

Gas Spring Upgrade Kit

Tools Required

- Felt Tip Marker (a color that will be visible on your gutters and rails)
- Electric Drill 12V (minimum)
- 1/8" Drill Bit (Provided by Brunswick)
- 9/32" Drill Bit (Provided by Brunswick)
- #2 Phillips Power Bit or Screw Driver
- E-Style External Retaining Ring Tool for a 1/4" shaft (can be purchased from Brunswick package number 84-200472-000) or Long Nose Pliers, or Small - Straight Tip Snap Ring Pliers
- Bankshot Bumper Deployment Tool (can be purchased from Brunswick package number 84-860100-000)

Installation Procedure

1. From the foul line, raise the rails on the bumper system with the Bankshot bumper deployment tool. Remove the section of bumper rail from the uprights that is closest to the pinsetter.



CAUTION!! A pinch point exists between the bumper rails and uprights. Refer to Figure 1.

2. The gas spring will be located between the 6th and 7th upright from the pinsetter. Refer to Figure 1.

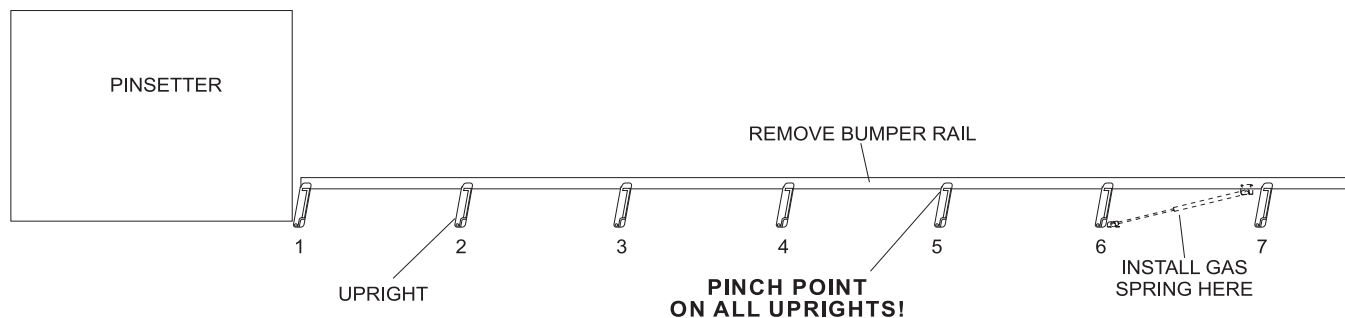


Figure 1

- With the 6th upright in the full up position, install the gutter mounting bracket, #84-200687-000, approximately 1/8" away from the 6th upright toward the foul line. Align the long edge of the bracket with the gutter. Be sure to position the rail mounting bracket in the orientation shown in *Figure 2*. The cutout is towards the foul line. With a felt tip marker, accurately mark the location of the (4) holes in the bracket onto the gutter. Refer to *Figure 2*.

