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INSTRUCTIONS FOR INSTALLING THE MODEL 15 TABULATOR MECHANISM SETS OF PARTS 84925 (UPPER CASE "G") AND 87860 (UPPER CASE "Z")

This mechanism is used to facilitate the tabulation of printed matter and responds to the selection of upper case "G" or upper case "Z" depending on the set of parts installed. Tabulator stops are positioned to conform to column spacing.

When the "tabulator" selection (upper case "G" or "Z") is set up on the vanes, a tabulator function lever will be selected. As the tabulator function lever moves into the path set up for it in the vanes, its rear arm operates a centrally pivoted latch bar (Figure 1), causing the rear end of the latch bar to rise and the front end to drop. As the rear end of the latch bar rises, it carries upward a spacing pawl link which in turn lifts the rear spacing escapement pawl out of engagement with the spacing escapement ratchet. The front end of the latch bar engages the shoulder of a tabulator latch which holds the latch bar operated, and thus permits the spacing mechanism to rotate with the main shaft and impart motion to the carriage. The carriage will advance along the line until a pawl mounted on the front of the carriage strikes a tabulator stop located on a tabulator bar extending across the front of the typing unit. This tabulator bar is pivoted at each end and extending downward from it is the tabulator latch. As the carriage pawl passes a tabulator stop it imparts a rocking motion to the tabulator bar and latch, thus releasing the latch bar from the latching shoulder of its latch. At each station tabulator stops must be positioned at intervals on the tabulator bar to conform to column spacing.

The following items are included in both the 84925 and the 87860 sets of parts:

2	1160	Screw
1	7965	Spring
1	74705	Spring
1	74707	Spring
2	74986	Screw
1	86761	Spring post
1	87324	Send-receive mechanism plate
1	87325	Tabulator bar assembly
1	87326	Tabulator latch bar assembly
1	87327	Spacing escapement pawl assembly
		including the following:
		1 3599 Nut
		1 3640 Lock washer
		1 74097 Pawl
		1 86776 Post
1	87343	Bell crank retainer assembly
1.	89097	Operating arm

The following items are included only in the 84925 (upper case "G") set of parts:

1 84656 Pneumatic keytop

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The following items are included only in the 87860 (upper case "Z") set of parts:

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1	84792	Tabulator function lever (upper case "Z")
1	84799	Master speed keytop
1	84800	Pneumatic keytop

For numbers referred to in the following text, which are not included in the foregoing lists, refer to Bulletin 1037.

INSTALLATION ON THE TYPING UNIT

Remove the typing unit from the base and remove the type bar carriage from the typing unit.

Remove the standard bell crank retainer from the carriage, and replace it with the 87343 bell crank retainer assembly so that the pawl is toward the top of the bell crank mounting plate. Use the two 1160 mounting screws furnished.

NOTE: On typing units equipped with a 74097 rear spacing escapement pawl having a tapped hole in the flat surface of the pawl, it will not be necessary to remove this pawl. Instead, the 86776 post, 3640 lock washer, and 3599 nut should be removed from the 87327 spacing escapement pawl assembly included in the tabulator set of parts, and installed on the rear spacing escapement pawl on the typing unit, with the post extending toward the left as viewed from the front of the typing unit.

NOTE: On typing units equipped with a 74097 rear spacing escapement pawl, which has no mounting hole for the 86776 post, proceed as follows:

From the typing unit, remove the printing and function bail springs, and remove the two screws, washers, and lock washers which mount the printing bail right bearing to the side frame. Rotate the main shaft until the printing bail can be moved to its forward position. Remove the printing and function bail assembly from its left bearing and remove it from the typing unit. Remove the three screws and lock washers which mount the printing bail to the shaft and withdraw the shaft far enough to permit the rear spacing escapement pawl to be removed and replaced by the 87327 spacing escapement pawl assembly furnished. Then replace the shaft in the printing bail using the three screws and lock washers previously removed.

Install the printing and function bail assembly in its left bearing, making certain that the carriage return reset push bar and the bell push bar are in their respective slots in the function lever comb. Make sure that the oiler in the right end of the shaft extends upward. Replace the two printing and function bail assembly bearing screws, washers, and lock washers, allowing some end play, not more than .004", between the bail assembly and its bearing brackets. Replace the printing and function bail springs.

