

INSTRUCTIONS FOR INSTALLING THE 162381 MODIFICATION
KIT TO PROVIDE AUTOMATIC NON-INTERFERING "BLANK"
TAPE FEED-OUT FOR MODEL 28 TYPING AND NON-TYPING
REPERFORATORS

1. GENERAL

a. The function of the 162381 noninterfering tape feed-out mechanism, when installed on Model 28 typing or nontyping reperforator, is to automatically feed out a suitable length of BLANK tape at the end of each message following a fixed period of idle signal line. Reperforator units so equipped may be mounted on any existing base other than the keyboard of the Automatic Send-Receive Set (ASR) or the Reperforator Transmitter Set (RT).

b. After feeding out a predetermined, but adjustable (.6" to 18") length of "BLANK" tape, the feed-out mechanism stops, recycles and remains inoperative until a subsequent message has been completed. Should a message be received during any part of the tape feed-out cycle, the mechanism stops and does not interfere with or cause loss of any portion of the incoming messages.

c. The 162381 kit consists of:

10	2191	Lockwasher	1	151658	Screw
1	2539	Nut	1	151659	Screw
2	3640	Lockwasher	2	151632	Screw
1	4812	Wick	1	151694	Screw
3	7002	Washer, Flat	3	153839	Screw
3	8330	Washer, Flat	1	156132	Bearing, Eccentric
2	45963	Spring	1	156136	Bracket
1	73175	Lockwasher	1	156137	Washer, Flat
1	76422	Spring	1	156740	Screw
1	86079	Washer, Felt	1	159565	Bracket
1	86873	Spring	1	160842	Washer, Spring
1	101796	Washer, Felt	1	162740	Feed-Out Frame Assembly
2	110743	Lockwasher	1	162741	Cam
1	112630	Spring	1	162742	Pawl, Detent
4	119649	Ring, Retaining	1	162743	Pawl, Feed
1	119656	Ring, Retaining	1	162744	Shaft
2	125011	Washer, Flat	1	162747	Roller
2	151152	Screw	1	162748	Lever w/Hub
3	151629	Nut, Special	1	162755	Bracket, Spring
2	151630	Screw	1	162756	Bushing

1	162761	Post	1	164886	Link
1	162762	Slide Storage Assembly	1	172639	Spring, Torsion
1	162764	Lever, Slide Trip	1	176286	Lever, Adjusting
1	162765	Bracket	1	179573	Nut
2	163327	Ring, Retaining	1	193639	Lever w/Shaft
1	164883	Lever	1	194168	Lever w/Shaft, Cam
1	164884	Lever w/Stud			Follower

d. For parts referred to in this specification and for parts ordering information refer to Teletype Parts Bulletin 1167B (Typing Reperforator) as 1172B (non-typing reperforator). The 162757 shaft and 163326 lever shown in the bulletins are replaced by the 193639 lever w/shaft plus a 163327 retaining ring.

2. INSTALLATION

a. General

(1) On units that are equipped with an old style 156028 punch front plate (not having two .114 x .188 elongated holes located on the right side of the plate just above the center), replace the old punch front plate with a new 156028 punch front plate.

NOTE

The new 156028 punch front plate is not furnished with these kits and must be ordered separately.

(2) On units equipped with an old style 156941 selector cam, it is necessary to replace it with a new 156941 selector cam (the new cam has a .148 wide stripper cam).

NOTE

The 156941 selector cam is not furnished with these kits and must be ordered separately.

(3) On units equipped with the 156059 punch slide reset bail, it is necessary to replace it with a 162763 punch slide reset bail (the 162763 punch slide reset bail has a spring hole in the rear leg and the reset blade extends .281 from the front leg toward the front).

NOTE

The 162763 punch slide reset bail is not furnished with these kits and must be ordered separately.

b. Installation Instructions

(1) Replace the 151416 hexagon nut that fastens the 156094 front toggle link to the 156060 eccentric shaft with the 179573 hexagon nut. The groove in the 151416 nut should be positioned toward the inside of the unit.

(2) Mount the 162762 slide storage assembly to the 156028 punch front plate with two 152893 screws, 3640 lockwashers and 125011 flat washers. The 162772 link (part of the 162762 slide storage assembly) must engage the 179573 nut.

(3) Remove and retain the selector mechanism in accordance with standard practice.

