



Standard Operating Procedure (SOP) for Bowling Ball Testing for the Senior Queens

Introduction

These national events bring together top senior bowlers. Our goal is to ensure a transparent, efficient, and consistent experience for all participants. By outlining detailed steps and responsibilities, we aim to maintain high standards of accuracy, fairness, and customer satisfaction. Whether you're a participant, staff member, or manager, this SOP serves as a resource to help navigate every aspect of the inspection and testing process.

Purpose and Scope

Purpose: This SOP outlines how equipment testing is conducted during the USBC Senior Queens. The goal is to ensure fair competition by confirming all bowling balls meet USBC standards, particularly with respect to hardness.

Scope: This SOP applies to definitions and acronyms, roles and responsibilities, tools and systems, process overview, inspection and testing procedures, non-compliant equipment handling, and communications.

Definitions and Acronyms

- **Slow Absorption:** Any ball with an oil absorption time greater than 90 minutes.
- **High Performance:** Advanced, often asymmetrical weight block designed to produce a more aggressive and dynamic reaction on the lane, characterized by a high differential and typically a low radius of gyration (RG).
- **Non-High Performance:** Balls with weak cores and cover stocks that are typically used for spare shooting. Note: Currently approved rubber and polyester or "plastic" balls are considered non-high-performance balls regardless of their other properties.
- **Durometer:** A tool used to measure the hardness of materials like rubber and plastic by pressing a presser foot into the material's surface.
- **78D:** Minimum manufactured hardness for slow absorbing high performance (urethane) bowling balls allowed in USBC Senior Queens.
- **CG:** Center of Gravity.

Roles and Responsibilities

- **PWBA Operations Manager, Senior Director, Short Duration Tournaments and Collegiate Bowling:** Supervises and/or conducts bowling ball testing. Performs and logs daily calibration of testing equipment. Serves as the primary point of escalation for potential non-compliant equipment and conducts additional inspections and/or testing as needed.



- **Equipment Specifications Team:** Compile and maintain all data gathered from the event. In addition, train the tournament staff on set-up, calibration, and use of the electronic durometer.

Tools and Systems

- Durometer (checks for hardness)
- Automated testing stand
- Infrared thermometer
- Data collection sheet (kept in SharePoint)
- Ball inspection forms

Process Overview

Bowling balls identified as 78D slow oil-absorbing high-performance bowling balls will be tested in accordance with the step-by-step inspection process outlined below.

Step-by-Step Inspection Process

a) Testing Timing

- i) Testing will be done on the Practice Session Day
- ii) To determine which competitors will be tested, lanes will be randomly selected and posted in the locker room one hour prior to the start of the squad practice session, following the same timeframe used for lane pattern postings.

b) Visual Inspection - each bowling ball will be rotated to verify:

- i) The make, model and serial number are present.
- ii) There are no cracks or fissures.
- iii) There are no extra holes.
- iv) There is a gripping orientation mark if no thumbhole.
- v) Balance - CG orientation.
- vi) There is no evidence of tampering.

c) Testing – 78D slow absorbing high performance bowling balls will be checked for hardness and temperature by:

- i) Placing by the ball in the testing apparatus and checking in five (5) spots around the equator of the ball (compared to the pin).
- ii) Simultaneously checking the ball's temperature with an infrared thermometer.
- iii) The following data will be collected from the testing: The name of the ball, the ball's serial number, the temperature of the ball, and the durometer reading of each punch (5).
- iv) Any ball testing lower than 73 hardness will be tested (punched) 5 additional times.

Note: In addition to random testing by squad, USBC may periodically conduct large-scale testing sessions during the event.

d) All compliant bowling balls will be returned to the competitor.

Non-Compliant Equipment

- a) If a non-compliant bowling ball can be repaired/fixed, it may be used in competition provided the repair work is completed, and the ball goes through the inspection and testing process and deemed compliant.
- b) If a non-compliant bowling ball cannot be repaired/fixed or ineligible for any reason(s) (including but are not limited to missing the manufacturer logo, ball



type, serial number, cracks or fissures, extra holes, missing grip orientation marks, out of balance -CG orientation, or evidence of tampering), the ball must be removed.

- i) Tampering with a ball (so it no longer meets USBC specifications, as stated in the USBC Equipment Specifications and Certifications Manual - USBC Rule 17a-1), is grounds for disqualification.
- c) When a ball is removed from competition for not meeting Tournament rules and USBC specifications:
 - i) A non-compliant equipment form (see Appendix A) will be completed by the scale room staff lead, verified and signed by a tournament official.
 - ii) A copy of the form given to the bowler.
 - iii) The ball is placed in safekeeping until the conclusion of the squad.
 - iv) The bowler can retrieve their ball at conclusion of their squad by presenting their copy of the non-compliant ball.

Appendix A

USBC Tournaments Bowling Ball Non-Compliance Form



Please Print

Date _____

Squad _____

Name _____

USBC # _____

Ball Data:

Brand _____

Model _____

Serial Number _____

Color _____

Reason(s) for removal:

Ineligible Ball List Y / N Weight Hole Y / N Gross Weight Y / N

Cracked Ball Y / N Visible Logo Y / N Serial # Y / N

Balance Y / N Hardness Y / N

Durometer Reading: Spot 1 _____ Spot 2 _____ Spot 3 _____ Spot 4 _____ Spot 5 _____

This ball has been deemed ineligible for use at this USBC Tournament.

YES / NO

This ball is ineligible for use in any certified USBC league or tournament.

YES / NO

Official's Signature _____

Bowling Ball Returned Y / N

Bowler's Signature _____