANK
178172	LP10 and up		G

b. For horizontal tabulation on upper case "Z", the 155134 Function Bar and the 155027 Keylever (order separately) should be used in place of the function bar and the keylever supplied.

c. The 154650 Suppression Code Bar Clip (furnished with the 152903 Modification Kit and included with Typing Unit LP10 and up) is used to hold the suppression code bar in the spacing position (to the right) to prevent it from being accidentally shifted to the left. This prevents selection of the horizontal tabulation function bar.

*Indicates Change

d. When the horizontal tabulator mechanism is used on a typing unit equipped with a sprocket feed platen accommodating less than 8-1/2 inch printed line, and on typing units with Serial No. 11,500 through 16,290 inclusive, the universal spacing drum (see Specification 5816S) providing 360° adjustment of the margins, must also be installed on the typing unit.

e. The horizontal tabulator mechanism for the Model 28 Printer provides means for advancing the printing carriage rapidly from left to predetermined stops to the right across the platen. A slotted ring, in which tabulator stops may be inserted, is attached to the spacing drum. These stops may be placed at any point around the slotted ring to stop the printing carriage wherever desired for columnar arrangement. Operation of the assigned key lever (usually Figures G) releases the spacing clutch and latches its trip lever out for rapid spacing of the printing carriage until the trip lever is released by action of the next tab stop on the spacing drum.

(1) 154780 Modification Kit. - In order to delay transmission while the printing carriage is spacing from one tab point to another, a transmitter distributor control mechanism is used to stop the transmitter. This mechanism consists of a contact assembly which is operated by the tabulator operating lever. This contact assembly is wired into the start magnet circuit of the transmitter distributor, so as to break the circuit to the start magnet while tabulation is taking place. It is necessary to insert one LTRS character after horizontal tabulation for 60 or 75 wpm and two LTRS characters for 100 wpm in order to permit time for previous selection to clear.

(2) 164476 Modification Kit

(a) The function of the horizontal tabulator transmitter distributor transfer control mechanism for the Model 28 Printer is to stop the transmitter and to keep an external circuit closed while the typing unit printing carriage is moving across the platen during tabulation.

(b) Stopping of the transmitter distributor is accomplished by controlling the transmitter distributor start magnet from the normally closed contacts and closing the external circuit from the normally open contacts of the transfer switch operated by the horizontal tabulator mechanism.

(c) The transmitter distributor control switch is opened upon initiation of the tabulation function and closed upon completion of the tabulation function.

(d) When sending tabular matter from a transmitter distributor it is necessary that one or more "fill-in" characters be inserted in the tape immediately following the tabulation character "Figs" "G" or "Figs" "BL". The "fill-in" character generally is either "Figs" or "Ltrs".

1. It is required that the transmitter distributor transmit not more than one (1) character following the tabulation character, "Fig" "G" or "Figs" "BL", before it is stopped from transmitting by the horizontal tabulator transmitter distributor control under the

following operating conditions.

a. At 60 and 75 WPM operation from a Model 14 transmitter distributor.

b. At 60 and 75 or 100 WPM operation from a Model 28 Transmitter Distributor (LXD) or a Model 28 Transmitter Distributor equipped with the 156773 Modification Kit (Specification 5836S) respectively.

2. It is required that the transmitter distributor transmit not more than two (2) characters following the tabulation character "Fig" "G" or "Figs" "BL" before it is stopped from transmitting by the horizontal tabulator transmitter distributor control when operating at 100 WPM operation from a Model 14 Transmitter Distributor or from a Model 28 Transmitter Distributor not equipped with the 156773 Modification Kit (Specification 5836S).

f. The following Modification Kits consists of:

			154781	157535	157536	163174	163175	163176	178172
1	152903	Modification Kit listed in Paragraph 1g.	X						
1	154780	Modification Kit listed in Paragraph 1j.	X	X	X	X	X	X	
1	157526	Modification Kit listed in Paragraph 1g.		X					X
1	157527	Modification Kit listed in Paragraph 1g.			X				
1	163177	Modification Kit listed in Paragraph 1g.				X			
1	163178	Modification Kit listed in Paragraph 1g.					X		
1	163179	Modification Kit listed in Paragraph 1g.						X	
1	164476	Modification Kit listed in Par. 1.j.							X

g. The following Modification Kits consists of:

			152903	157526	157527	163177	163178	163179
2	2191	Washer, Lock	X			X		
2	7002	Washer, Flat	X			X		
1	7036	Collar, Set	X			X		
1	7603	Spring	X			X		
1	33038	Spring	X			X		
1	2875WD	Diagram, Wiring	X			X		
1	74536	Screw 6-40 x 5/32 Set	X			X		
1	93356	Washer, Felt	X			X		
1	94693	Wick	X			X		
1	150973	Type Pallet Blank	X			X		
2	151722	Screw 6-40 x 3/16 Hex.	X			X		
1	153367	Arm W/Pin	X			X		

			152903	157526	157527	163177	163178	163179
1	153368	Bail	X			X		
1	153382	Bail W/Rivet	X			X		
1	153383	Arm	X			X		
1	154614	Cam	X			X		
1	154650	Clip	X			X		
1	155037	Keylever, Tab-G	X	X		X	X	
1	157200	Spring	X			X		
1	157238	Spring	X			X		
1	157508	Modification Kit (Listed in Paragraph 1h)	X	X	X			
1	157515	Modification Kit (Listed in Paragraph 1i)	X	X		X	X	
1	157516	Modification Kit (Listed in Paragraph 1i)			X			X
1	158352	Bail	X			X		
1	158353	Bail	X			X		
1	158354	Arm	X			X		
1	158461	Keylever, Tab-Blank			X			X
1	160843	Spring	X			X		
1	163180	Modification Kit (Listed in Paragraph 1h)				X	X	X

h. The 157508 or 163180 Modification Kit consists of:

			157508	163180
6	2191	Washer, Lock	X	X
1	3598	Nut	X	X
3	7002	Washer, Flat	X	X
1	41675	Washer, Flat	X	X
1	82463	Spring	X	X
1	84758	Spring	X	X
1	87401	Spring	X	X
2	110743	Washer, Lock	X	X
1	110879	Spring	X	X
1	111342	Spring	X	X
1	112629	Spring	X	X
4	119649	Ring, Retainer	X	X
1	119651	Ring, Retainer	X	X
1	119652	Ring, Retainer	X	X
1	119653	Ring, Retainer	X	X
2	125015	Washer, Flat	X	X
2	151630	Screw	X	X

			157508	163180
1	151632	Screw 6-40 x 3/8 Hex.	X	X
*1	151722	Screw 6-40 x 3/16 Hex.	X	X
1	151685	Screw 4-40 x 5/16 Fil.	X	X
1	151880	Nut 4-40 Hex.	X	X
2	152893	Screw 4-40 x 1/4 Hex.	X	X
1	153360	Stud	X	X
1	153361	Post	X	X
1	153364	Lever W/Bushing	X	X
1	153365	Arm, Cam	X	X
1	153375	Arm, Slide	X	X
1	153377	Bracket W/Stud	X	X
1	153894	Plate W/Stud	X	X
1	153896	Bail, Latch	X	X
1	154670	Screw 6-40 Special	X	X
1	154671	Bracket	X	X
1	154698	Wick	X	X
1	155716	Plate, W/Pin	X	X
1	158334	Spring	X	X
1	158335	Stud	X	X
1	158337	Plate W/Pin	X	X
1	158339	Arm W/Pin	X	X
1	158340	Bracket	X	
5	158341	Plate	X	X
1	158342	Arm	X	X
1	158343	Bracket	X	X
1	158344	Nut Shoulder	X	X
1	158346	Lever W/Hub	X	X
1	158347	Bracket	X	X
1	158348	Bracket	X	X
1	158349	Arm, Slide	X	X
1	158351	Pawl W/Stud	X	X
1	158357	Ring W/Roller	X	
1	163181	Ring W/Roller		X
1	163182	Bracket		X

i. The 157515 or 157516 Modification Kit consists of:

			157515	157516
1	4703	Spring	X	X
1	72522	Wick	X	X
1	90517	Spring	X	X
1	152642	Lever, Function	X	X
1	152653	Pawl, Function	X	X
1	152660	Plate, Spring	X	X
1	152693	Bar, Function UC BL		X
1	155135	Bar, Function SC UC G	X	

			157515	157516
1	157240	Spring	X	X

j. The 154780 or 164476 Modification Kit consists of:

			154780	164476
1	2191	Washer, Lock	X	X
1	7002	Washer, Flat	X	X
1	34432	Washer, Flat	X	X
1	80708	Clamp, Cable	X	X
1	121244	Clamp, Cable	X	X
1	151630	Screw 6-40 x 1/4 Hex.	X	X
1	153380	Bracket	X	X
1	153387	Cable Assembly	X	
1	155715	Stud	X	X
1	155721	Contact Assembly	X	
6	155753	Sleeve, Insulating		X
1	2875WD	Wiring Diagram	X	X
1	164477	Cable Assembly		X
1	164478	Contact Assembly		X

k. For part numbers referred to and for parts ordering information, see Teletype Model 28 Page Printer Parts Bulletin 1149B.

2. INSTALLATION

NOTE

References made to left or right, up or down, front or rear, etc. apply to unit in its normal operating position as viewed from the operator's position in front of the unit.

a. 152903 or 163177 Modification Kit

(1) Remove the front plate assembly in accordance with standard practice.

(2) Remove and discard the 150434 Spacing cut-out Transfer Bail. Retain the 82463 Spring, the 119652 Retainer Ring and the two 4586 Felt Washers. Install the 153382 Bail Assembly, two 4586 Felt Washers, 153383 Bail Extension Arm and 7036 Set Collar on the 150214 Transfer Bail Bearing Stud. The spring projection on the 153383 Arm should extend toward the rear and to the right, and the arm should lie flat against the 153382 Bail with the larger opening around the 150214 Bearing Stud and the smaller opening around the stud on the 153382 Bail. The 7036 Set Collar should be located on the 150214 Stud next to the 153383 Arm. The two 4586 Felt Washers are located on the 150214 Stud inside the bail, one next to the bail and one next to the 7036 Set Collar. Secure the 153382 Bail on the stud using the 119652 Retainer Ring previously removed. Install the 74536 Screw in the set collar and tighten the collar with the screw head downward and toward the rear so that it will be

accessible from the bottom of the unit after the front plate has been replaced. Replace the 82463 Spring and attach the 33038 Spring from the 153382 Bail to the 153383 Arm.

(3) Replace the front plate assembly by reversing the procedure used in removing it. Do not replace spacing gear and shaft at this point.

(4) Remove the stunt box assembly in accordance with standard practice.

(5) Remove the main shaft assembly in accordance with standard practice. Replace the 150003 Spacing Clutch Restoring Cam with the 154614 Cam. The side of the cam marked "O" should face away from the clutch side of the assembly. Tighten the screws that secure the spacing clutch assembly to a torque of 8 to 10 inch-lbs. Discard the 150003 Cam. Do not replace the main shaft assembly at this point.

(6) Remove from the clutch trip shaft beginning with the 150349 Cam Follower Arm, those parts up to and including the 150355 Spacing Clutch Latch Lever. To facilitate removal of the clutch trip shaft parts loosen the three set collars and slide the shaft to the left through the shaft bearing in the left side frame. Discard the 152517 Trip Lever Arm and the 150889 Spacing Clutch Trip Arm. Assemble the 153368 Bail and the 153367 Arm Assembly on the trip shaft. The 153367 Arm goes inside the 153368 Bail with the long arm to the front. Fasten the arm and bail together with the 151722 Screw, 2191 Lock Washer and 7002 Flat Washer. Assemble two 93356 Felt Washers inside the bail as it is placed on the trip shaft. The 153368 Bail should be located on the shaft so that the one end of the bail rides the spacing clutch restoring cam. Reassemble the 150355 Latch Lever with the 93356 Washer inside the bail on the shaft next to the 153368 Bail. Next, assemble the 158353 Bail, 158354 Arm, 158352 Bail and two of the 93356 Felt Washers on the shaft. Fasten the 158354 Arm to the inside of the 158353 Bail with the 151722 Screw, 2191 Lock Washer and 7002 Flat Washer. The 158352 Bail goes inside the 158353 Bail and the two 93356 Felt Washers go inside the 158352 Bail. The long arms of the 158352 Bail and 158354 Arm extend forward adjacent to each other. The forward end of the 158352 Bail extends across next to the 152515 Space Trip Lever. Reassemble the remaining parts removed from the trip shaft in their respective locations prior to removal. Attach the 7603 Spring from the 158352 Bail to the 158353 Bail. Replace the 74701 Clutch Stop Lever Spring with the 160843 Spring. Discard the 74701 Spring.

