

INSTRUCTIONS
FOR THE
ADJUSTMENT OF THE
BLUE STREAK COMET

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These instruction sheets describe the adjustments necessary to obtain proper operation of the Comet, particularly at high speed when operated by the Teletypesetter. The adjustments can also be used for a manually operated Comet at normal speeds.

It should be noted that the operation of a slug casting machine on Teletypesetter composition is more exacting than when the machine is manually operated. An operator will subconsciously make allowances for minor misadjustments and will automatically adjust himself to the pace and feel of the machine. The Teletypesetter operating unit, however, is a purely automatic device which means that machine adjustments must be made and maintained exactly as recommended by the manufacturer.

Machine adjustments which are the same on the Comet as on other model Linotypes, and which are considered normal adjustments have been omitted from these instructions.

The adjustments given are for the Blue Streak Comet proper and do not pertain to the Electric Quadder and Teletypesetter Safety circuit. For information on these units, consult Service Instructions Nos. 8 and 11.

ADJUSTMENTS

1. Leveling of Machine

For proper operation of the Comet at high speeds, it is essential that the machine be level or even slightly higher (approx. 1/4") on the magazine side. A slight lean to the left will keep the lower end of the matrix against the distributor screw.

2. Assembler Front

The space and drop at the assembler front should be examined to assure the free fall of matrices. The settings for this particular condition are given by Fig. 1. It is obvious that on high speed operation any impediment in travel or any departure from the correct settings for space and drop at the front will interfere with matrix circulation.

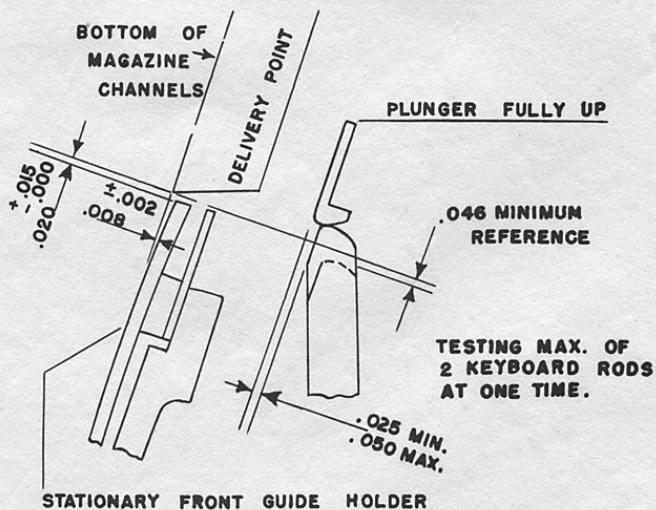


FIG. 1

3. Keyboard

Make certain that there is sufficient keyboard cam overthrow spring action. This is easily checked by observing the action of the overthrow springs as noted in Fig. 2.

When the keyboard cam is at rest, there should be about .010" clearance between the keyboard plunger and the cam yoke. If the plunger binds the cam yoke when the cam is at rest, the fall of the cam will be retarded and transpositions will result.

