



OIL PATTERN REPORT

2019

OVERVIEW

The United States Bowling Congress began to study its current lane dressing rules more than six years ago as part of its ongoing effort to improve Center Certifications.

The last change to lane dressing rules came in 1992 when the American Bowling Congress (ABC) announced the three-unit rule, which stated lane dressing could be applied in any amount and any distance if there is a minimum of three units. This became the only standard oil pattern regulation.

In this research project, the Equipment Specifications and Certifications team evaluated the validity of this rule in today's bowling environment. Since the rule was first instituted nearly 27 years ago, numerous areas in the sport have changed dramatically, and the goal was to determine what changes, if any, are needed.

History

As technology in the sport began advancing in the 1970s and 1980s, the American Bowling Congress faced many difficult years of maintaining the integrity of the game¹.

The introduction of lane dressing techniques, which steered a delivered ball to the pocket (optimal location for achieving a strike), forced the ABC to look at its standards for maintaining the integrity of the game – the very foundation on which ABC was organized and for which USBC continues to exist today.

Lane blocking was the practice of applying lane conditioner in a manner which would aid in directing the path of a bowling ball to the pocket. A story bearing the headline, "Doctoring of Lanes Danger to Bowling," was prominently displayed in the September 1966 issue of *Bowling* magazine. It carried a subhead, "Stature of game jeopardized by illegal procedures; Malpractice violate spirit of rules, sportsmanship."

An amendment was passed at the 1966 Convention stating:

The lane surface shall not be altered or conditioned to create a ball path or otherwise affect the course of the ball by abrasives or any other materials or methods.

Lane conditioning procedures were incorporated as part of the rulebook. A blue-ribbon committee of bowling leaders was appointed to study and recommend procedures to curb the practice, but nothing seemed to stop the tide of scores being bowled on lanes with noncomplying conditions. The BPAA adopted a resolution in 1973 supporting the ABC fight against lane doctoring.

The low-profile ABC High Score and Awards Committee suddenly was thrust forward, reviewing cases involving hundreds of suspect scores and denying many. Bowlers made personal appearances before the committee to appeal scores that had been rejected.

As we look back over the last 50-plus years in the area of lane dressing, the next step in fighting the battle on lane conditions came in 1976 (nearly 10 years after the 1966 amendment) when legislation passed regarding blocked lanes. Authority was given to withdraw ABC lane certification from persons who persist in blocking lanes.

Also, ABC moved to flat conditions. The following was approved:

If dressing is used, it must be applied uniformly and distributed evenly, gutter to gutter, for the entire predetermined distance down the lane (for example, and without

¹A review of the American Bowling Congress first 100 years

limiting the distance, 35-40 feet from the foul line).

Also, in 1977 the Testing and Research building (later re-named the Equipment Specifications Center) officially opened and was "a great step forward for all of bowling."

A series of rules and milestones in this area ensued:

- 1981: Urethane bowling balls were introduced to the marketplace.
- 1982: Brunswick commissioned the University of Illinois to develop a lane dressing measurement device.
- 1983: ABC and WIBC developed the Certified Lane Inspectors Workshop program, which enabled association officials to become certified lane inspectors.
- 1984: ABC approved an amendment that redefined the obligations of a bowling proprietor to retain their certification.
- 1985: Lane dressing [UV] additive mandated for 1985-1986 bowling season.
- 1986: Official release of lane dressing inspection device.

In July 1986, the Multi-Unit Bowling Information Group (MUBIG), which represented one-third of all bowling lanes in the U.S., held a meeting in Houston where the organization informed ABC leadership they no longer could endorse ABC's lane conditioning rule and as a result would encourage member proprietors not to have their establishments certify with ABC. They claimed that ABC's blend rule was too subjective and could not be enforced consistently.

MUBIG's reaction was puzzling because ABC/WIBC had since approved the use of a new lane dressing measuring device that would take the subjectivity out of lane dressing inspections. MUBIG proposed a limited distance dressing rule that it felt was more enforceable and would not appreciably affect scoring ability. ABC requested more testing be performed before any limited-distance dressing rule be put into effect by either proprietors or ABC, and MUBIG officials agreed.

- 1987: ABC and MUBIG reach agreement on an either/or rule of crowned conditions or 26 feet limited distance dressing.
- 1988: ABC and WIBC begin joint operation and financing of the Equipment Specifications and Certifications Department. Limited Distance Dressing (LDD) oiling adjusted to a maximum of 24 feet and gutter to gutter.
- 1991: System of Bowling, focusing research and testing efforts toward the total bowling environment (i.e., balls, pins, lane surfaces and finishes, as well as lane dressings). This year, bowling also saw its first reactive resin bowling ball.