(7) Remove and discard the 151657 Screw that fastens the 150399 Carriage Return Shaft to the 152563 Spacing Mechanism Bracket. Retain the 2191 Lock Washer. Install the 153361 Post in place of the discarded screw but do not use the lock washer.

(8) Install the 153375 Slide Arm in the slot in the 150894 Space Suppression Bar corresponding to Position 17 in the stunt box. The spring projection on the slide arm is toward the front and left.

(9) Assemble the 153894 Plate to the 153364 Lever Assembly using the 119649 Ring Retainer, 151722 Screw, 2191 Lock Washer, and 7002 Flat Washer. The stud on the 153894 Plate extends through the slot in the 153364 Lever coming out on the same side as the stud welded on the end of the 153364 Lever. Install the 153894 Plate and 153364 Lever Assembly to the 153377 Bracket on the stud located nearest the center of the bracket. The 153894 Plate is next to the 153377 Bracket. The large hole in the 153364 Lever should be

opposite the hole in the 153377 Bracket nearest to the stud on which the 153364 Lever is mounted. Secure the lever on the stud with the 119652 Retainer Ring. Install the 153896 Latch Bail on the stud in the 153894 Plate and secure with the 119649 Retainer Ring. The end of the latch bail with the tapped hole should be opposite the flat projection on the 153894 Plate. Run the 151880 Nut onto the 151685 Screw and install the screw into the tapped hole on the 153896 Latch Bail so that the threaded end engages the flat projection on the 153894 Plate. Attach the 82463 Spring from the latch bail to the 153364 Lever. Install the 153365 Cam Plate on the stud in the end of the 153364 Lever. Secure with the 119649 Retainer Ring. The end of the cam plate containing the spring hole should be on the same side of the 153364 Lever as the spring hole in the 153364 Lever, and the cam slot portion should be near the adjusting screw on the 153896 Latch Bail. Attach the 111342 Spring with 154698 Wick from the cam plate to the 153364 Lever.

(10) Remove and retain the 155042 Trip Shaft Support Bracket Assembly from the 150894 Bar. Retain the 151346 Screw, two 2191 Lock Washers and 3598 Nut. Install the 153377 Bracket with the attached parts in the typing unit. The large opening in the 153364 Lever goes over the 153361 Post, the flat projection containing the tapped hole on the 153377 Bracket fastens to the underside of the 150894 Bar. The 153896 Latch Bail engaging surface is to the rear of the projection on the 158354 Trip Arm. The cam slot in the 153365 Cam goes over the stud in the 153367 Arm that was mounted on the trip shaft. Install the 41675 Washer on the stud in the 153367 Arm between the 153365 Plate and the 153367 Arm. Place the 155716 Plate next to the 153377 Bracket with the stud end upward and the stud extending to the left so that the corresponding holes line up. Insert the 151632 Screw with the 2191 Lock Washer through the holes in the 155716 Plate and the 153377 Bracket into the 153361 Post. Secure the other end of the 153377 Bracket and the 155042 Trip Shaft Support Bracket to the 150894 Bar with the 151346 Screw and 2191 Lock Washer which previously secured the trip shaft support bracket. Retain the 3598 Nut and 2191 Lock Washer that were next to the trip shaft support bracket. The trip shaft support bracket should be installed between the 150894 Bar and 153377 Bracket. Install the 151630 Screw, 2191 Lock Washer and 7002 Flat Washer in the adjusting hole on the lower end of the 155716 Plate and 153377 Bracket. Attach the 84758 Spring from the 153377 Bracket to the 153375 Slide Arm.

(11) Install the 153360 Stud, 7002 Flat Washer and the previously retained (Par. 2.a (10)) 2191 Lock Washer and 3598 Nut in the slot on the lower end of the 153364 Lever. The threaded end of the stud should be to the right.

(12) Replace main shaft assembly, the spacing gear and shaft by reversing the procedure used in removal.

(13) Hold the 158343 Spring Bracket with the projection pointed away. Hook one end of the 158334 Spring through the lower portion of the spring hole. With the spring pointed to the right, string the 158340 Bracket on to the spring and then the five 158341 Tab Stop Plates and hook the other end of the 158334 Spring over the top of the same spring hole.