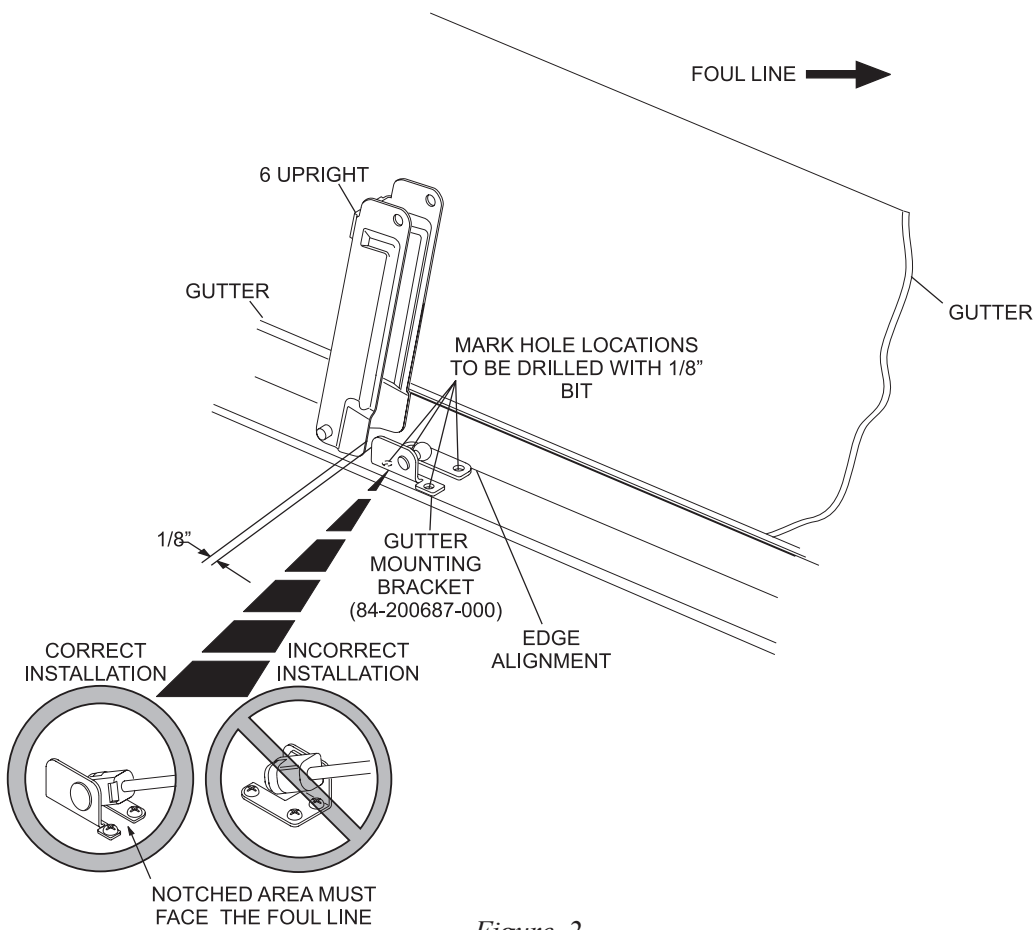


Figure 2

- Drill four 1/8" holes in the marked positions for the gutter mounting bracket.
- Secure the gutter mounting bracket firmly in place with the four #10-14 screws, 11-054462-000.

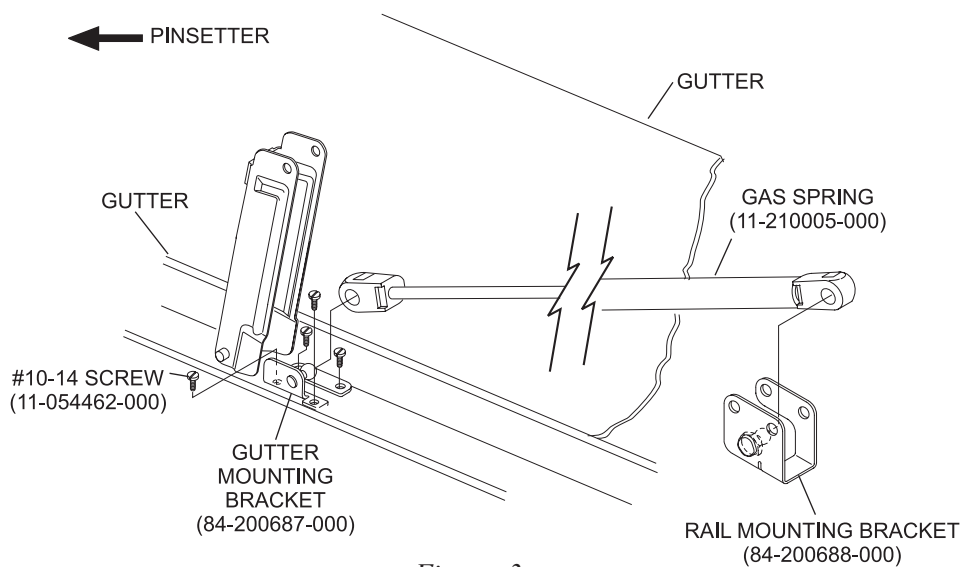


Figure 3

6. Assemble the gas spring, 11-210005-000, to the gutter mounting bracket, 84-200687-000, and the rail mounting bracket. The gas spring simply snaps onto the ball on each bracket. Refer to *Figure 3*. No tools are needed.
7. Reassemble the bumper rail to all the uprights.
8. Pivot the gas spring and rail bracket assembly from the gutter mounting bracket and position the rail mounting bracket against the bumper rail. Position the rail mounting bracket a 1/4" away from the upright. With the felt tip marker, accurately mark the position of the (2) holes in the rail mounting bracket, 84-200688-000, on to the bumper rail. Refer to *Figure 4*.