In the lane dressing area, as part of the System of Bowling, ABC announced a minimum of three units of dressing across the lane for any distance the lane is dressed. The dressing could be applied in any amount and any distance if there is a minimum of three units.

The System of Bowling announcement drew praise, and criticism, from all areas of the bowling industry. However, BPAA leadership had concerns about the three-unit rule. This prompted industry leaders to hold a meeting to understand BPAA's objections. They were concerned about the ability of centers to accurately measure lane dressing to meet ABC specifications without the need to buy expensive lane dressing measuring equipment.

It was determined to still move forward with the three-unit rule; however, a concession was offered. A seven-month grace period was provided to allow centers to acclimate to the new three-unit rule. Also, during this period, ABC/WIBC would agree not to require after-score inspections and honor score denials.

From 1992 on, the only changes in the lane dressing rule would be adjustments in the organization's enforcement procedures.

EQUIPMENT

The Equipment Specifications and Certifications team performs ongoing research and testing to ensure bowling balls, pins, lane surfaces and lane oils meet the standards and regulations, and proposes adjustments to the Equipment Specifications Committee, if needed.

Since the System of Bowling launched in 1993, bowling technology has drastically changed. Reactive resin coverstocks, synthetic lanes, new lane machines and lane oils modernized the game. This was the technology boom, and we continued to see bowling balls hook more, more oil added to the lanes and an ongoing back and forth between the bowling ball and lane oil manufacturers.

See the most recent [Bowling Technology Study](#) of 2018 for a more in-depth look into today's bowling equipment, as well as recent changes in this area.

Bowling Balls

Upon the release of the first reactive resin bowling ball in 1991, it wasn't long before all manufacturers were using the technology. Production ramped up as the performance characteristics, and cosmetic changes created a frenzy from consumers looking to purchase these hook-in-the box spheres.

In 1998, the industry saw another shift in coverstock technology when the first particle bowling ball was released. From there, Epoxy coverstocks hit the market in 2005, though they were short-lived.

During the past several decades, manufacturers tested and released bowling balls with all types of additives. Core technology continued to expand through designs and the way these bowling balls were drilled began to drive more and more hook potential for the consumer.

By the time USBC was formed in 2005, the Equipment Specifications and Certifications team was [approving](#) 250-plus bowling balls a year, which climbed to 340 in 2017. The bowling industry is seeing 1,114% more bowling balls being approved and launched in the marketplace (polyester and reactive) today than in 1992, before the System of Bowling launched.

Lanes

Bowling lanes used to be constructed of different types of wood, but lane manufacturers turned to synthetic materials in the 1970s. The new lanes are easier to maintain, more durable and provide a more consistent playing field.

The materials used in synthetic lanes have the look of a wood surface, but centers no longer need to resurface the lanes each season. USBC set specifications for the synthetic lanes, including a specification related to the hardness of the surface, in 2007.

As identified through USBC Center Certification Data in this [report](#), approximately 85% of lanes today are synthetic, with the remaining 15% made of wood.

Lane Oils

The lane conditioner, the oil-based liquid that nowadays is applied with a machine to the lane surface, is another factor that has come into play in more recent years.

In 1987, after two years of testing, ABC introduced an ultraviolet additive in the lane oil, along with a device to record and read the amount of oil present on a lane surface.

USBC introduced lane oil physical property specifications for the first time in 2007, setting a range of viscosities for the oil.

As of today, there have been more than 150 USBC approved lane conditioner products for use by bowling centers as identified [here](#).

Lane Machines

Before the 1970s, lanes were dressed a variety of ways with lane oil, which included the use of towels, mops and all sorts of different mechanisms by lanemen up and down the lane. The most notable device at the time was a bug-sprayer because of its widely popular use on the PBA Tour. It also was at this time that lane machines were first introduced, providing a more consistent way to dress the lanes.

Lane pattern development also became an area of focus, especially as soon as the lane dressing measurement device became available in 1982. Once lane patterns could be measured more systematically, it began to provide a clearer understanding and visual of the playing field.

Lanes were cleaned by hand as well – a long and tedious process – and thus had the same inconsistencies and variables which existed when oiling the lanes was done by hand.

One of the most substantial improvements to lane machines in the 1990s was the ability for them to clean and strip the lanes. In the past, regardless of the pattern put down, if the lanes weren't cleaned properly, you were laying one pattern on top of another.

Today's lane machine technology has continued to improve in this area and allowed for more consistent distribution of oil on the lanes. Lane machines now can hold up to 30 patterns in their memory bank, thus making lane dressing inspections a difficult area to govern.