Set the typing unit on its back. On typing units so equipped, remove the 89442 reset lever down stop assembly; remove the send-receive mechanism plate and strip it of its accessories, leaving the motor stop contact assembly (if the typing unit is so equipped) connected to its wiring. Assemble all the parts removed from the standard send-receive mechanism plate on the 87324 send-receive mechanism plate furnished and mount the plate on the typing unit. Replace the 89442 reset lever downstop assembly if removed.

Set the typing unit on its right side; remove the three function lever comb mounting screws and lock washers, and remove the comb.

Install the 86768 (upper case "G") or the 84792 (upper case "Z") tabulator function lever (depending on the type furnished) in the sixth slot from the lower end of the vane frame.

Facing the bottom of the typing unit, install the 87326 tabulator latch bar assembly as follows:

Slide the slotted extension of the tabulator space pawl link over the spacing escapement pawl post and hold it on the post. Rotate the tabulator latch bar toward the front of the typing unit and insert the latch bar in the second slot from the lower end in the send-receive-mechanism plate, so that the front projection is toward the right, pointing downward.

In this position, the lobe on the rear extension of the tabulator function lever should be in the same plane as that portion of the tabulator latch bar just to the left of the "U" form.

Hook one end of the 7965 tabulator latch bar spring in the spring eye of the latch bar and hook the other end over the spring post in the rear of the send-receive-mechanism plate. Install the tabulator function lever spring 74705.

With the tabulator spacing pawl link engaged by the spacing escapement pawl post and the tabulator latch bar bearing extending outward from the typing unit, replace the function lever comb, inserting only the upper mounting screw with its lock washer. Make sure that the function levers and push bars are in their respective slots in the function lever comb before tightening the mounting screws. Mount the tabulator latch bar bearing on the outer side of the lower part of the function lever comb, using the two 74986 screws provided, and the lock washers previously removed. Make sure that the tabulator latch bar assembly is free in its slots before tightening the mounting screws.

Set the typing unit in its normal position and remove the mounting screw from the selector vane pivot clamp, second from the top, on the left end of the vane frame and replace it with the 86761 hexagonal spring post. Before installing the 87325 tabulator bar assembly on the front of the typing unit, loosen the tabulator bar pivot screw lock nuts. Hold the tabulator bar assembly in an upright position and lower the assembly into its bearings in the send-receive-mechanism plate, making sure that the tabulator latch bar enters the opening in the tabulator latch. Adjust the tabulator bar pivot screw so that there is approximately an equal number of threads protruding from each tabulator bar pivot arm. Then tighten the lock nuts on the pivot screws. Maise the platen to the figures position and replace the type bar carriage. Hook one end of the 74707 spring in the hole in the left end of the tabulator bar and engage the other end in the spring post on the vane frame. When the escapement pawl operating arm on the printer is made of .065" thick material (74144) remove and replace it with the 89097 operating arm (.095" thick). If the printer is already equipped with a 89097 arm, disregard the operating arm included with this set of parts.

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Before adjusting the tabulator mechanism, the following parts of the typing unit should be checked and, if necessary, adjusted to meet the requirements specified in Adjustment Bulletin "Type Bar Page Printer" (Model 15).

- (a) Send-Receive Mechanism Plate Adjustment.
- (b) Send-Receive Reset Lever Upper Adjusting Screw Adjustment.
- (c) Reset Lever Lower Adjusting Screw Adjustment.
- (d) Right and Left Motor Stop Contact Adjustments, if the typing unit is equipped with motor stop mechanism.
- (e) Signal Bell and Carriage Return Latch Bar Latch Adjustments.
- (f) Spacing Escapement Pawl Operating Arm Adjustment.

For Tabulator Mechanism Adjustments, see Adjustment Bulletin "Type Bar Page Printer" (Model 15).

NOTE: If a keyboard is to be used in the base, remove the standard keytop from the key lever that is used for tabulator operation, and replace it with a tabulator keytop of a corresponding character and style as furnished.

*Indicates change



FIGURE I