



United States Golf Association

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**September 28, 2009
Notice to Manufacturers
Groove Geometry**

The USGA has decided to reaffirm the interpretations regarding groove edges and adopt the proposed additional requirements regarding groove walls and bases which were set forth in the July 27, 2009 Notice to Manufacturers.

After the USGA sent that Notice, a number of manufacturers provided comments to the USGA. The USGA considered these comments, as it had considered the many communications provided by manufacturers and others on the groove topic after the USGA initially identified spin creation as an area of rulemaking interest in March 2005.

Prior to the publication of the July 27 Notice, the USGA had become aware of a small number of novel groove designs, which the USGA believes have the potential to defeat or significantly impact the new groove rule's goal of reducing spin on shots from the rough. It was and is the view of the USGA that those novel designs failed the rule's requirements with respect to edge radius. Nevertheless, to eliminate any possibility for misinterpretation and to ensure that the desired benefits of the new groove rule are obtained, the USGA issued the July 27 notice.

Most constituencies, including manufacturers, have understood the new rule's purpose, as well as the rule itself, as evidenced by the fact that over 90% of clubs submitted for 2010 conformance rulings conform under the new rule. Accordingly, although the July 27 Notice and the rule adopted today include new restrictions on the shape of the groove wall and base, as well as an additional clarifying definition of a groove edge, we believe that these additions are so consistent with the generally understood intent and interpretation of the August 2008 rule that it is appropriate to apply this rule effective January 1, 2010.

Allowing novel grooves that are designed to defeat the purpose of the new rule would deprive the game of golf of the anticipated benefits of the rule change. The USGA does not view such a result as acceptable and, as a consequence, concluded that prompt action is appropriate.

USGA Interpretations of 2010 Groove Specifications

The groove starts where there is a significant departure from the plane of the face (“land”) and this is joined to the wall of the groove via the edge. The wall continues to the base of the groove.

The edge must be substantially in the form of a round (having an effective radius of not less than 0.010", as determined by the two circles method, and not greater than 0.020"), which comprises an arc to which the groove wall and the land are tangential. As such, the ends of the “round” coincide with the ends of the edge - one end marking the joint to the land and one end marking the start of the groove wall. To further clarify, this means that groove edges must be a convex curve and must not include serrations, gear teeth or other similar features.

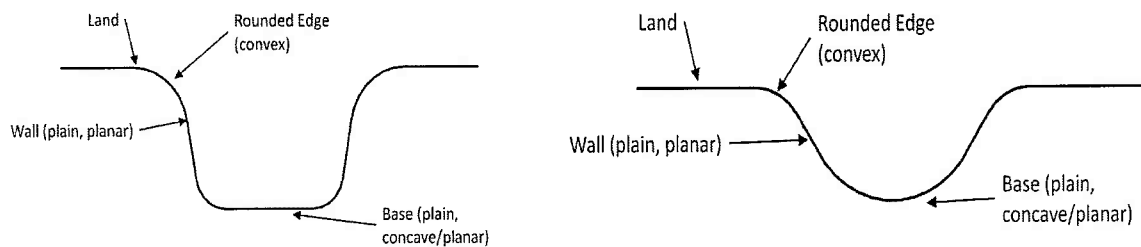
The USGA reserves the right to define the extent of the groove edge. Edge configurations, including (but not limited to) chamfers, fillets, notches, and other such features, do not conform to the rule because they are not in the form of a round. An allowance may be made for edge regions not strictly fulfilling this requirement as a result of production variations, but any such variations must be minimal and must not be part of the club’s intended design.

These groove edge requirements apply only to clubs with loft of 25 degrees and higher.

Additional Requirements

The following geometry requirements apply to all clubs except putters and drivers.

- (i) The wall of the groove must be substantially “plain” and “planar”. This would disallow features such as bends, indentations in or protrusions from the wall.
- (ii) The base of the groove must also be substantially “plain” and join the two opposing walls of the groove using a concave shape or a plane.



Illustrative examples of permissible grooves

A copy of the updated 2010 groove rule is attached to this document. The illustrative examples and interpretative information will be published in the next revision of the *Guide to the Rules on Clubs and Balls*.

Implementation of the Additional Requirements

These additional provisions become effective on January 1, 2010 for all clubs submitted to the USGA for official conformance evaluation. Additionally, all clubs used in events wherein the condition of competition requiring that the player's clubs conform to the new groove rule applies will be subject to these additional provisions.

