



Leo P. Tabick PGA



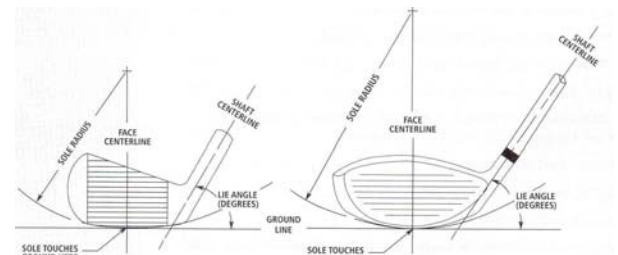
# The Golf Performance Academy

## The Journey Begins

Properly fit equipment will have an immediate effect on the five characteristics of Distance, Accuracy, Trajectory, Backspin, and Feel within the golf swing. However within those five characteristics are 24 separate equipment specifications that will effect shot performance. Starting with this installment we will explain and examine each of the specifications and their individual effect on one of the five swing characteristics. We will separate and grade them into the categories of Major, Medium and Minor factors<sup>1</sup>. Knowing these factors will help you distinguish between swing and equipment flaws.

Have you ever stood in the middle of the fairway, brimming with confidence 100 yards from a center cut pin, staring at a perfect lie, you're swinging great. You take your stance make as good a swing as you are capable, and watch the ball start left and continue left, missing the green by 15 yards. You look at your playing partner bewildered. You look down and the divot looks like it is aimed right at the pin, what went wrong? **I hate this game!!** In most cases, it is never the arrow and always the Indian, except for this time. It could be your equipment.

**Lie** – In the game of golf the term Lie has two distinct and separate interpretations. The first has to do with the ball and how it lays in the grass, after it lands, either thru the green, in a hazard or on the green. The second and the one we will be interested in is called the **Lie Angle**. The lie angle by definition is – **The angle of the centerline of the shaft with the ground line tangent to the sole at the face centerline.**<sup>2</sup> The figure to the right will give you a better understanding of lie angle. Improper fit lie angles will cause directional problems and have a **major effect on accuracy**. In spite of changes from one manufacture to another in design philosophy, within the golf industry there are accepted general standard lie angles. A club with a lie angle that is lower in degrees than the standard for that head is considered **flat**; conversely a club with a lie angle that is higher in degrees than the standard for that head is considered to be **upright**. The greater the loft angle (we will discuss loft in detail in later issues) the more dramatic the directional problems will be. Additionally, a greater loft angle also means more backspin, but if the clubface is tilted flat or upright, some of the backspin will be translated into sidespin, and you guessed it you will be more prone to mishits traveling right or left of the target, regardless of how good your swing mechanics are. This second factor is why the lie angle is much more important in the short irons than in the woods.



<sup>1</sup> The Golfsmith Practical Fitting Program, Golfsmith International, Austin TX

<sup>2</sup> Golf Club Design, Fitting, Alteration & Repair, 4<sup>th</sup> Edition, Ralph Maltby



Ed Galasso  
Class "A" Clubmaker



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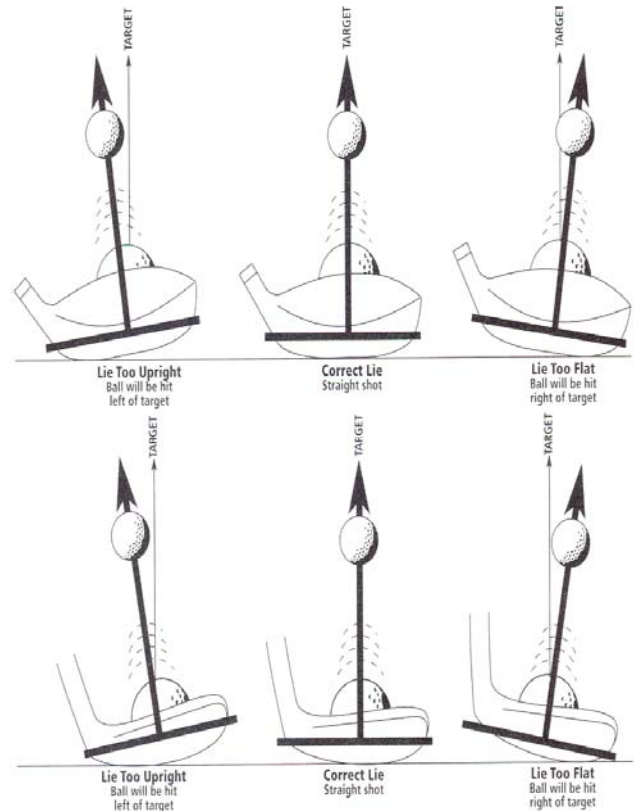


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There is a myth associated with the lie angle that exists with all levels of golfer from the novice or high handicapper to the touring professional. Many golfers think that if the lie is wrong so that the sole contact with the ground is towards the heel, the reason the ball flies to the left (right handed swinger, to the right for us southpaws) is that the heel grabs the ground and forces the face to rotate closed, and the ball will fly to the left. Vice –versa; they think that the pushed shot from an incorrect lie comes from the toe side of the sole digging into the ground, which causes the face to turn open. WRONG. No matter how square you hold the leading edge of the club head to your target, as the toe rises up, the face AUTOMATICALLY points to the hook side of the target. The opposite is true for when you hold the leading edge if the face square to the target but tilt the heel up off the ground—the face now points to the fade side of the hole.<sup>3</sup>

The Dynamic Lie Fitting Method is the best way to determine the proper lie angle for a given player. The club fitter places special contact sensitive tape along the sole of each club to be tested. Then a 2'x1' piece of ¼" plastic board is placed on the ground, a ball is placed on the board and the golfer attempts to hit the ball. In so doing when the sole of the club comes in contact with the board a mark is transcribed on to the tape. From the distance the mark is from the centerline of the sole the club fitter then can determine if the lie can stay as or should be bent more upright or flatter. Cast clubs can be bent at best 2 degrees in either direction dependent on the type of steel used to make the mold. Forged clubs are much easier to bend because of the steel used in the forging process.



NOTE: Even though the leading edge of the club is perpendicular to the desired direction of flight, the plane on the face of either a too upright or too flat lie club will hit the ball either left or right of the target, respectively.



Next month - LOFT

<sup>3</sup> The Search for the Perfect Golf Club, Tom Wishon, Tom Grundner. – Sports Media Group, 2005 pg26



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