

BELL SYSTEM PRACTICES
Teletypewriter and Data Stations

SECTION P34.005
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AT&TCo Standard

SELECTOR MECHANISM
28 TELETYPEWRITER
REQUIREMENTS AND PROCEDURES

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1. GENERAL

1.01 This section covers the requirements and adjusting procedures for the selector mechanism used in the 28 teletypewriter. The general teletypewriter requirements are given in Section P30.012.

Caution: The electric power should be disconnected before the apparatus is removed from its protective housing. Where operation of the apparatus, after its removal from the housing, is required, power should be applied with appropriate precautionary measures taken to prevent accidents.

1.02 This section is reissued to:

- (a) Incorporate the addendum. (2.11)
- (b) Provide revised drawings of the selector magnet (2.02 and 2.03), and the selector mechanism. (2.04)
- (c) Add a drawing of the range-finder mechanism with the front-nut knob. (2.08)
- (d) Add a drawing of a selector-clutch mechanism without the adjustable guide. (2.10)

1.03 Changes are indicated by marginal arrows.

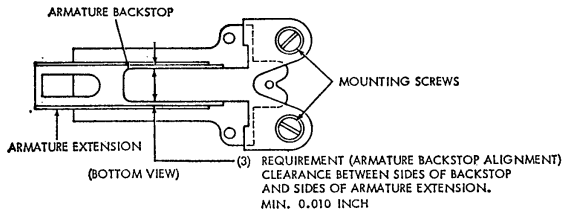
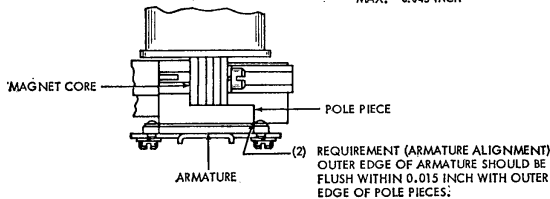
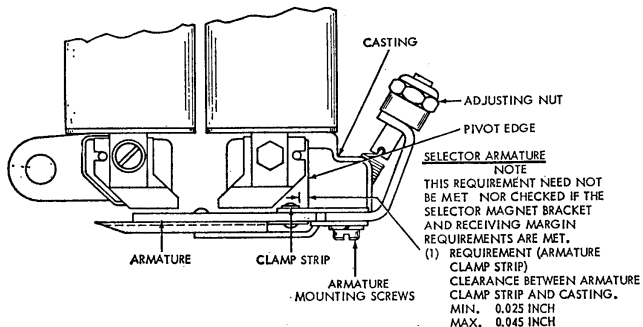
2. REQUIREMENTS AND ADJUSTING PROCEDURES

2.01 The following figures show the adjusting tolerances, positions of moving parts, and spring tensions. Where a figure shows interrelated parts, the sequence that should be followed in checking the requirements and making the adjustments shown on that figure is indicated by the letters (A), (B), (C), etc. Common requirements and adjustments of clutches are shown in Section P34.612.

2.02 Selector Magnet

NOTE

TO FACILITATE MAKING THE FOLLOWING ADJUSTMENTS, REMOVE THE RANGE FINDER AND SELECTOR MAGNET ASSEMBLIES. TO INSURE BETTER OPERATION, PULL A PIECE OF PAPER BETWEEN THE ARMATURE AND THE POLE PIECES TO REMOVE ANY OIL OR FOREIGN MATTER THAT MAY BE PRESENT. MAKE CERTAIN THAT NO LINT OR PIECES OF PAPER REMAIN BETWEEN THE POLE PIECES AND ARMATURE. BEFORE REMOUNTING THE RANGE FINDER, CHECK AND ADJUST THE RANGE FINDER KNOB PHASING.