The consumer impact, however, for competitive bowling is enormous. Today, you can compete on patterns used in World Bowling or professional competitions. Imagine competing on the patterns Team USA and numerous other countries from around the world compete on in the World Championships.

A competitive league bowler who wanted to practice on a Professional Women's Bowling Association (PWBA) pattern could bowl league on their Standard house shot, then have the center strip the lanes, download the pattern, and bowl a six-game block. This wasn't even possible 27 years ago.

At the USBC Open Championships, the operations team can administer two consistent lane patterns for team and doubles/singles across five total squads, 114 days a year, providing the most consistent and fair opportunity to bowl for the coveted Eagle in the tournament's 116-year history.

As part of the 2018 Bowling Technology Study, survey data showed most industry stakeholders, who took part in a 2017 Summit, agreed that lane machine technology had a positive impact on bowling. It also included the fact this technology and lane patterns are the most influential factors in scoring, more than the bowling ball itself.

RESEARCH

The USBC Equipment Specifications and Certifications team is conducting ongoing research on lane conditions. Four research studies have been completed over the last year, studying scores and steering of the bowling ball. Though much has been learned, to fully understand this area will take several more years of ongoing research.

It is clear the three-unit rule has lost relevance due to advancements in lane machine technology. Conditions that can change at the push of a button make lane conditions part of a league night, not part of a center. Standard, Challenge, and Sport league classifications exist to identify the difficulty of the patterns used in leagues.

USBC Research will continue to better classify lane conditions and provide better education and services to our stakeholders, so they are able to choose the right lane conditions for their leagues.

LANEMEN GROUP

The United States Bowling Congress commissioned a working group to visit the International Bowling Campus to help advise the Equipment Specifications and Certifications Team and Committee regarding the three-unit rule.

The eight people who participated had a collective experience of 255 years in the bowling industry, an average of 36 years each. The group strongly felt the current lane dressing and enforcement rules were failing and needed to be evaluated. They also believe the proprietors of today are more business-focused, where in the past they were bowling-focused.

After the history in this area was presented and discussed, a series of questions were asked that created group discussion and eventually consensus on the various topics.

When asked what bowlers want, the group responded that bowlers don't know or care about whether lane conditions meet USBC specifications, they just want to score well. If scores were to go down because of enforced lane dressing rules, bowlers would raise those concerns with their bowling center.

When discussing what proprietors want, the group stated proprietors care about satisfying bowlers, regardless whether they comply with the specification. The group believes there is a portion of proprietors not complying with the rule today, whether intentional or unintentional.

Today's patterns break down quicker, which requires significant moves in from game to game. If the three-unit rule were eliminated, most believe the patterns will remain the same but potentially could get a little easier.

SUMMARY

The research has shown the current lane dressing rules by USBC no longer are applicable because of advancements in technology.

The research and testing by the Equipment Specifications and Certifications team is an ongoing commitment to its educational effort and dedication to the idea that USBC needs to continually explore all facets in bowling while thinking about the future of the sport and the integrity of the competitions conducted in the sport.

In addition to the research and data gathered, USBC believes the engagement of all stakeholders in these topics is extremely important to build a brighter future for the sport and a better USBC of which everyone can be proud.

The modern bowling balls drastically alter any oil pattern applied to a lane surface, to the extent that by the end of a league session the pattern is totally different than the starting pattern. Most patterns likely do not comply with the current three-unit rule, required at the time oil is applied, by the end of a league session. The existing enforcement policy of one inspection per year does little to ensure continuous compliance.

The ability to govern and uphold policies, the very reason for USBC's existence, must be for meaningful cause with the ability for its governing body to enforce. The three-unit rule in the current environment no longer makes sense, and therefore, suspension or elimination of the rule is required.

Next Steps

The Equipment Specifications Committee has ruled to suspend the three-unit rule indefinitely.

The Equipment Specifications and Certifications team along with the Equipment Specs Committee will continue to monitor the impact of this rule suspension through scoring analysis and also

assess the long-term significance of this decision.

In the interim, bowlers who desire to compete on a more challenging condition to improve their skills long-term will seek out those league and tournament opportunities.

All USBC national events, such as the Junior Gold Championships, USBC Open and Women's Championship tournaments, as well as all USBC short-duration tournaments, will continue to run Sport-compliant patterns. USBC must challenge the best bowlers in the world and highlight their abilities through tough competition and consumer education, ultimately crowning national champions.

USBC will continue to maintain the Standard, Challenge and Sport conditions average conversion [charts](#), thus allowing those who wish to compete on a more challenging condition in a league or tournament to do so, with their appropriate averages.

USBC will continue to research all areas of the sport moving forward. USBC has been, and always will be, committed to fulfilling its role as the National Governing Body for the sport of bowling.