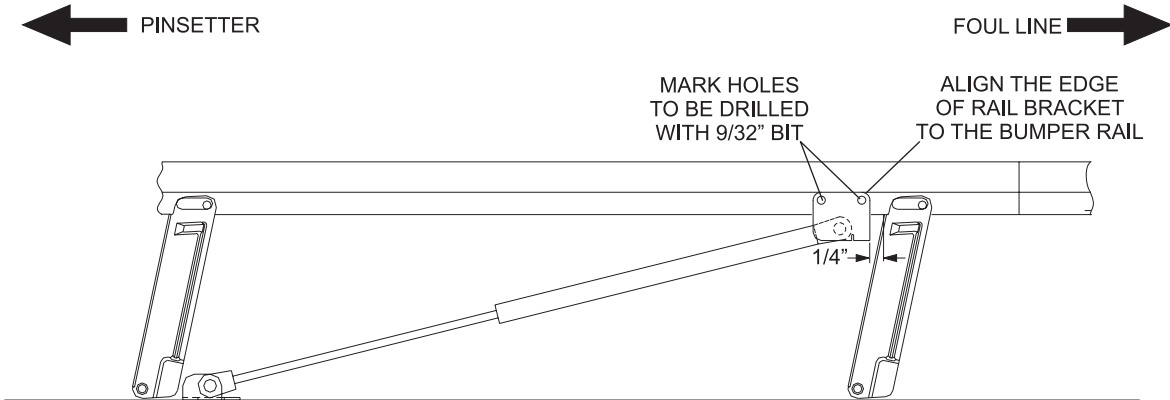


Figure 4

9. With a 9/32 drill bit, drill through both walls of the plastic bumper rail at the marked positions. The rail mounting bracket, 84-200688-000, may be used as a drill fixture if necessary. Refer to *Figure 4*.
10. Attach the rail mounting bracket and gas spring assembly to the bumper rail with (2) connecting pins, 84-200458-004, and (2) E-Rings, 11-537050-000. The E-Rings should be on the gutter side of the rail, not the lane side. Refer to *Figure 5*.

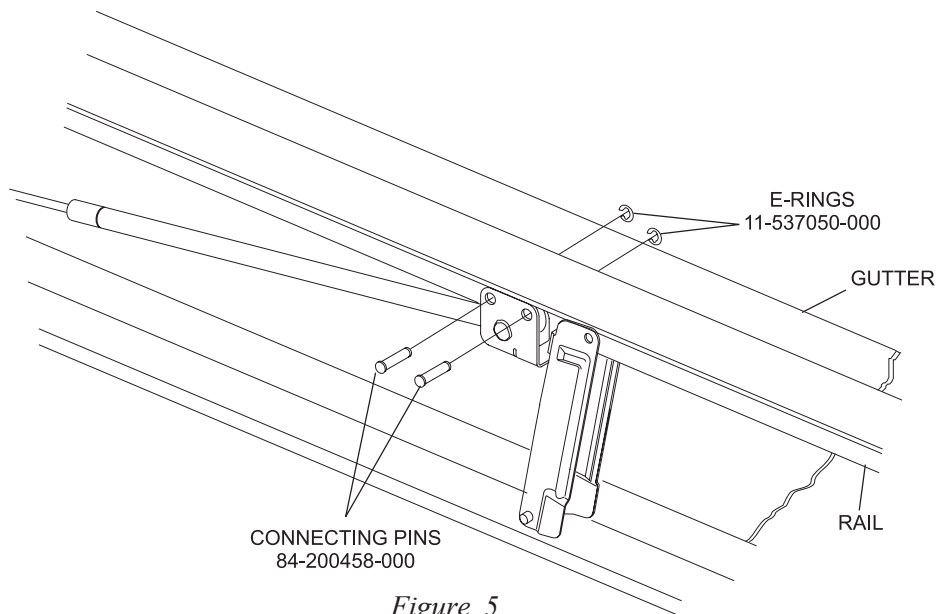


Figure 5

11. Using the Bankshot bumper deployment tool, from the foul line end of the lane, raise and lower the bumper rails to verify that the system goes up and down smoothly. Adjust the system for any binding as needed.