(14) Mount the 158342 Arm and 158343 Spring Bracket on to the 158357 or 163181

Ring using the 152893 Screws and 110743 Lock Washers. Make certain that the spring loops do not extend over the rear edge of the 158343 Bracket. (Note: Make certain that the slot selected allows the mounting holes of the 158343 Bracket to line up with the mounting holes in the 158357 or 163181). Slip the 158334 Spring around the groove in the 158357 or 163181 Ring and position the 158340 or 163182 Bracket and the five 158341 Tab Stop Plates so that they are fully seated down in the slots in the ring with the long portion extending radially out from the ring. The stops should not extend out from the flat side of the ring. There should be no small 158341 Stop Plates between the 158343 Bracket and the 158342 Arm.

(15) On the spacing drum mechanism replace the 154624 Carriage Return ring with the 158357 or 163181 Ring. To facilitate this, return carriage to left and release the spring drum from tension. Remove the two 112626 Nuts that clamp the 150554 Plate to the studs in the spacing and spring drums. Remove the screw mounting the upper right cable pulley to the 150554 Plate. Remove the right screw and loosen the left screw that mounts the 150598 Printing Track. Move the right end of the track up until it is clear of the guide plates mounted on the 150554 Plate. The right side of the 150554 Plate can then be lifted clear of the spacing drum far enough to permit removal of the 154624 Ring. Remove only the four screws that clamp the 154624 Ring to the spacing drum. Replace the 154624 Ring with the 158357 or 163181 Ring. Discard the 154624 Ring. The roller on the ring should be to the left of the 150235 Transfer Slide. After tightening the screws that clamp the 158357 or 163181 Ring, replace the 156632 Stud in the drum with the 154670 Stud. Reassemble those parts removed by reversing the procedure used in removing them. Care should be taken that the wire cable is located properly in the grooves in the spacing and spring drums. Install the 154671 Bracket behind the 112626 Nut and 2669 Lock Washer that secure the 150554 Pulley Support Plate to the spacing drum mounting stud. The large portion of the bracket should be to the right of the stud and extend behind the 150554 Support Plate and turned clockwise until it rests on the 150554 Plate.

(16) Fasten the 158339 Arm to the 158346 Lever. The large elongated hole in the 158339 Arm goes over the hub in the 158346 Lever and the long end of the 158339 Arm extends beyond the short end of the 158346 Lever. Place the 158344 Bushing in the elongated hole in the 158346 Lever and thread into it, through the 158339 Arm, the 151630 Screw with the 2191 Lock Washer and 125015 Flat Washer assembled on the screw. The 151722 Screw with the 2191 Lock Washer and 125015 Flat Washer, screw into the tapped hole in the 158346 Lever. Mount the 158351 Pawl in the hole in the 158339 Arm and secure with the 119651 Retainer Ring. The open section of the pawl should straddle the pin in the 158339 Arm. Attach the 110879 Spring from the pawl to the 158339 Arm.

(17) Remove the 150538 Dashpot by removing the three mounting screws and removing the 150536 Transfer Slide Spring. Replace the 150667 Stud with the 158335 Stud. Discard the 150667 Stud. The parts removed from the 150667 Stud are in the same location on the 158335 Stud and in addition the 158346 Lever Assembly and the 119653 Retainer Ring are installed on the stud. The lever assembly goes inside the transfer slide and is placed over the stud after the rear side of transfer slide and the one bushing are placed over the stud, the second bushing and forward side of the transfer slide are placed on the stud after the lever assembly. The pawl end of the assembly should extend toward the right and the heads of the

screws toward the front. The added 119653 Retainer Ring goes in the third groove from the front end of the 158335 Stud, and the lever assembly in front of it.

(18) Mount the 158347 Bracket using the 151723 Screw that secures the lower right corner of the 152538 Front Plate and the lower mounting screw of the dashpot. The slot in the bracket fits over the end of the 158339 Arm. The long end with the hole extends back through the long opening to the back side of the front plate until the bracket hole is in line with the lower mounting screw hole for the dashpot. Replace the 2669 Screw and 2191 Lock Washers but do not tighten. Replace the dashpot using the lower mounting screw to clamp the one end of the 158347 Bracket, then tighten the 2669 Screw. Replace the 150536 Transfer Slide Spring and attach the 125238 Spring to the 158335 Stud the same as it was previously attached to the 150667 Stud.