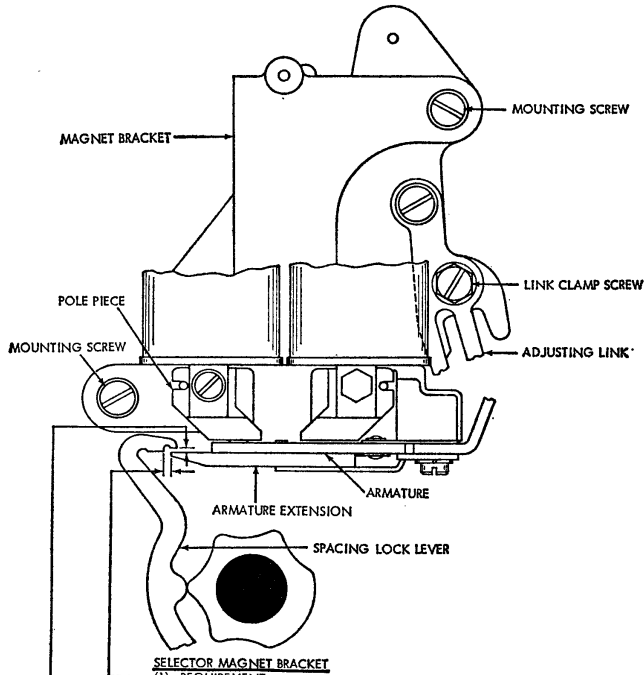


TO ADJUST

1. POSITION ARMATURE SPRING ADJUSTING NUT TO HOLD ARMATURE FIRMLY AGAINST PIVOT EDGE OF CASTING.
2. POSITION ARMATURE AND BACKSTOP WITH MOUNTING SCREWS LOOSENED.

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2.03 Selector Magnet



SELECTOR MAGNET BRACKET

(1) REQUIREMENT

SPACING LOCK LEVER ON EACH HIGH PART OF CAM. ARMATURE IN CONTACT WITH POLE PIECE. CLEARANCE BETWEEN END OF ARMATURE EXTENSION AND SHOULDER ON SPACING LOCK LEVER.
MIN. 0.020 INCH
MAX. 0.035 INCH

TO ADJUST

LOOSEN TWO MAGNET BRACKET MOUNTING SCREWS AND ADJUSTING LINK CLAMP SCREW. POSITION MAGNET BRACKET BY MEANS OF ADJUSTING LINK AND TIGHTEN LINK CLAMP SCREW ONLY.

(2) REQUIREMENT

SPACING LOCK LEVER ON EACH HIGH PART OF CAM. ARMATURE IN CONTACT WITH POLE PIECE. SOME CLEARANCE BETWEEN UPPER SURFACE OF ARMATURE EXTENSION AND LOWER SURFACE OF SPACING LOCK LEVER WHEN LOCK LEVER IS HELD DOWNWARD.
MAX. 0.003 INCH

TO ADJUST

POSITION UPPER END OF MAGNET BRACKET. TIGHTEN TWO MAGNET BRACKET MOUNTING SCREWS. RECHECK REQUIREMENT (1).

2.04 Selector Mechanism

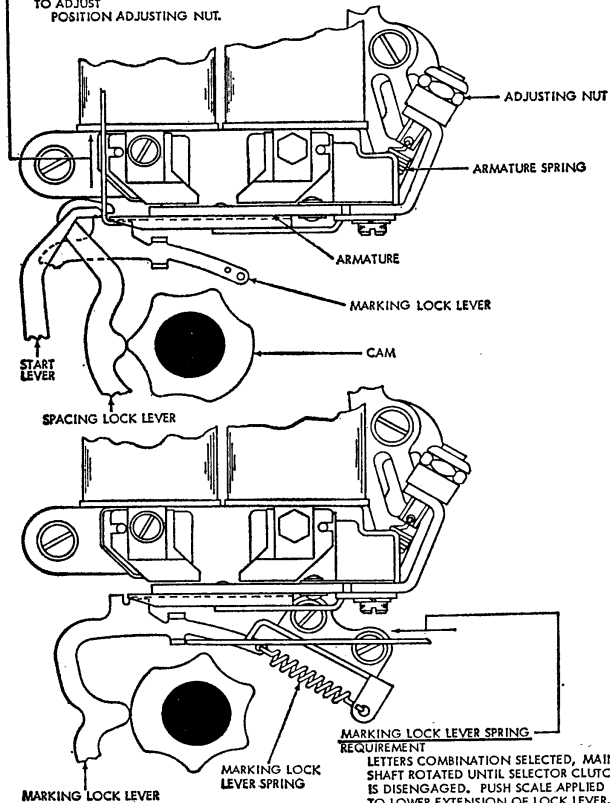
SELECTOR ARMATURE SPRING

REQUIREMENT

MARKING LOCK LEVER, SPACING LOCK LEVER, AND START LEVER ON HIGH PART OF THEIR CAMS. SCALE APPLIED AS NEARLY VERTICAL AS POSSIBLE UNDER END OF ARMATURE EXTENSION. APPROX. 3 OZS.

TO PULL ARMATURE TO MARKING POSITION. IT MAY BE NECESSARY TO READJUST THIS SPRING TENSION WHEN MAKING DISTORTION TOLERANCE TESTS OF THE UNIT.

TO ADJUST POSITION ADJUSTING NUT.



