



Stern Pinball, Inc.

Stranger Things TK Lock Mechanism

Stranger Things LE (Q2) / Premium (Q3)

Adjustment Guide

Document Number: 755-7679-00

Issue: Rev 1.0

Date: August 5, 2020

INTRODUCTION

The TK Lock Deflector mechanism has several adjustment capabilities that are pre-set to recommended values at the time of shipping. This guide can be used to verify that your game is still within specifications and to make changes if necessary.

COPYRIGHT

© Stern Pinball, Inc. 2020

All rights reserved.

No part of this publication may be reproduced in any form or by any means without the prior written permission of Stern Pinball, Inc.

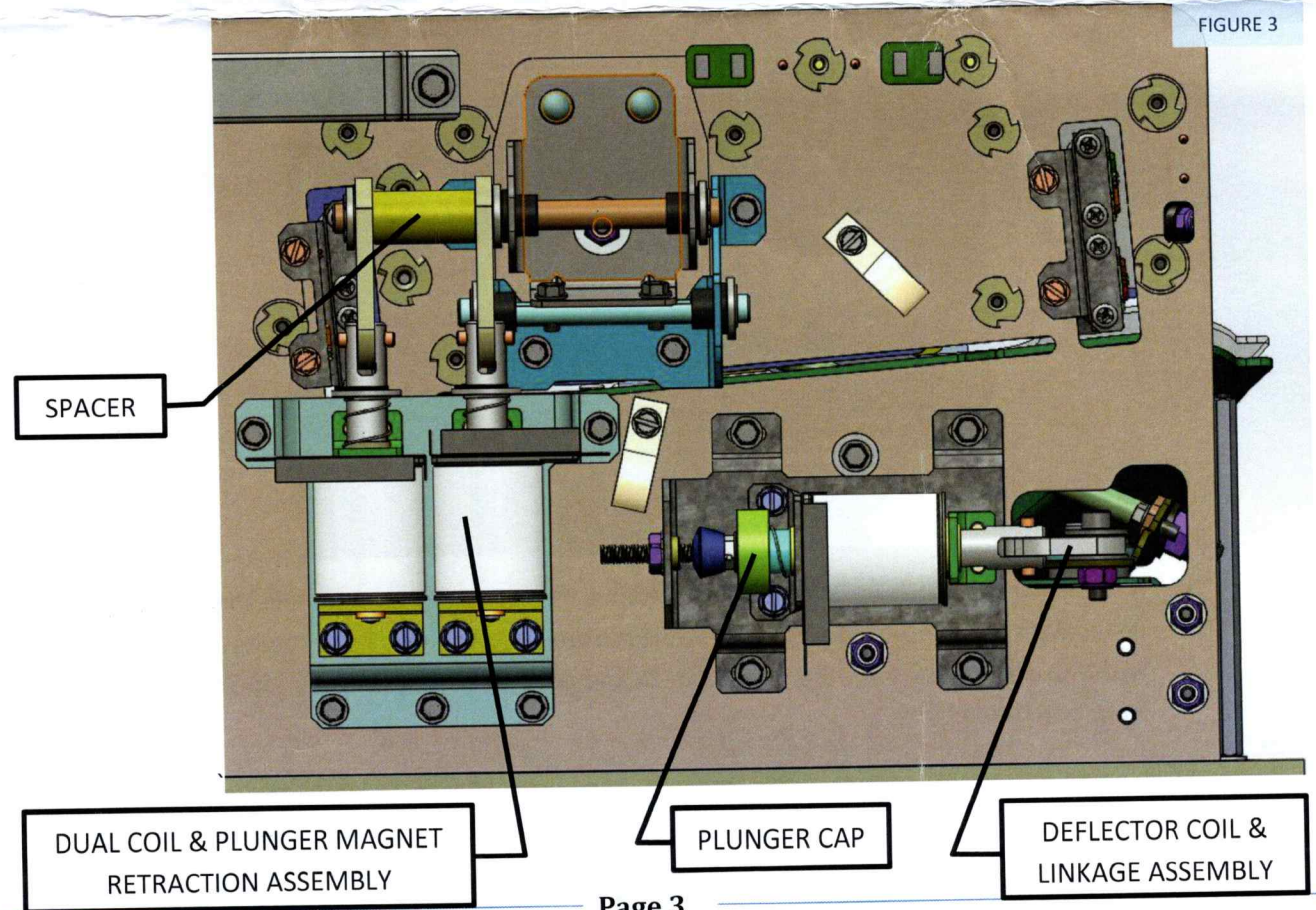
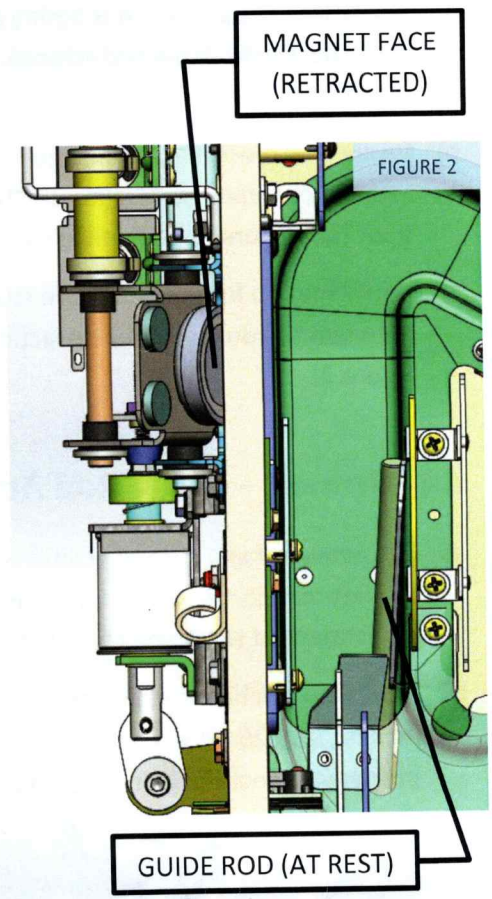
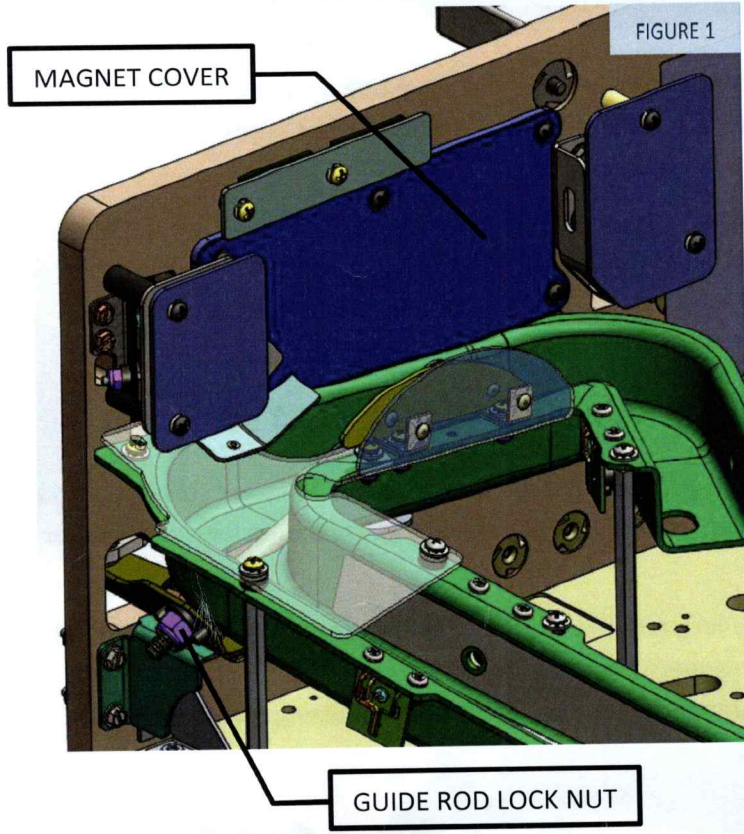
Table of Contents