(19) Replace the 152586 Bracket with the 158348 Bracket. Care should be taken that the shims under the spacing shaft bearing next to the front plate are not disturbed. The left end of the 158346 Lever fits in the vertical slot in the bracket.

(20) Install the 158349 Slide Arm in the slot on the 158348 Bracket and fasten the opposite end on the 153360 Stud with the 119649 Retainer Ring. Attach the 87401 Spring from the spring projection on the slide arm to the 158348 Bracket.

(21) Attach the 112629 Spring from the hole in the 158339 Arm to the spring projection on the 158347 Bracket.

(22) Replace the 150194 Plate with the 158337 Plate. Prior to installing the plate, position the spacing drum so that the 158342 Arm on the 158357 or 163181 Ring Assembly will be to the left of the 158337 Plate.

(23) Install the 152653 Function Pawl, 157200 Function Pawl Spring and 94693 Wick on all units except LP6, LP8 and LP9 and up (157240 Function Pawl Spring and 72522 Wick on all LP6, LP8 and LP9 and up Typing Units) 152642 Function Lever, 152660 Plate, 90517 Function Lever Spring, 155135 Bar and 4703 Function Bar Spring in Position 17 in the stunt box.

(24) Replace the stunt box by reversing procedure used in removing it.

(25) Remove type box. Replace the 150147 Type Pallet (&) and associated 150077 Spring in the type box with the 150973 Type Pallet (blank) and new 157238 Spring. Replace type box.

(26) Replace the 151306 Key Lever (G, &) with the 155037 Key Lever (Tab, G). To remove key lever grip plastic keytop firmly and pull upward.

(27) When it is desired to hold the suppression code bar in the spacing position (as in non-selective calling typing units) install the 154650 Clip.

(28) Check the standard adjustments listed in Paragraph 3.

b. 157526, 157527, 163178 or 163179 Modification Kit

(1) Follow procedure in Paragraph 2a (4), (7) through (11) inclusive, (13) through (22) inclusive.

(2) Install 155135 Function Bar or 152693 Function Bar and the following parts in Position 17 of the stunt box. 4703 Function Bar Spring, 152653 Function Pawl, 157240 Function Pawl Spring, 72522 Wick, 152642 Function Lever, 152660 Spring Plate and 90517 Function Lever Spring.

(3) Follow procedure in Paragraph 2a (24).

(4) Remove type box. Remove and discard the 150147 Type Pallet (&) and associated 150077 or 157238 Spring in the type box. Replace type box.

(5) Replace the 151306 Key Lever with the 155037 or 158461 Key Lever. To remove key lever grip plastic keytop firmly and pull upward.

(6) Follow procedure in Paragraph 2a (28).

c. 154780 or 164476 Modification Kit

(1) Install the 155721 or 164478 Contact Assembly so that the terminals are up and the contacts extend down.

(2) For the 154780 Modification Kit, solder the 153387 Cable Assembly using the cable end that has the least wire exposed from the tubing to the 155721 Contact Assembly. Connect the black wire to the rear terminal. Route the cable from the terminals around the end of the bracket up the inside of the bend in the bracket.

(3) For the 164476 Modification Kit, place three pieces of 155753 Insulating Sleeves over the ends of the 164477 Cable having the least amount of exposed wire and solder to the 164478 Contact Assembly. Connect the black wire to the middle terminal, white wire to the terminal next to the contact assembly bracket, and red wire to the rear terminal.

(4) Tie the cable with lacing cord to the bracket so that the cable lays along the bend of the bracket.

(5) Place the 2191 Lock Washer and 7002 Washer on the 151630 Screw and partially thread the screw into the hole in the 155716 Horizontal Tabulator Plate. Mount the 155721 or 164478 Switch Assembly on the 155716 Plate. The small hole in the switch bracket fits over the pin in the upper end of the 155716 Plate. The open slot in the bracket goes under the 7002 Flat Washer on the 151630 Screw. Tighten the screw.

(6) Mount the 153380 Bracket to the right side frame using the front 151631 Screw that mounts the 150452 Drive Shaft Bearing to the side frame. The long flat side of the bracket should be parallel to the front plate and in front of the mounting screw.