MARKING LOCK LEVER SPRING

REQUIREMENT

LETTERS COMBINATION SELECTED, MAIN SHAFT ROTATED UNTIL SELECTOR CLUTCH IS DISENGAGED. PUSH SCALE APPLIED TO LOWER EXTENSION OF LOCK LEVER.

MIN. 1-1/2 OZS.

MAX. 3 OZS.

TO START LEVER MOVING.

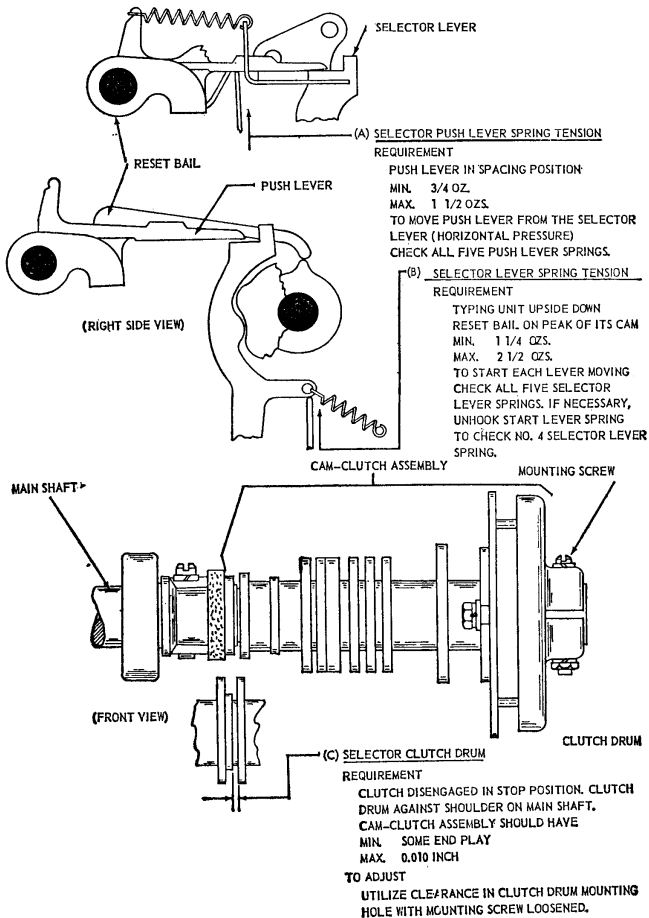
SELECTOR MECHANISM

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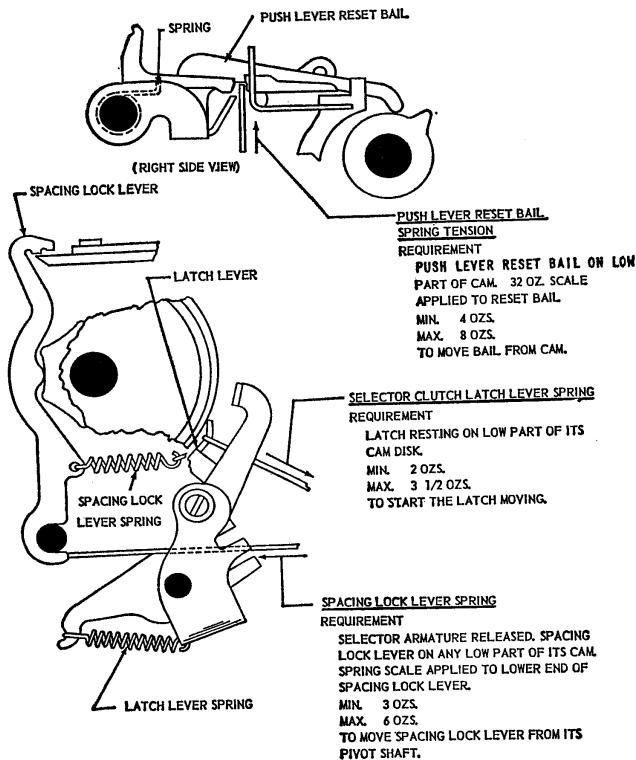
TYPEWRITER

REQUIRE-

2.05 Selector Cam Clutch



2.06 Selector-Clutch Mechanism



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2.07 Range-finder Mechanism (Rear-nut Knob)



(A) RANGE FINDER KNOB PHASING

REQUIREMENT

WITH RANGE FINDER KNOB TURNED TO EITHER END OF RACK, ZERO MARK ON SCALE SHOULD BE IN LINE WITH SCRIBED LINE ON RANGE FINDER PLATE ± 3 POINTS.