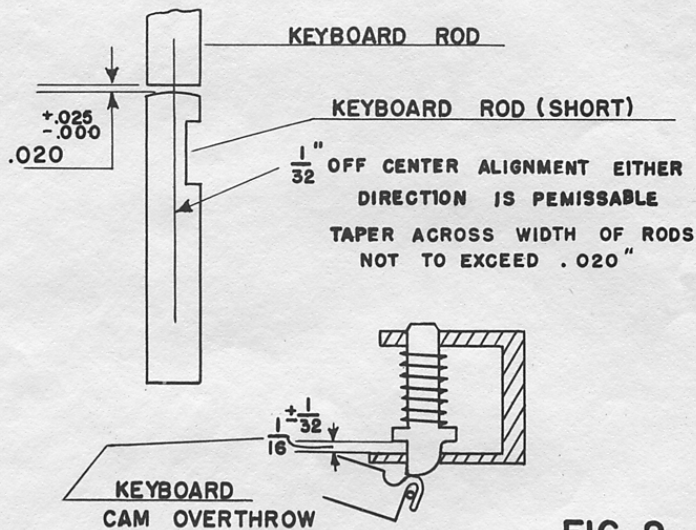


FIG. 2

4. Assembling Guides

The assembling guides are set to an exact contour at the factory. In some cases, however, it is entirely possible that the lower end may be bent accidentally in handling. The lower end of the guides should have a clearance from the belt of approximately $\frac{3}{8}$ ". Under no circumstances should any attempt be made to bend the upper ends of the guides since these are fixed to the assembler front.

The assembler front, however, can be moved as a unit or the magazine frames readjusted, if required, to obtain proper alignment of the assembling guides with the magazine channels.

5. Assembler Chute Finger

The assembler chute finger should be so adjusted that it will just clear the thickest matrix used. The assembler chute finger spring should be slightly stronger than it is usually set on other models.

6. Assembling

The entire assembler area is a critical one because most of the action occurs at this point. The following points should be checked:

- a. The star wheel tension is set normal for a speed of 8 lines per minute and is increased slightly as the speed increases to 10 or 12 lines per minute.
- b. The size of the star wheel should be checked periodically and should not be allowed to wear excessively. Its diameter must always be sufficient to deliver the matrices behind the assembling elevator pawls.
- c. Check the relation of the assembling elevator to the swinging front to assure that it is in proper alignment and that it has proper clearance as per Fig. 3. If the assembling elevator is out too far, it will interfere with the travel of the matrices. Also, if clearance is excessive, difficulties with thin matrices will be encountered.

