



Executive Summary: 2026 PBA String Pin Report

Topic: Evaluation of Brunswick Boost string pin machines (USBC-Approved version) and their suitability for Professional Bowlers Association (PBA) competition.

I. Background

Early in 2024, bowling centers equipped with the new USBC-Approved Brunswick Boost string pin machines expressed interest in joining the PBA Regional Tour. The USBC (United States Bowling Congress) approved certain string pin machines starting August 1, 2023, after determining that scores and averages on these systems do not require adjustments compared to traditional free-fall pinsetters. However, not all string pin machines are certified/Approved; only those with strings of at least 54 inches in length meet the USBC standards.

Objective: The PBA conducted tests to determine if these certified string pin machines could maintain the integrity of professional-level play.

II. Differences Between Free-Fall and String Pin Machines

- **Free-Fall Machines:** Pins are placed freely on the lane and knocked down without any attachments.
- **String Pin Machines:** Pins are connected to strings that are used to reset the pins. USBC-Approved string pin machines use longer strings (54 inches) to simulate free-fall action while minimizing tangles (breakdowns).

Key Considerations:

- Strings on string pin machines can affect pinfall dynamics, potentially affecting scoring.
- Approved string pin machines aim to closely replicate free-fall conditions but may behave differently under certain conditions.

III. Testing Process and Key Findings

Testing Locations:

- The Brunswick Boost tests were conducted at Timber Wolfe Lanes (Oxford, PA).
- Previous tests included different lane patterns and a range of PBA-level bowlers.

Data Analysis:

- Lanetalk technology was utilized to gather data from 2024 PBA national tour events on free-fall machines.
- Key metrics analyzed included:
 - First-ball shot outcomes
 - Leave rates (e.g., corner pins, splits)
 - Spare conversion percentages

Findings:

1. **Strike and Spare Rates:**
 - The strike percentage on Boost string pin machines was 41.4%, compared to 57.6% on the 2024 national tour (free-fall machines).
 - Higher rev-rate players noted fewer "messenger" pins on string machines, requiring bowlers to hit slightly higher in the pocket for consistent pin carry.
2. **Impact of High-Speed Bowling:**
 - In a previous test with a bowler throwing at speeds of 27-30 mph confirmed that increased speed did not result in higher scores. The average score using high-speed techniques was lower (205) than the bowler's previous regional string pin average (215).
3. **Scoring Fairness:**
 - No significant advantage was found for specific styles (e.g., high rev, two-handed techniques).
 - Players needed to adjust to the difference in pin action but generally found the machines to be fair.
4. **Pin Respotting and Out-of-Range Issues:**
 - String machines automatically reset pins to their original positions, unlike free-fall machines that may have more nuanced handling of out-of-range pins.
 - The PBA will follow USBC rules for handling these situations.

IV. Technical Challenges and Solutions

- **Off-Spot Pins:** During early tests, a minor issue arose when the boost machine set first ball racks with pins off-spot. This did not occur on every rack, but was noted by competitors. Re-racks were allowed as normal during tournament competition. It was later determined that a change to the initial string tightening procedure was needed – and implemented by the manufacturer for their future installs of the Boost string pin machine.
- **Maintenance Observations:**
 - USBC approved versions still requires someone on-site to handle tangles, especially with PBA level high-speed play, though a full-time mechanic is not necessary.

- The machines eliminate deadwood and out-of-range delays, contributing to faster gameplay.

V. Conclusion and Recommendations

The PBA's tests and data analysis have determined that USBC-Approved Brunswick Boost string pin machines are acceptable for professional-level competition. The machines maintain the integrity of the sport while offering benefits like reduced maintenance and increased efficiency.

Next Steps:

- **Integration:** USBC Approved Brunswick Boost string pin machines can be utilized in PBA Tour events.
- **Further Testing:** The PBA may conduct additional evaluations of other certified string pin machines in the future to ensure consistency.

Final Statement: Brunswick Boost string pin machines meet the PBA's standards for fairness and competition. They do not pose a significant advantage or disadvantage to any style of play and are deemed a viable option for professional events.

Appendices

- **Appendix A:** PDF - Detailed statistical data comparing Brunswick Boost string pin machines to free-fall machines.

Appendix A

PDF Attached...