| | |
|---|---|
| 1) Tools Required..... | 2 |
| 2) Items to Check Before Adjusting TK Lock..... | 3 |
| 3) Adjustment – Guide Rod Activated & Resting (Horizontal) Positions..... | 4 |
| 4) Adjustment – Guide Rod Angular (Vertical) Position..... | 5 |
| 5) Adjustment – Left Entrance Ramp and Magnet Cover Alignment..... | 6 |

1) Tools Required

- a) 7/16" Hex Wrench, Nut Driver, or adjustable Crescent Wrench
- b) 3/8" Hex Wrench or adjustable Crescent Wrench
- c) #2 Phillips Screwdriver
- d) Masking tape (optional)

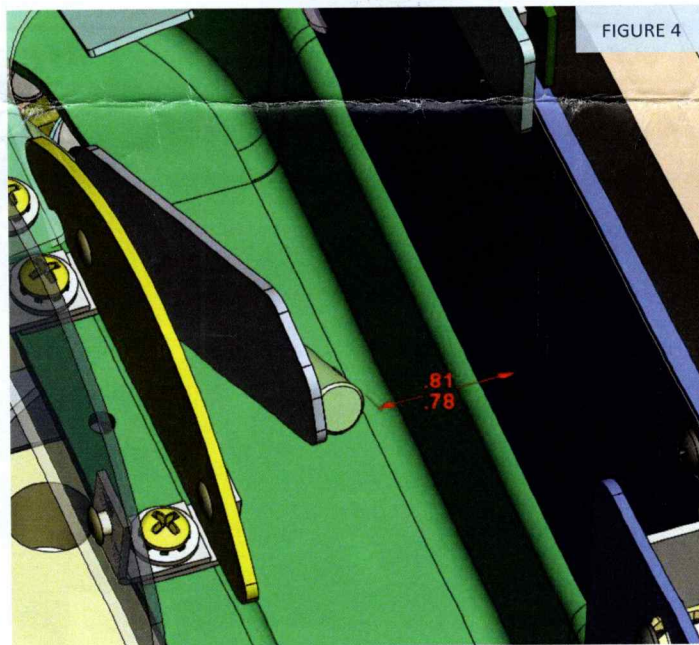
2) Items to Check Before Adjusting TK Lock



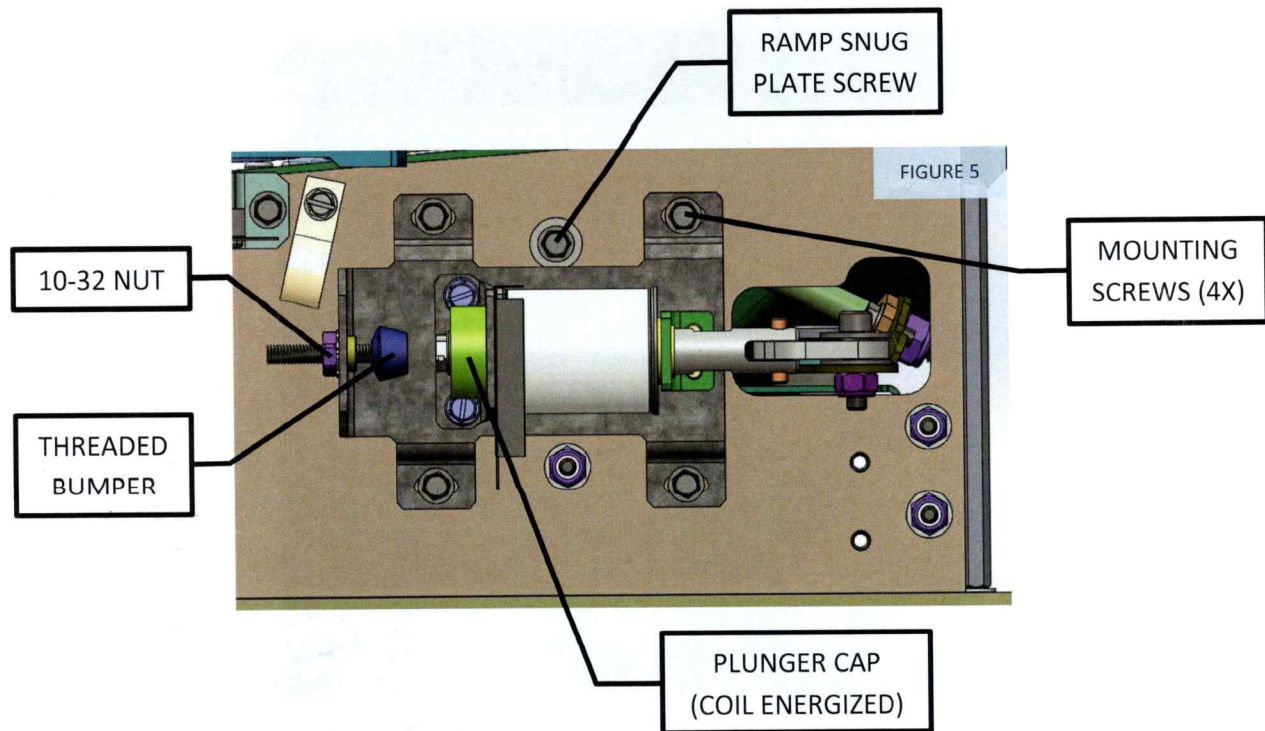
- a) Verify that the guide rod is tightly secured in its mounting bracket (the deflector linkage may have some backlash). If the rod is loose, tighten the lock nut [see Figure 1] with a 7/16" wrench or nut driver until snug - do not overtighten.
- b) Verify that the deflector linkage moves freely when you press the plunger cap against the coil retaining bracket [see Figure 3]. The guide rod should not be rubbing on the cutout in the plastic ramp floor [see Figures 1 & 2] while the plunger is moving.
- c) Verify that no foreign items are stuck to the face of the TK lock magnet. Push down on the spacer between the dual magnet retraction plungers [see Figure 3] and inspect the face of the magnet [see Figure 2].

