

5–6. Bumpers (Figure 5–4)

NOTE: Bumper adjustment should be performed in conjunction with a check and adjustment of stroke timing (5–7) and hammer phasing (5–8). Final settings may vary from values given. If previous values have been recorded, use them instead.

1. Place printer offline. To save paper, route it through printer but do not engage in tractors.
2. Press 2nd FUNC switch. Repeatedly press MODE switch until display reads 002.
3. Set ADDR and DATA switches to adjust front bumper. Repeatedly press ADDR switch to set display to 12.0. Press DATA switch once so display reads 12.1.

□ **WARNING** □

Shuttle assembly will be moving forcefully against bumpers during adjustment. Do not put fingers between shuttle and bumper. Take care to grip only edge of bumper pad while rotating bumper assembly during adjustment. Do not touch linear motor cable guides.

4. Press 2nd FUNC switch. Shuttle motion will begin without printing and the rebound rate of the front bumper will appear in the digital display.
5. Observe display:
 - (a) If it indicates 155 ± 2 , go to step 10.
 - (b) If not, go to step 6.
6. Press RDY switch to stop shuttle motion. Loosen locknut (1) by rotating counterclockwise using bumper locknut spanner (2).
7. Press 2nd FUNC switch and repeat steps 3 and 4.

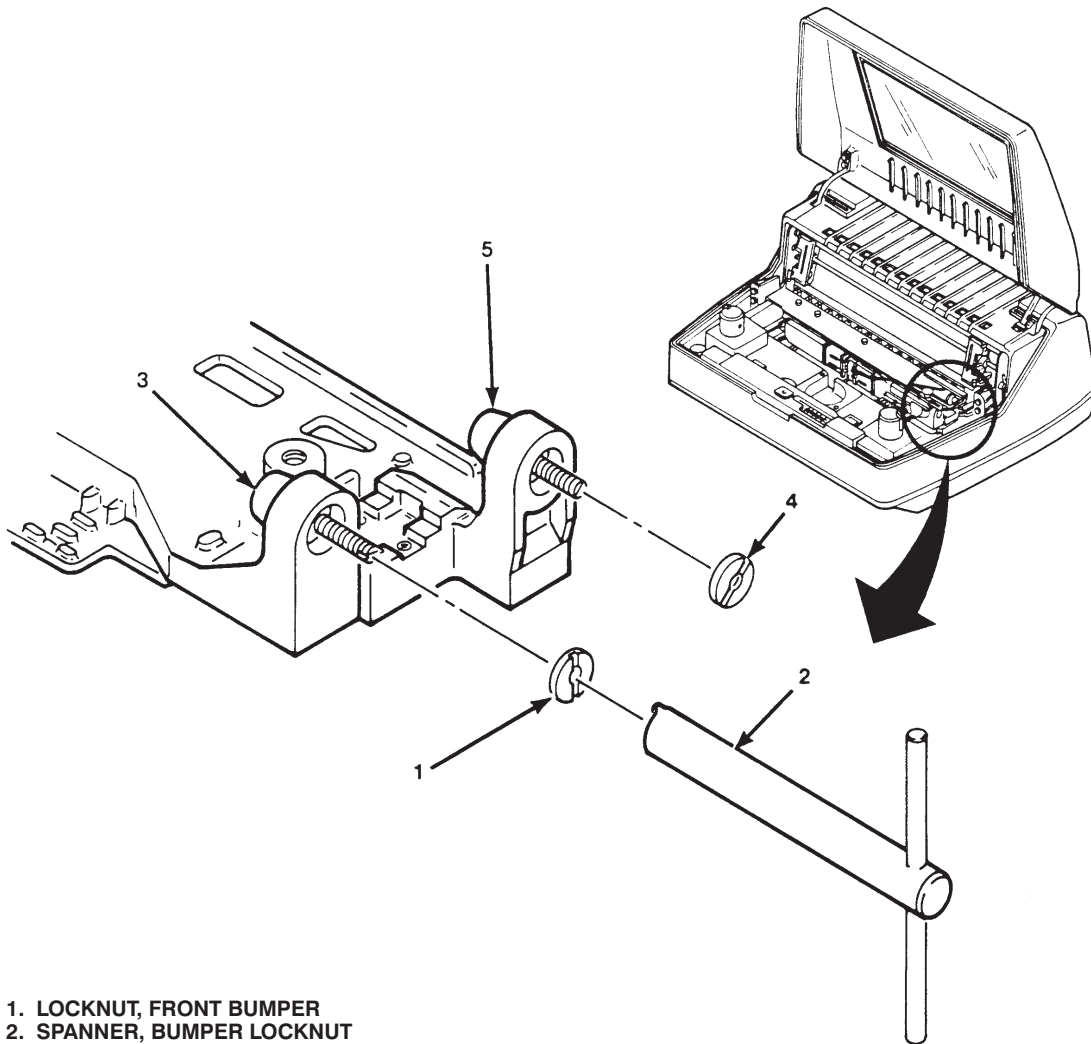
NOTE: Clockwise rotation decreases the display indication; counterclockwise rotation increases it.

8. Rotate front bumper (3) by its edge until display indicates 155 ± 2 . Hold bumper (3) firmly to prevent any further displacement and press RDY switch. Shuttle motion will stop.
9. Tighten locknut (1). Press 2nd FUNC switch and verify setting by repeating steps 3 through 5.
10. Press F/L switch; shuttle motion will restart and rebound rate of rear bumper will appear on digital display.
11. Observe digital display:
 - (a) If it indicates 255 ± 2 go to step 14.
 - (b) If not, go to step 12.

5-6. Bumpers—continued

12. Press RDY switch to stop shuttle motion. Loosen locknut (4) by rotating it counter-clockwise using bumper locknut spanner (2).
13. Press 2nd FUNC switch. Set ADDR and DATA switches to adjust rear bumper. Repeatedly press ADDR switch to set display to 12.0. Press DATA switch twice so display indicates 12.2.
14. Press 2nd FUNC switch. Shuttle motion will begin without printing and rebound rate of rear bumper will appear on digital display.

NOTE: When bumper index numbers and stroke timing are correct, write them down and store with printer.



1. LOCKNUT, FRONT BUMPER
2. SPANNER, BUMPER LOCKNUT
3. BUMPER, FRONT
4. LOCKNUT, REAR BUMPER
5. BUMPER, REAR

Figure 5–4. Bumper Adjustment

5–7. Stroke Timing

NOTE: Stroke timing should be checked and adjusted in conjunction with bumper adjustment (5–6) and hammer phasing (5–8).

1. Install paper in tractors. Press 2nd FUNC switch.
2. Select service aid 13.0 to verify stroke timing. Stroke timing is defined as half of period of shuttle movement. When display indicates 13.0, press DATA switch once. Verify that ADDR, DATA, and 2nd FUNC indicators are on.
3. Press 2nd FUNC switch. Shuttle motion will begin and repeating “H” pattern will be printed.
4. Observe display:
 - (a) If it indicates 51.5 ± 4.0 , go to step 5.

NOTE: It is possible to obtain very close tolerances in the following adjustment.

- (b) If not, readjust bumpers by selecting a new rebound rate (para 5–6). Values less than 51.5 will decrease stroke timing and values greater will increase it. The goal is to achieve correct stroke timing without bumper knocking.
5. Press RDY switch. Shuttle motion will stop.

NOTE: When bumper index and stroke timing are correct, record values and store with printer.