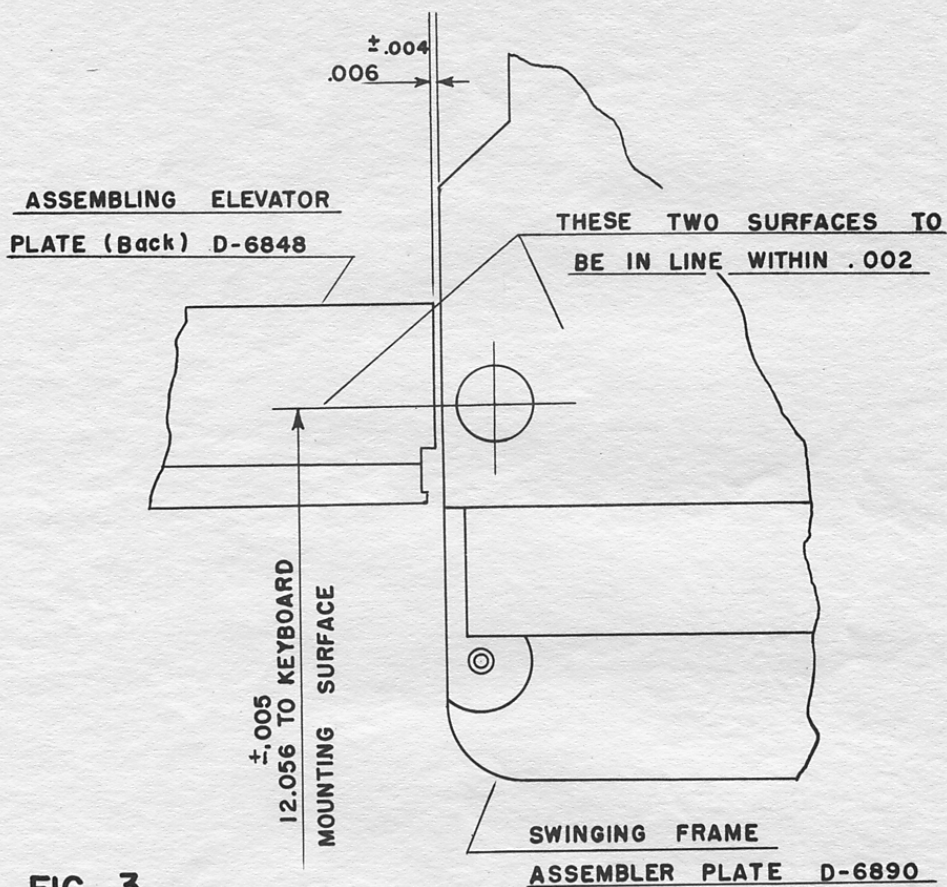


FIG. 3

- d. The lower, rear, right-hand side of the spaceband chute has a hexagon head screw projecting from it. The purpose of this screw is to cam the chute to the left, closer to the assembling elevator, when the swinging front is closed. With the front closed, there should be a maximum of $1/32$ " clearance between spaceband chute and assembling elevator. This is easily checked by raising assembling elevator to proper height. If necessary, a small lock washer may be placed under the head of the screw. Spaceband box pawl spring tension should be slightly increased for high speed operation.

- e. The space between the assembler cover and the assembling elevator gate should be set to a minimum just short of rubbing to eliminate any possibility of interference during matrix travel with the toe of the matrix.
- f. Check the assembler slide over its complete travel to assure that it is flush with or behind the assembling elevator back plate. In many cases, the assembler slide is bent by carelessly closing the swinging front, and consequently the bent slide does not permit the free fall of spacebands.
- g. Check the assembler slide spring tension. This tension should be increased slightly for high speed operation.
- h. To insure trouble-free operation, it is essential that the assembler slide brake release is tripped just before elevator rises. This will insure that the last matrix in the line is delivered behind the assembling elevator pawls.
- i. See that the assembling elevator fibre buffer is in good condition and that it provides clearance for spacebands. This buffer is a protective device and is obviously subject to wear. It should be replaced as soon as it is noticeably distorted.
- j. The assembling elevator gate matrix fender should be set so that its inner edge is flush with the assembling elevator gate surface. If it protrudes, it will interfere with matrix travel and if it is below the gate surface, matrices will not be guided properly into the assembling elevator.
- k. Check to see that the assembling elevator back pawl banks on the delivery slide releasing wire bushing; this prevents overtravel of the pawl. If the pawl overtravels, the assembling elevator back plate will interfere with assembling of matrices. The releasing wire should extend 1/8" from lower end of brass bushing. This permits the brass bushing to provide a bank for the pawl.
- l. Check the front assembling elevator gate settings, location and action; there is no difference between this and the regular machine; but it must be continuously maintained. The flat cam should be lubricated with vaseline or grease once a week.

- m. The spaceband buffer finger is set so that its left-hand end is positioned as high as possible without raising the wedge of a spaceband, close to the left-hand end of a line in the assembling elevator. If the wedges of the spacebands in the assembling elevator are held in a raised position by the buffer finger, the line will appear longer than it actually is. This condition will cause the tight line safety to function and prevents certain lines of proper length from being delivered for the cast. The desired operation is such that spacebands and matrices in the assembling elevator should lean away from the star wheel, so that top of the incoming matrix is pushed within the pawls.
- n. Check the duplex rail to make certain it does not bind spacebands. In some cases it has been found that the duplex rail protrudes into the assembling elevator sufficiently to impede spaceband travel. Check to see that the duplex rail travels its full distance to the right when the assembling elevator is raised and banks solidly against its stop to prevent matrices jumping and catching on delivery channel rails.

7. Line Delivery

It is important to note the action of the assembling elevator at the top of its stroke. If the follower on the teletypesetter elevating cam is incorrectly set, the assembling elevator can slam against its upper stop and seriously disturb the line of matrices. Conversely, if incorrectly set in the opposite direction, it may not travel sufficiently fast or high to assure solid latching. This can only be observed by actually having the teletypesetter operating unit raise the elevator at operating speed.