3) Adjustment – Guide Rod Activated & Resting (Horizontal) Positions

- a) The activated and resting positions of the guide rod are controlled by the deflector coil assembly in the left rear corner of the back panel. The bracket has slots on all four mounting feet, to allow for adjustment of the guide rod positions.
- b) **Activated** – When the deflector coil is energized, the back edge of the guide rod should be .78-.81 inches (19.8-20.6 mm) away from the magnet cover plastic [see Figure 4]. A larger gap may not properly deflect the ball and a smaller gap may prevent the ball from reaching the magnet.



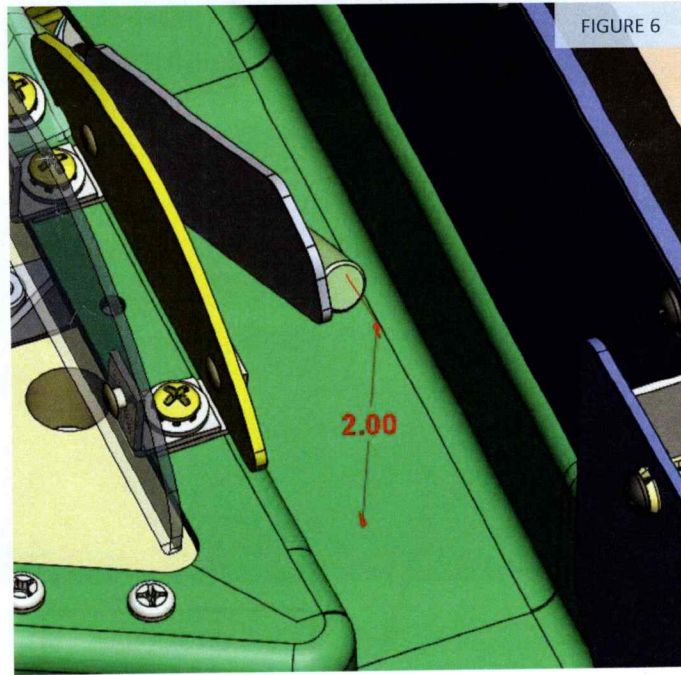
- i) If the guide rod gap is not within specifications, it will be necessary to hold the plunger cap in its coil energized position [see Figure 5] while making adjustments. This process can be simplified with the assistance of another person or by temporarily adding masking tape or a spacer block, to keep both hands free.



- ii) Loosen, but do not remove, the four mounting screws that hold the deflector coil assembly against the back panel [see Figure 5].
 - iii) While the plunger is in the energized position, slide the deflector coil assembly sideways to adjust the guide rod gap to the proper distance.
 - iv) Tighten the four mounting screws and remove any added tape or spacers.
- c) **Resting** – If the deflector coil assembly was adjusted in step 3b, the resting position of the guide rod might have been changed. When the deflector coil is not energized, the flat blade of the guide rod should be just touching the front inner wall of the plastic ramp [see Figure 2]. A large gap on that side may cause the rod to interfere with a ball traveling through the ramp, when the TK lock is not active.
- i) If the resting position of the guide rod is more than .06 inches (1.5 mm) away from the ramp wall [see Figure 2], it can be adjusted by moving the threaded bumper in the deflector coil assembly.
 - ii) Loosen the 10-32 nut with a 3/8" wrench [see Figure 5].
 - iii) Twist the threaded bumper clockwise to move it away from the coil, until the guide rod is touching the wall.
 - iv) Re-tighten the 10-32 nut.