(4) Replace the 152403 selector lever guide bracket with the 162765 selector lever guide bracket, replacing all the screws, lockwashers, levers and springs.

(5) Remove and retain the 156248 punch slide latches and associated springs. Replace the 159430 reset bail trip lever with the 162764 reset bail trip lever. Replace the 156248 punch slide latches and associated springs. Add the 76422 spring with a 4812 wick between the reset bail and the new reset bail trip lever.

(6) Main Shaft Removal

(a) Remove and retain the function clutch drum mounting screw and lockwasher.

(b) Remove and discard the 151632 screw, retaining the 2191 lockwasher used to mount the 173340 collar.

(c) Loosen the 3598 nut and 156987 screw securing the 159411 lower cam follower roller.

(d) Remove and retain the 156467 retaining ring, two 151246 washers, and the 156465 spring washer, two 152893 screws, two 3640 lockwashers, and the 156403 bearing clamp disc from the selector end of the mainshaft.

(e) Remove and retain the 158745 bearing clamp and its mounting hardware from the opposite end of the shaft.

(f) Pull the main shaft out from the rear of the unit. The function cam and clutch assembly and the collar will drop.

NOTE

If the unit being modified has needle bearings, the needle bearings, the needles (40) must drop out before the function clutch drum cam slide over. Retain all parts except the collar.

(7) Mount the 162755 spring bracket on the top of the 159625 rocker bail guide bracket using the existing screws, lockwashers and discarding the two 7002 flat washers. Note: The spring bracket extension should be positioned toward the right.

(8) Replace the main shaft as follows:

NOTE

Relubricate in accordance with standard practice.

(a) Add the 119656 retaining ring to the main shaft in the groove in front of the rear ball bearing.

(b) Add a 160842 spring washer to the main shaft next to the 119656 retaining ring.

(c) Start the selector end of the main shaft through the rear bearing hole in the frame. Over the shaft, add the 156132 eccentric bearing (prongs toward selector), a 162743 feed pawl (teeth down and toward the right), 156137 flat washer, 162742 detent pawl, 162741 cam (hub toward front), and the function cam and clutch assembly.

(d) If the unit being modified is equipped with needle bearings for the function cam and clutch assembly, push the function cam and clutch assembly toward the front and the 162741 cam and associated parts toward the rear. Position the main shaft so that the front groove for needle rollers is between the 162741 cam and the function cam. Add 20 greased needle rollers to the groove, then place the function cam and clutch assembly over the needle rollers to keep them in place.

(e) Mount the 162741 cam to the main shaft with a 151659 screw and a retained 2191 lockwasher.

NOTE

Before fastening the 162741 cam, make sure that the feed pawl, washer, and detent pawl are all on their respective eccentric shoulders. Rotate the main shaft until the feed pawl is in the extreme right position, then position the 162741 cam so that its dip is facing down.

(f) If the unit being modified is equipped with a function cam and clutch assembly with needle bearings, position the main shaft so that the rear groove for the needle roller is between the 162741 cam and the function cam and clutch assembly. Add 20 greased needle rollers to the groove. Move the function cam and clutch assembly over the needle rollers to keep them in place.

(g) Mount the 150000 clutch drum to the main shaft with its mounting screw and lockwasher, retained in Paragraph 2.b.(6)(a).

(h) Replace the 156467 retaining ring, two 151246 flat washers, the 156465 spring washer, two 152893 screws, two 3640 lockwashers, and the 156403 bearing clamp disk removed and retained in Paragraph 2.b.(6)(d).

(i) Replace the 158745 bearing clamp with its mounting screw and lockwasher removed and retained in Paragraph 2.b.(6)(e).

(9) Remount the selector mechanism, removed in Paragraph 2.b.(3) in accordance with standard practice.

(10) Readjust the rocker bail lower roller, rocker bail guide bracket, selector and punch in accordance with standard practice.

(11) Add the following parts to the 162745 drive arm:

(a) Add the 101796 felt washer and the 162747 roller to the post with a 119649 retaining ring.

(b) Add the 162748 lever to the drive arm with a 156740 screw, 2191 lockwasher, and 8330 flat washer.

(12) Add the 156136 bracket to the frame with two 151630 screws, and 2191 lockwashers.

