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NOTICE TO GOLF BALL MANUFACTURERS

Subject: Proposed Modification to the Overall Distance Standard Test and the Initial Velocity Test

This Notice supersedes the Notice of December 4, 1995, entitled "Notice to Golf Ball Manufacturers Re Optimization", which alerted manufacturers of the USGA's intent to pursue a modification of the existing test protocol.

Overall Distance Standard (O.D.S.)

In 1976, the USGA established a standard to limit the overall distance (i.e., carry and roll) of a golf ball when hit under a set of conditions then considered to be representative of a world-class competitor. Determination of the overall distance a golf ball would travel under this set of conditions was done using the best techniques then available.

Prior to the adoption of the standard, meetings were held with manufacturers in 1975 to discuss the proposed procedure. The procedure was circulated for comment. The procedure, which became effective on March 1, 1976 and was updated in 1980, specified test launch conditions based on a calibration ball. The procedure also stated:

> "If it is found that a ball submitted for testing has its optimum distance when tested outside of the range of launch conditions specified above, it will be tested at the new conditions and calibration ball data for validating the test will be redefined for these conditions and so specified."

Until recently, testing for conformance to the overall distance standard was conducted using a mechanical golfer. However, the limitations of the mechanical golfer and the growing number of submissions (currently 1,918 ball types) has rendered it impractical to find the optimum launch conditions. In the last several years, we have gained knowledge which gives us the ability to determine the optimum launch conditions for any ball type using our new Indoor Test Range (ITR). This provides accurate aerodynamic properties of golf balls, and in conjunction with a refined trajectory and roll model, allows us to find, through an iterative process, those launch conditions which will result in maximum overall distance, holding only clubhead speed at impact as a constant.

The proposed modification to the O.D.S. will be to optimize the performance of each ball with regard to distance, and judge this against a specified limit.

Initial Velocity (IV) Standard

In 1941, the USGA established a standard to limit the initial velocity of a golf ball when hit by a world-class player. Although there were already limits on weight and size, the intent of the standard was to limit further the distance potential of the golf ball. The current testing methodology measures the velocity of the golf ball when struck with a striker that emerges from a massive wheel spinning at a specified speed.

The staff has proposed that the current testing methodology be replaced by a coefficient of restitution (C.O.R.) test for golf balls. The test would measure and limit the C.O.R. of a golf ball when it impacts a freestanding plate, that approximates the weight of a standard driver clubhead, at a velocity of one hundred and eighty feet per second. This upgraded test is more representative of the speeds at which the most highly skilled players can now hit a golf ball.

Timetable for Implementation

The staff has proposed to the Executive Committee that all balls submitted for the Spring 2000 conforming ball list and thereafter be subject to the modified test procedures.

Subject to further testing and data refinement, the staff has proposed to the Implements and Ball Committee that a formal Notice and Comment review of the proposed modifications begin on or about March 1, 1999, culminating in an open hearing during May 1999. In the interim, golf ball manufacturers interested in discussing the modified procedures are urged to contact the USGA Technical Department so that a meeting can be scheduled.

Yours sincerely,

Frank W. Thomas
USGA, Technical Director

November 24, 1998