(7) Route the 153387 or 164477 Cable Assembly under the 150672 Spacing Shaft Bearing, along the rear side of the 153380 Bracket, through the notch between the side frame and the front plate. After passing to the right of the side frame the cable is routed toward the rear under the 150452 Drive Shaft Bearing, to the right of the 152400 Selector Mounting Plate, under the 152404 Transfer Lever Spring Bracket, (insert cable upward between the body and the mounting surface of the 155090 Wick Feed Lubricator if present) adjacent to the 151630 Screw mounting the selector plate, upward adjacent to the 6745 Mounting Screw for the 151627 Tie Rod and ending up at the connector assembly. Place one inch pieces of tubing over each wire, then solder the black wire to Terminal 12 and the white wire to Terminal 13 on the connector. For the 164477 Cable Assembly, solder the red wire to an unused terminal on the connector. Slide the one inch pieces of tubing over the terminals after soldering. (Note: When the form starter XD control is also installed on the typing unit, wire as indicated on Wiring Diagram 2875WD.) Mount the 121244 Clamp and 34432 Flat Washer using the 6745 Screw and 2669 Lock Washer that mounts the right end of the 151627 Rod to the side frame. Position the clamp so that the cable is in front of the screw. Mount the 80708 Clamp (discard 80708 Clamp when 155090 Wick Feed Lubricator is present on selector) using the 151630 Mounting Screw at the rear of the selector mounting plate. Position the clamp so that the cable is in front of the screw. Tie the cable with lacing cord to the 150452 Drive Shaft Bearing and to the 153380 Bracket at several places along the bracket.

(8) The transmitter distributor control wiring terminates on Terminals 23 and 24 of the cabinet. For earlier models of the Electrical Service Unit the customer must provide wiring from the Electrical Service Unit spare leads A-30-0-BL and A-73-W-G to Terminals 23 and 24 of the cabinet and for the transfer contacts.

(9) Replace the 151722 Screw that clamps the 153894 Plate to the lower end of the 153364 Horizontal Tabulator Lever, with the 155715 Stud. The stud should be to the front of the bakelite contact. Loosen the 155721 or 164478 Contact Assembly Bracket Mounting Screw and reposition contact assembly if necessary.

(10) Check the Horizontal Tabulator Latch Bail Adjusting Plate Adjustment in accordance with standard practice.

3. ADJUSTMENTS AND LUBRICATION

a. For adjustment and lubrication procedure refer to standardized information (for other than Bell System refer to Teletype Bulletin 217B).

(1) Check the following adjustments:

(a) Function Clutch Trip Lever.

(b) Clutch Trip Shaft Set Collars.

(c) Anti-deflection Plate.

(d) Type Box Clutch Trip Lever.

(e) Clutch Drum Position.

(f) Spacing Gear Clearance.

(g) Spacing Gear Phasing.

(h) Line Feed Clutch Phasing (for 152903 or 163177 Modification Kit).

(i) Spacing Trip Lever Bail Cam Plate.

(j) Function Reset Bail Blade.

(k) Oscillating Rail Slide Position.

(l) Carriage Wire Rope.

(m) Carriage Return Spring Tension.

(n) Carriage Return Latch Bail.

(o) Dash pot Vent Screw.

(p) Printing Carriage Position.

(q) Printing Track.

(r) Left Margin.

(s) Horizontal Tabulator Mechanism.

(t) Operating Lever Slide Arm (for the 154780 or 164476 Modification Kit).

(u) Operating Lever Adjusting Plate (for the 154780 or 164476 Modification Kit).

(v) Transmitter Control Adjustments (for the 154780 or 164476 Modification Kit).

* * *

ADDENDUM TO SPECIFICATION 5864S, ISSUE 7, DATED FEBRUARY, 1964

1. Specific

Make the following changes in the specification:

a. In Paragraph 1.h. add the following parts to the 163180 kit: 1 - 72254 washer, 1 - 151346 screw, 1 - 2191 lockwasher.

b. On Page 8, Paragraph (10), in the 14th line after "washer which previously secured the trip shaft support bracket." Change the paragraph to read as follows:

If the 155042 trip shaft support bracket is not present use the 72254 washer supplied with the modification kit. Retain the 3598 nut and 2191 lockwasher that were next to the trip shaft support bracket. The trip shaft support bracket should be installed between the 150894 bar and 153377 bracket. Install the 151630 screw, 2191 lockwasher and 7002 flat washer in the adjusting hole on the lower ends of the 155716 plate and 153377 bracket. Attach the 84758 spring from the 153377 bracket to the 153375 slide arm.

c. Make the adjustments shown on attached Figure 1.