4) Adjustment - Guide Rod Angular (Vertical) Position

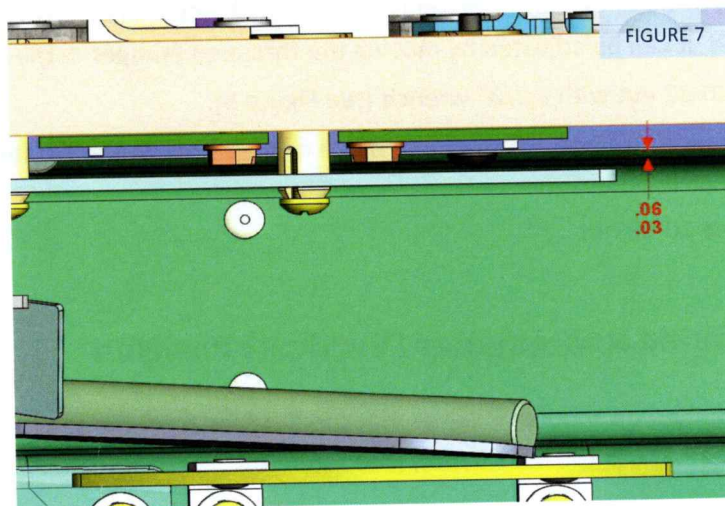
- a) The angle of the guide rod should be set so that the distance from the top of the rod tip to the ramp floor is 2.00 inches +/- 0.03 (50.0-51.6 mm) [see Figure 6].



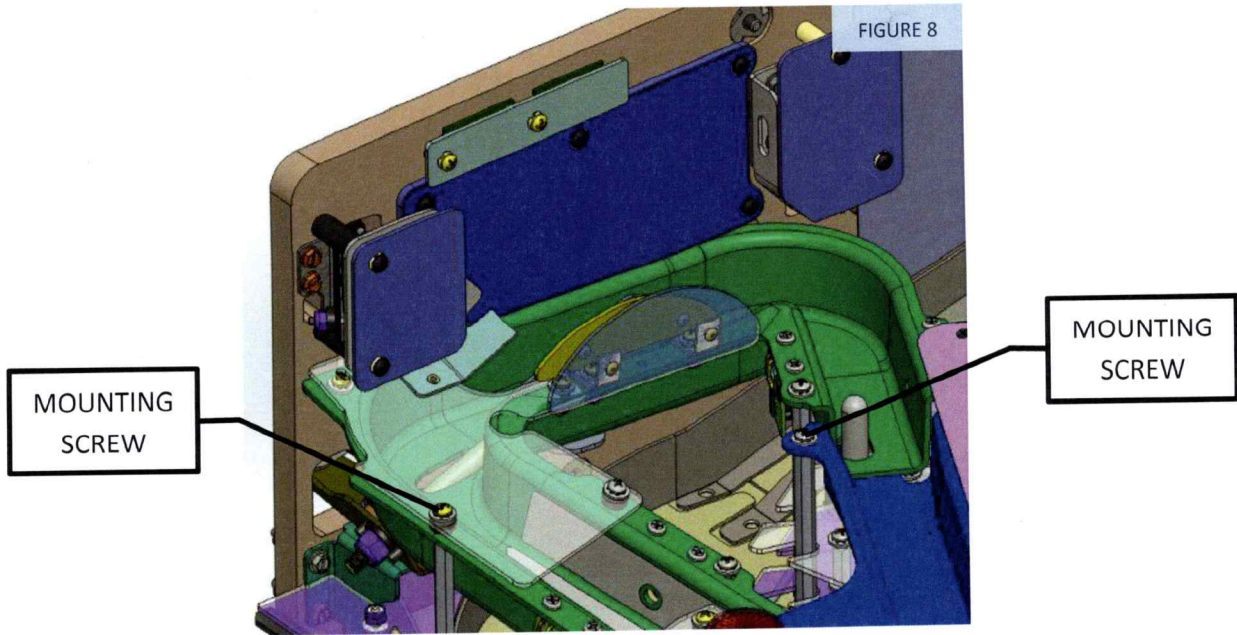
- b) If the guide rod tip is not at the correct height, slowly but firmly push the guide rod down or pull it up to achieve the proper angle.

5) Adjustment – Left Entrance Ramp and Magnet Cover Alignment

- a) The ramp wall should be 0.03-0.06 inches (0.8-1.5 mm) in front of the magnet cover [see Figure 7]. This position was set at the factory and should not need to be changed. The adjustment should only be made if either of the following conditions are seen.
- i) The ramp wall is too far from the cover and the ball travels past the magnet.
 - ii) The ramp is too close to or behind the cover and the ball deflects off the bottom edge.



- b) To adjust the left entrance ramp, loosen but do not remove the two mounting screws on the ramp flanges [see Figure 8] using a #2 Phillips screwdriver. Ignore the two screws at the ramp entrance (their positions cannot be changed).



- c) Turn the snug plate screw [see Figure 5] to move the ramp toward or away from the back panel as needed. It may be necessary to loosen the screw first and then slowly tighten it while pushing forward on the ramp wall.
- d) Tighten the mounting screws on the ramp flanges.