Questions regarding this information should be sent to Dick Rugge, P.O. Box 708, Far Hills, NJ 07931, Fax 908-234-0708, e-mail: drugge@usga.org.

2010 RULES - CLUB FACE MARKINGS (Appendix II, 5)

c. Impact Area Markings

If a club has grooves and/or punch marks in the impact area they must meet the following specifications:

(i) Grooves

- Grooves must be straight and parallel.
- Grooves must have a plain(*), symmetrical cross-section and have sides which do not converge (see Fig. XI).

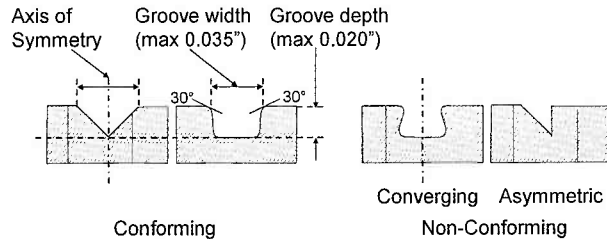
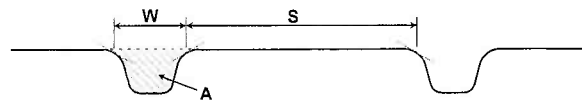


Fig. XI

- The width, spacing and cross-section of the grooves must be consistent throughout the impact area.
- The width (W) of each groove must not exceed 0.035 inches (0.9 mm), using the 30 degree method of measurement on file with the USGA.
- The distance between edges of adjacent grooves (S) must not be less than three times the width of the grooves, and not less than 0.075 inches (1.905 mm).
- The depth of each groove must not exceed 0.020 inches (0.508 mm).
- (*) For clubs other than driving clubs, the cross-sectional area (A) of a groove divided by the groove pitch ($W+S$) must not exceed 0.0030 square inches per inch (0.0762 mm²/mm) (see Fig. XII).

$$\frac{A}{W + S} \leq 0.0030 \text{ in}^2 / \text{in}$$

Fig. XII



- Grooves must not have sharp edges or raised lips.
- (*) For clubs whose loft angle is greater than or equal to 25 degrees, groove edges must be substantially in the form of a round having an effective radius which is not less than 0.010 inches (0.254 mm) when measured as shown in Fig. XIII, and not greater than 0.020 inches (0.508 mm). Deviations in effective radius within 0.001 inches (0.0254 mm) are permissible.

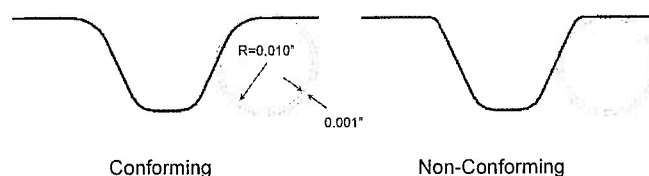


Fig. XIII

(ii) Punch Marks

- The maximum dimension of any punch mark must not exceed 0.075 inches (1.905 mm).
- The distance between adjacent punch marks (or between punch marks and grooves) must not be less than 0.168 inches (4.27 mm), measured from center to center.
- The depth of any punch mark must not exceed 0.040 inches (1.02 mm).
- Punch marks must not have sharp edges or raised lips.
- (*) For clubs whose loft angle is greater than or equal to 25 degrees, punch mark edges must be substantially in the form of a round having an effective radius which is not less than 0.010 inches (0.254 mm) when measured as shown in Figure XII, and not greater than 0.020 inches (0.508 mm). Deviations in effective radius within 0.001 inches (0.0254 mm) are permissible.

Note 1: The groove and punch mark specifications above marked with an asterisk (*) apply only to clubs manufactured on or after January 1, 2010.

Note 2: Effective January 1, 2010, the Committee may require, in the conditions of competition, that the clubs the player uses must conform to the groove and punch mark specifications above marked with an asterisk (*). This condition is recommended only for competitions involving the highest level of expert player.

d. Decorative Markings

The center of the impact area may be indicated by a design within the boundary of a square whose sides are 0.375 inches (9.53 mm) in length. Such a design must not unduly influence the movement of the ball. Decorative markings are permitted outside the impact area.

e. Non-metallic Club Face Markings

The above specifications do not apply to clubheads made of wood on which the impact area of the face is of a material of hardness less than the hardness of metal and whose loft angle is 24 degrees or less, but markings which could unduly influence the movement of the ball are prohibited.

f. Putter Face Markings

Any markings on the face of a putter must not have sharp edges or raised lips. The specifications with regard to roughness, material and markings in the impact area do not apply.