28 PERFORATOR-TRANSMITTER-BASE
REQUIREMENTS AND ADJUSTMENTS

1. GENERAL

1.001 This addendum supplements Section P34.660, Issue 2.
1.002 This addendum is issued to revise requirements on the
manual and power-drive backspace mechanisms, to add
requirements for auxiliary contacts, letters and figures contacts,
and transmitting code-reading contacts, and to add reference to
another associated Bell System Practice.

2. REQUIREMENTS AND ADJUSTMENTS

The following changes apply to Part 2 of the section:

(a) 2.17.1, 2.17.2, 2.17.3—added
(b) 2.64—revised
(c) 2.64.1—added
(d) 2.65, 2.66, and 2.68—revised
2.17.1 Auxiliary Contacts

**Requirements**

1. **Auxiliary Contacts**
   - **Requirement**
     - Cam follower on high part of cam
     - Min.: 3-1/2 ozs.
     - Max.: 4-1/2 ozs.
     - To separate the contacts.
     - To adjust bend upper contact spring.

2. **Requirement**
   - Cam follower off its cam.
   - Clearance between contact points
   - Min.: 0.015 inch
   - Max.: 0.020 inch
   - To adjust position set screw with lock nut loosened.

3. **Requirement**
   - Clutch disengaged, clearance between cam follower and cam
   - Min.: some
   - Max.: 0.005
   - To adjust position mounting bracket with its mounting screws loosened. This adjustment is to be refined when strobing is done.

**Note**

There should be at least 0.010 clearance between the contact guard and the transfer rail; and there should be at least 0.015 inch clearance between the lower extension of the cam follower arm and the inside surface of the clutch disk. If necessary, loosen the two contact assembly mounting screws and position the contact assembly and the cam follower hinge.
2.17.2 Letters and Figures Contacts

RIGHT HAND CONTACT

REQUIRED
CLUTCH DISENGAGED AND LATCHED, ANY KEYLEVER OTHER THAN LETTERS OR FIGURES DEPRESSED. RIGHT CONTACT GAP
MIN. 0.013 INCH
MAX. 0.018 INCH
CHECK BOTH LETTERS OR FIGURES CONTACTS.
TO ADJUST
POSITION CONTACT ASSEMBLY WITH ITS BRACKET MOUNTING SCREWS LOOSENED.

LEFT CONTACT SPRING

REQUIRED
CLUTCH DISENGAGED AND LATCHED. THEN ANY KEYLEVER OTHER THAN LETTERS OR FIGURES DEPRESSED.
MIN. 4-1/2 OZS.
MAX. 5-1/2 OZS.
TO ADJUST
BEND LEFT CONTACT SPRING. CHECK BOTH CONTACT ASSEMBLIES.

LEFT SIDE CONTACT POINTS

LETTERS-FIGURES CONTACT SPRING

CONTACT STIFFENER

REQUIRED
CLUTCH DISENGAGED AND LATCHED, THEN LETTERS OR FIGURES KEYLEVER DEPRESSED. LEFT HAND CONTACT GAP
MIN. 0.020 INCH
MAX. 0.025 INCH
TO ADJUST
BEND CONTACT STIFFENER. CHECK BOTH CONTACT ASSEMBLIES.
2.17.3 **Code-reading Contacts (Transmitting)**

- **Requirement 1:** Clutch disengaged and latched, clearance between left side contact points
  - Min. 0.030 inch
  - Max. 0.035 inch

- **Requirement 2:** Clearance between the lower surface of bellcrank and the code bar
  - Min. 0.040 inch
  - Max. 0.070 inch

- **Requirement 3:** Lower surface of bellcrank should be parallel to the code bar.
  - To adjust position the mounting bracket with its mounting nuts loosened.

2.64 **Single-magnet Nontyping Reperforator:** Where a nontyping reperforator of this design is part of a 28 perforator-transmitter-base, the adjustment requirements specified for the reperforator in the section entitled 28 Nontyping Reperforator and Base, Requirements and Adjustments should be applied.

2.64.1 **Multimagnet Nontyping Reperforator:** Where a nontyping reperforator of this design is part of a 28 perforator-transmitter-base, the adjustment requirements specified in the section entitled 28 Multimagnet Nontyping Reperforator, Requirements and Adjustments should be applied.

2.65 **Typing Reperforator:** Where a typing reperforator is part of a 28 perforator-transmitter-base, the adjustment requirements specified in the section entitled 28 Typing Reperforator, Requirements and Adjustments should be applied.
E. Variable Features

2.66 Backspace Mechanism (Manual and Power Drive)

(1) Requirement
With rotational play in rake taken up to left, bottom surface of rake teeth should be in same vertical plane as left side of punch block or slightly to the right.

To adjust:
Remove two mounting screws from rear plate.
Position rake shaft gear in relation to gear segment, replace mounting screws.

(2) Requirement
With bellcrank spring unhooked and rake in operated position, clearance between bottom of rake teeth and lower surface of tape slot:
Min. 0.007 inch
Max. 0.011 inch (check at No. 1 & 3 pins.)

To adjust:
Loosen three mounting screws and eccentric mounting screw until friction tight.
Position front and rear plates, with bell crank handle fully depressed, until left edges of both plates are approximately in line with vertical plane of punch block and clearance meets the requirement. Tighten mounting screws and replace bell crank spring.

Feed pawl adjusting plate requirement:

(1) Preliminary: With bell crank rotated clockwise, feed pawl shall miss first tooth at point of least clearance by:
Min. 0.006 inch - Max. 0.010 inch

(2) Final: Feed pawl shall miss first tooth and engage second tooth by at least 1/2 of right engaging surface of feed pawl (as gauged by eye when feed pawl first contacts ratchet tooth).

To adjust:
Position adjusting plate with mounting screw friction tight.
2.68 Backspace Mechanism (Power Drive)

(A) Armature Hinge Requirement
Armature Ball Spring removed, with armature held against pole face and play taken up at hinge in downward direction. Clearance between armature and magnet bracket min. .005 -- max. .008 inch.
To adjust with hinge mounting screws loosened, position armature. While adjustment is being made armature should touch front and rear of pole face.

*NOTE:
This adjustment is made at factory and should not be disturbed unless a reassembly of the unit is undertaken. If necessary to make this adjustment, the punch unit should be removed. See disassembly and reassembly. Remake punch unit position adjustment.

3. ASSOCIATED BELL SYSTEM PRACTICES
The following change applies to Part 3 of this section:
(a) 3.01—revised
3.01 (Add the following Bell System Practice.)

Subject
28 Multimagnet Nontyping Reperforator, Requirements and Adjustments

Section
P34.662