TO PHASE

REMOVE PLATE AND POSITION KNOB WITH MOUNTING NUT LOOSENED

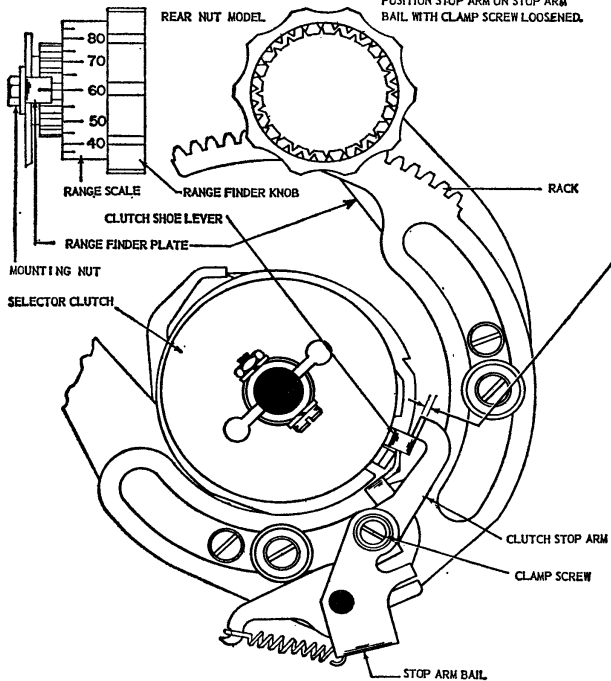
(B) SELECTOR CLUTCH STOP ARM

REQUIREMENT

RANGE SCALE SET AT 60. SELECTOR CLUTCH DISENGAGED. ARMATURE IN MARKING POSITION. CLUTCH STOP ARM SHOULD ENGAGE CLUTCH SHOE LEVER BY APPROXIMATELY FULL THICKNESS OF SHOE LEVER.

TO ADJUST

POSITION STOP ARM ON STOP ARM BAIL WITH CLAMP SCREW LOOSENED.



2.08 Range-finder Mechanism (Front-nut Knob)

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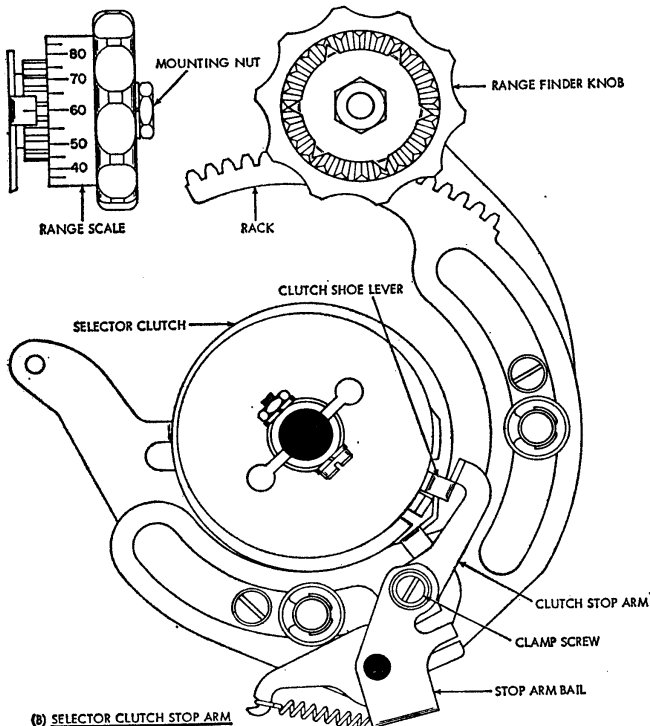
(A) RANGE FINDER KNOB PHASING

REQUIREMENT

WITH RANGE FINDER KNOB TURNED TO EITHER END OF RACK, ZERO MARK ON SCALE SHOULD BE WITHIN 3 POINTS OF SCRIBED LINE ON RANGE FINDER PLATE.

TO ADJUST

REMOVE MOUNTING NUT, DISENGAGE KNOB FROM RACK AND POSITION KNOB. RE-ENGAGE KNOB WITH RACK AND REPLACE MOUNTING NUT.



(B) SELECTOR CLUTCH STOP ARM

REQUIREMENT

RANGE SCALE SET AT 60. SELECTOR CLUTCH DISENGAGED. ARMATURE IN MARKING POSITION. CLUTCH STOP ARM SHOULD ENGAGE CLUTCH SHOE LEVER BY APPROXIMATELY FULL THICKNESS OF SHOE LEVER.

TO ADJUST

POSITION STOP ARM ON STOP ARM BAIL WITH CLAMP SCREW LOOSENED.