* * *

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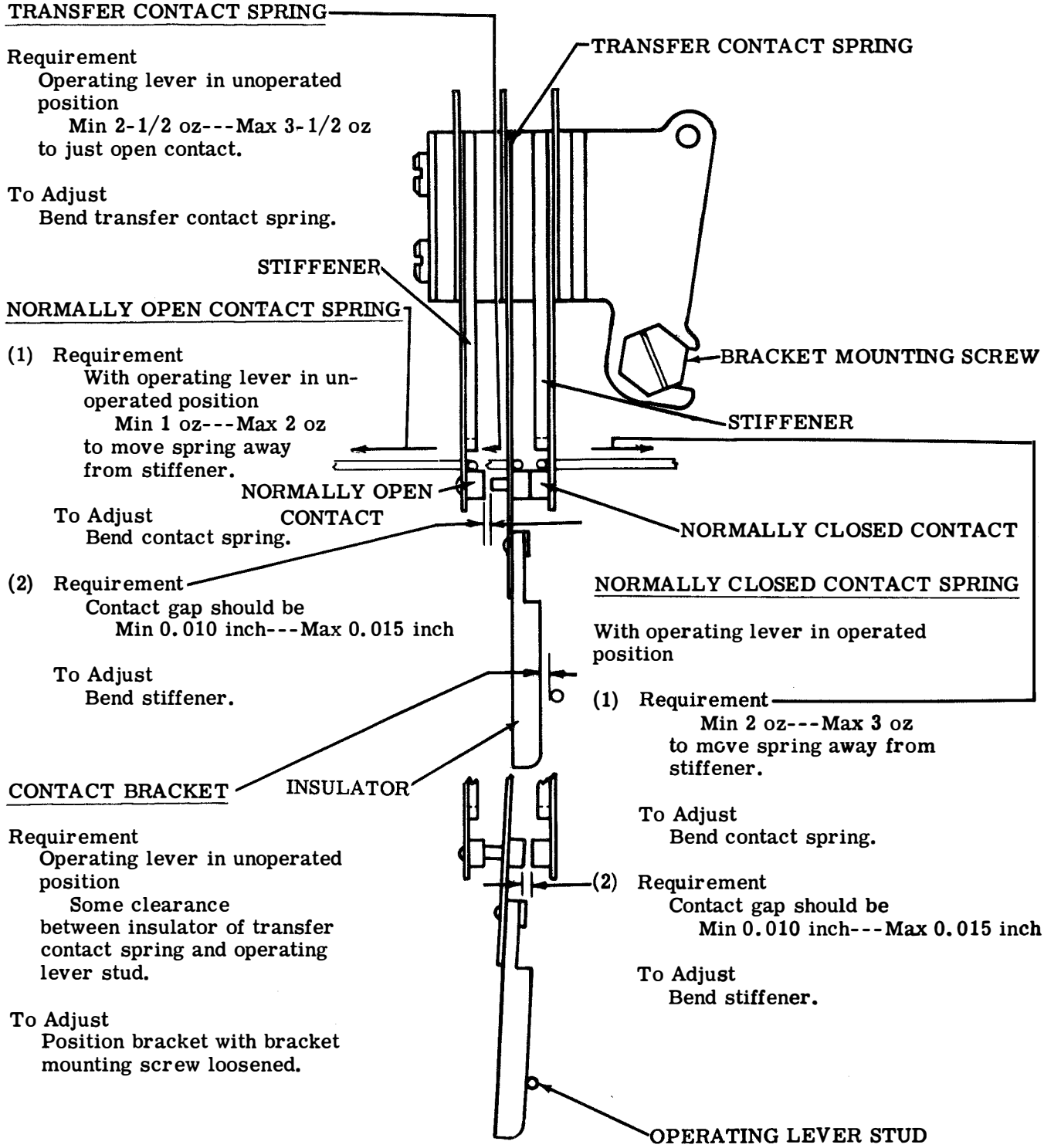

Figure 1 - Transmitter Control Contact Adjustments