- a. Check to see that the safety latch which delays the return of the hook, is guided properly and drops freely. It should have sufficient "bite" on the pin to keep the assembling elevator hook from re-engaging.
- b. The assembling elevator safety stop should be checked for proper operation to prevent the assembling elevator latch or hook from re-engaging before the delivery slide returns to normal. If the banking surface is worn or chamfered in the wrong direction, it will not stop the assembling elevator.

- c. Check the delivery slide link separation feature by holding the delivery slide in the delivery position and manually pulling on the delivery lever. Proper separation should occur. If it does not, adjust the tension spring. This area must be kept lubricated to assure maintenance of the safety action, otherwise it is possible to break the delivery cam lever. In some early cases, the face-plate casting was rather full on the back, and clearance should be checked.
- d. The leather washer of the delivery air cushion cylinder should be saturated with oil and the cylinder properly adjusted, to prevent waiting lines from rebounding.

8. First Elevator

Check particularly to see that the spacing between the front and back jaws is correct, also the first elevator back jaw guard should be set to a light rub to retain the back jaw in its proper position. The vise automatic is set in standard manner, and should be set as close as possible.

9. Intermediate Channel

The intermediate channel matrix vertical aligning pieces should be set rather light and equal on both sides. If set too heavy, it is possible to bend the toes on thin matrices because of the speed. If set unevenly, the matrices may be twisted and cause difficulty in getting on the second elevator. The intermediate channel spaceband drag bar should be adjusted by means of its eccentric mounting studs, so that spacebands drag lightly starting about 2" from the left end.

10. Distributor Box

Distributor box settings are all normal but must be carefully maintained. Top rails should be smooth and polished.

11. Distributor Clutch

One of the new features of the Comet is the new type distributor clutch. Having once been adjusted in the factory, it is seldom necessary to readjust it. However, in the event the clutch fails to properly throw-off or if clutch fails to engage, it will be necessary to adjust shoe 4, Fig. 5. This shoe has an elongated slot cut into it for adjustment purposes.

11. Distributor Clutch (Cont'd)

Loosen screw 5 and position shoe 4 so that it will have sufficient "bite" on plate 6 to remain in engagement during normal operation and to disengage if the channel entrance clogs or if for any reason an interference occurs.