(13) Add the 163327 retaining ring to the end groove of the 162744 shaft and place the shaft through the hole in the 156136 bracket placing the 162745 drive arm assembly over the shaft and push the shaft butts against the 156136 bracket. Add the other 163327 retaining ring to the other side of the bracket. Mount the 162745 drive arm assembly to the shaft with a 151658 screw and a 2191 lockwasher.

(14) Add the 176286 adjusting lever to the 162744 shaft with a 153839 screw, 2191 lockwasher, 7002 flat washer, and a 151629 nut.

(15) Add the 86873 spring between the 162745 drive arm and the 162755 spring bracket.

(16) Remove and retain the 150687 selector plate hex mounting post from the selector. Mount the 162756 bushing to the trip bracket so that the threaded portion is toward the front with a 73175 lockwasher and a 2539 nut.

(17) Add a 163327 retaining ring to the 193639 lever w/shaft and mount the lever w/shaft to the unit through the 162756 bushing adding the 164883 cam follower lever and 164884 lever w/stud with their respective 153839 screws, 2191 lockwashers, 8330 flat washers and 151629 special nuts.

NOTE

The cam follower lever mounts in the selector between the push lever reset bail and the selector rear plate. The 164884 lever w/stud mounts near the front plate of the selector.

(18) Place the 172639 torsion spring over the 150687 hex post and mount so that the long end of the torsion spring is to front of unit.

(19) Add the 164886 link and 119649 retaining ring. The left end of the 164886 link mounts in the front slot of the 161109 guide post in the punch.

NOTE

The cam follower lever mounts in the selector between the push lever reset bail and the selector rear plate.

(20) Replace and discard the 151631 screw, and retain the 2191 lockwasher, used to mount the 156995 post to the rear leg of the rocker bail, with the 162761 post.

(21) Mount the 162740 feed-out frame assembly as follows:

NOTE

To simplify installation, remove the ratchets from the frame assembly by removing two retaining rings. The 162786 blocking arm should engage the 194168 drive arm. The lever on the 193639 lever w/shaft fits into the rectangular opening of the 162760 latch lever.

(a) If the unit being modified is equipped with timing contacts, remove and discard the 151632 screw, 2191 lockwasher, 7002 flat washer, and the 2481 spacer used to mount the 159565 bracket to the right side of the frame.

(b) Mount the feed-out frame assembly to the frame by its lower mounting hole with a 151632 screw, a 2191 lockwasher and a 7002 flat washer.

(c) Mount the free end of the 162804 drive link (part of the 162740 feed-out frame assembly) to the 162761 post with a 119649 retaining ring, a 86079 felt washer, and a 119649 retaining ring.

(d) On units equipped with timing contacts, proceed as follows:

1. If the furnished 159565 bracket is similar to the one on the unit, discard the furnished bracket, a 151694 screw and a 2191 lockwasher (furnished in kits).

2. If the furnished 159565 bracket is not similar to the bracket on the unit, replace it with the furnished bracket, retaining the associated parts and discard the old bracket, a 151694 screw and a 2191 lockwasher (furnished in kits).

(e) On units that are not equipped with timing contacts, proceed as follows:

1. Remove and retain the 153839 screw and 2191 lockwasher, (if the unit is equipped with a connector bracket, discard the 2481 spacer), used to mount the 162862 bar to the frame.

2. Mount the 159565 bracket to the unit with a 151694 screw and a 2191 lockwasher and replace the 153839 screw and 2191 lockwasher removed in Paragraph 2.b.(20(d)1).

(f) Mount the feed-out frame assembly with its upper mounting hole and the 159565 bracket with its formed over leg with a 151632 screw, 2191 lockwasher and 7002 flat washer.

(22) Add the 4563 springs between the 159565 bracket and the 162743 feed pawl and 162742 detent pawl.

NOTE

Replace retaining rings and ratchets, if removed per note in Paragraph 2.b.(21).

3. ADJUSTMENTS AND LUBRICATION

a. Bell System refer to standardized information for adjustments and lubrication. The adjustments and lubrication procedure for kit 162381 is the same as for the Automatic Non-Interfering "Letters" Tape Feed-Out Mechanism Kits.

b. All other customers refer to Teletype Model 28 Bulletin 247B for Typing Reperforator or 256B for the Non-Typing Reperforator.

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