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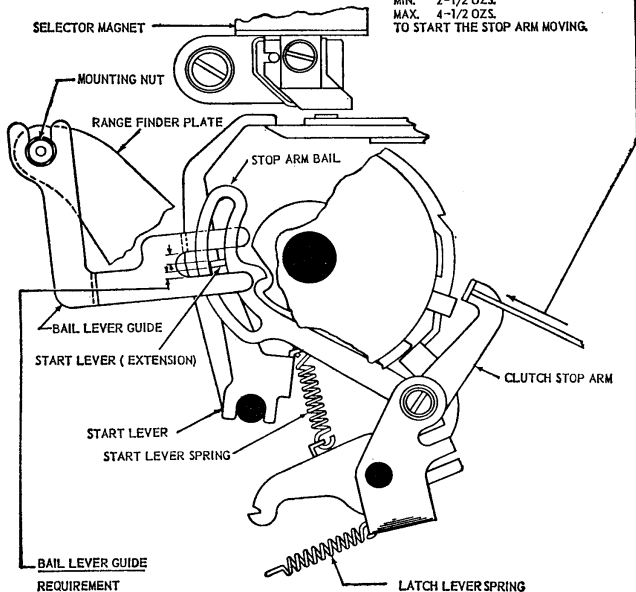
2.09 Selector-clutch Mechanism (with adjustable guide) ←

NOTE: BAIL LEVER GUIDE ADJUSTMENT
APPLIES ONLY TO UNITS
EQUIPPED WITH ADJUSTABLE GUIDES.

START LEVER SPRING

REQUIREMENT

LATCH LEVER SPRING UNHOOKED, STOP
ARM BAIL, IN INDENT OF ITS CAM,
RANGE SCALE SET AT 60.
MIN. 2-1/2 OZS.
MAX. 4-1/2 OZS.
TO START THE STOP ARM MOVING.



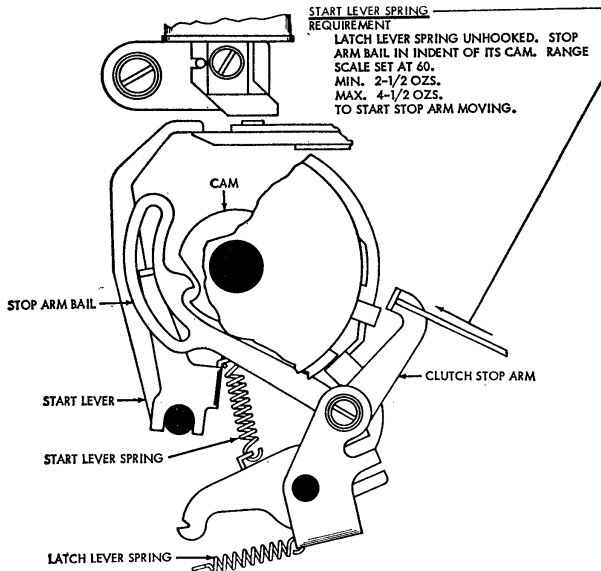
REQUIREMENT

SOME CLEARANCE BETWEEN
EACH SIDE OF GUIDE FORK
AND EXTENSION OF START
LEVER THROUGHOUT ITS
TRAVEL.

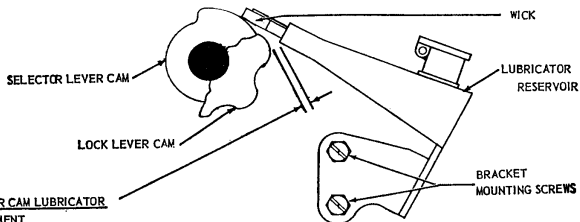
TO ADJUST

POSITION BAIL LEVER GUIDE
WITH MOUNTING NUT LOOSENED.

2.10 Selector-clutch Mechanism (without adjustable guide) ↗



2.11 Selector Cam Lubricator



SELECTOR CAM LUBRICATOR REQUIREMENT

THE LUBRICATOR TUBE SHOULD CLEAR THE HIGH PART OF THE LOCK LEVER CAM BY AT LEAST 0.020 INCH
 THE HIGH PART OF THE SELECTOR LEVER CAMS SHOULD TOUCH THE LUBRICATOR WICK, BUT SHOULD NOT RAISE IT MORE THAN 1/32 INCH.

TO ADJUST

POSITION THE LUBRICATOR BRACKET WITH ITS MOUNTING SCREWS LOOSENED.

NOTE: THERE SHOULD BE SOME CLEARANCE BETWEEN THE MARKING LOCK LEVER SPRING (SEE 2.04) AND THE LUBRICATOR RESERVOIR.

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