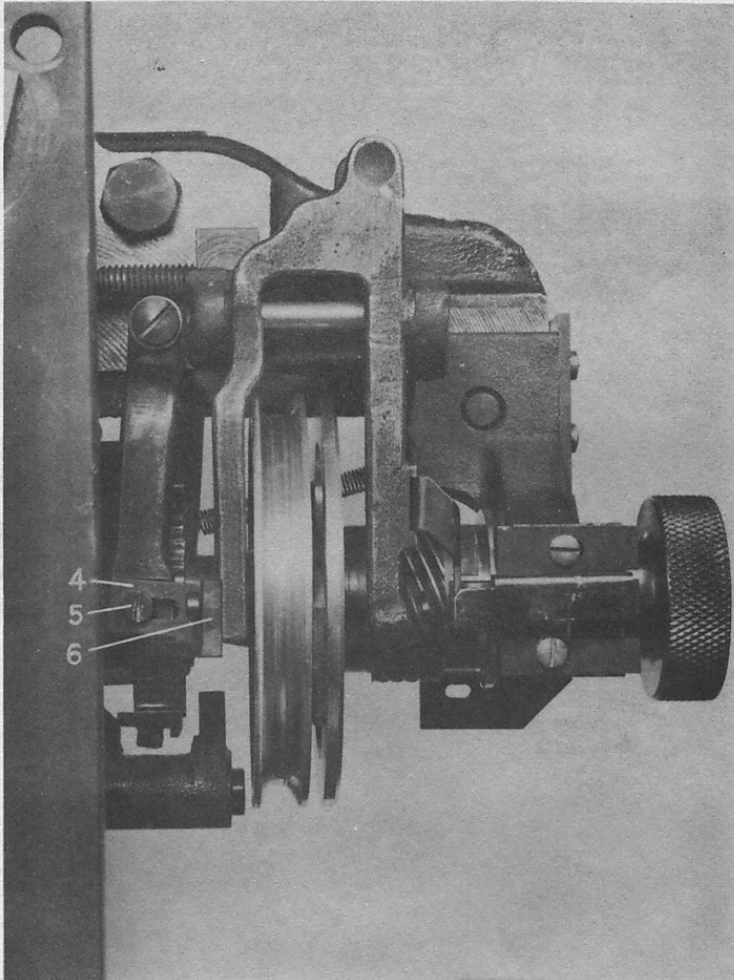


FIG. 5

12. Channel Entrance

Channel entrance and distributor clearances and settings are shown in Fig. 4.

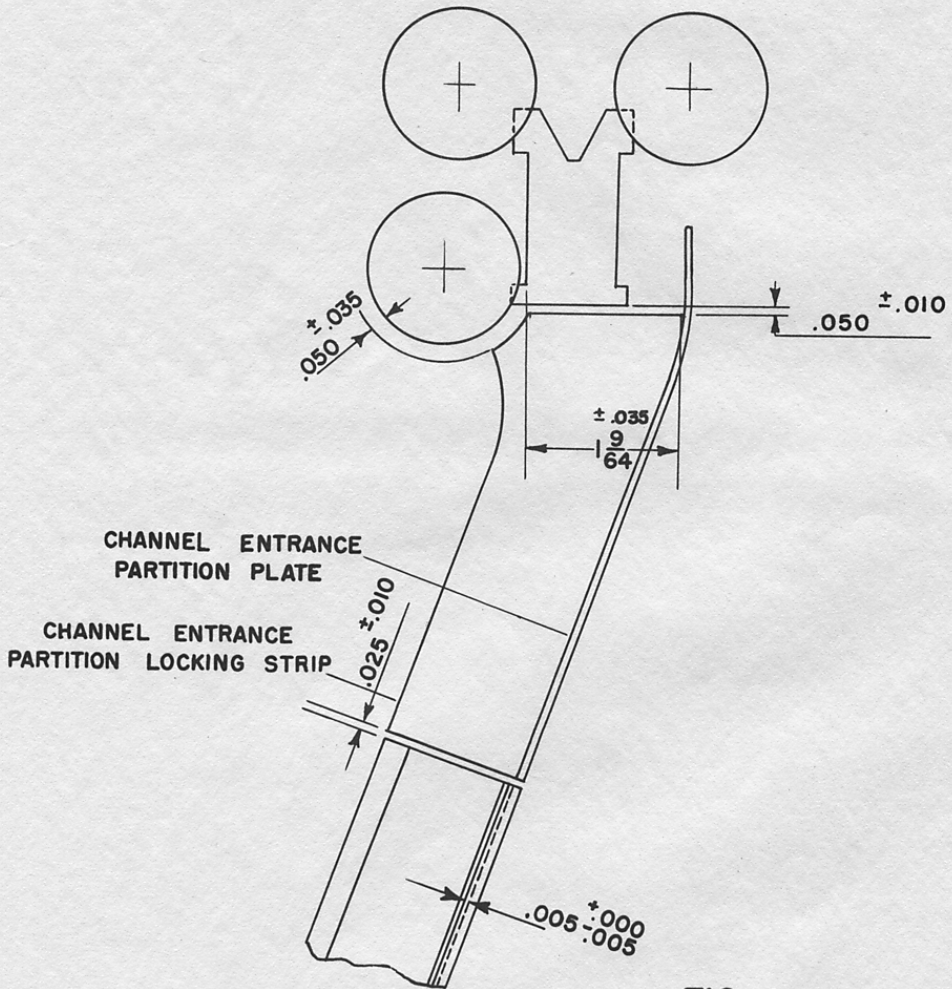


FIG. 4

13. Driving Clutch

The main driving clutch settings must be correct.

Check for 1/16" clearance between the fork lever and the flange of the driving shaft collar with the clutch engaged and motor turned off.