



# **DRILLING SPECIFICATION CHANGES**

2019

# OVERVIEW

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The USBC introduced new ball specifications, along with the research reports that supported the changes, in April 2018. One of the new specifications is the elimination of the balance hole. The specification change is to maintain the design intent of the ball and eliminate manipulation of the physical properties of the ball, and thus the performance, with additional drillings.

Since the release of the new specification, there has been discussion about creative ways to modify gripping holes in order to manipulate the properties of a bowling ball. This goes against the intent of the balance-hole rule change.

Research showed a maximum 1-1/4" diameter balance hole could alter the differential RG of a ball by as much as .020" which has a maximum spec of .060" for an undrilled ball before any holes are added. Therefore, a ball with a balance hole could get up to .080".

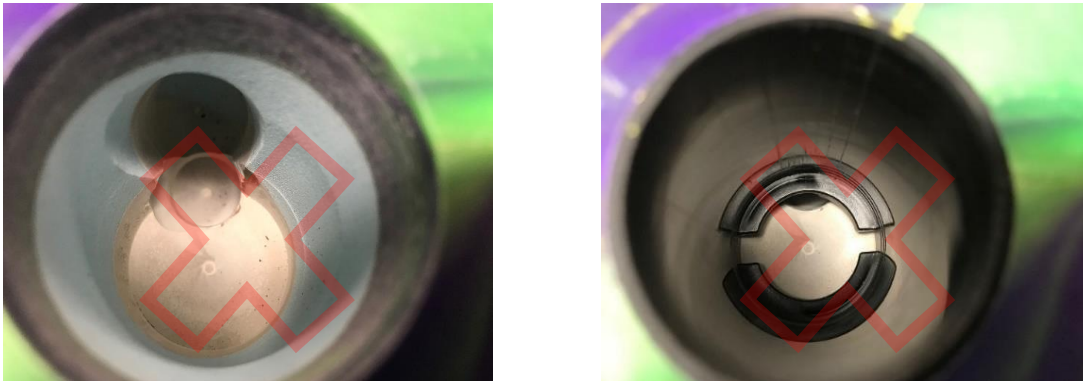
Eliminating the balance hole helps limit changing the differential RG, which alters the performance. At one point in time, the USBC mandated that the 1-1/4" maximum diameter be applied anywhere inside the hole to prevent enlarging the hole diameters inside the ball.

The glossary at the back of the specification manual defines a void as:

*"A manufactured cavity with purposeful size, dimension and/or location within an object."*

Balls are not allowed to have voids. Also, gripping holes are intended for gripping purposes only. Therefore, altering a gripping hole to create a cavity with purposeful size, dimension and/or location is not allowed and violates existing USBC rules as noted in the Equipment Specifications Manual<sup>1</sup>.

## Not permitted – Holes (voids) behind gripping devices



In order to further clarify the specification, USBC is adding a requirement that the hole cannot be deeper than 4-1/2" from the surface of the ball and a maximum diameter for any hole drilling into a ball of 1-9/16" which matches the largest hole required to install an approved removeable device.

### Specific rule and verbiage change

*Effective Aug. 1, 2020*

- Holes or indentations for gripping purposes shall not exceed five and shall be limited to one for each finder and for the thumb, all for the same hand with **no drilled holes exceeding 1-9/16" diameter and 4-1/2" deep. (Note: This includes holes required to install removable devices)**. The player is required to use all the gripping holes on every delivery with the same hand except when using a house ball.

*Effective immediately*

- Any secondary hole drilled inside of a gripping hole that is not intended for gripping purpose is considered a void and not allowed except for vent holes.

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<sup>1</sup> [Equipment Specifications Manual](#)