

I was custom fit at the big golf store.

The longer the length of the driver, the farther you'll hit the ball.

I am not a good enough golfer for custom fit clubs to matter.

Women's clubs are designed for women golfers.

The lower the loft on your driver, the farther the ball will go.

THE NEW 12 MYTHS

THAT COULD WRECK YOUR GOLF GAME

Modern golf clubs hit the ball farther.

You can't go wrong if you stick with well known brand name clubs.

Your new driver has a larger sweet spot.

When I buy a club with an S-flex shaft, I know I am getting stiff flex.

The faster you swing, the stiffer your shaft should be.

I bought a big company's adjustable hosel driver so I already have been custom fit.

by **Tom Wishon**

CUSTOM MADE EQUIPMENT FIT AND BUILT FOR YOU BY:

THE NEW
12 MYTHS
THAT COULD **WRECK**
YOUR GOLF GAME

excerpts from:
The Search for the Perfect Golf Club

by **Tom Wishon**

Books by Tom Wishon:

The Golf Club Identification and Price Guide (1984)

The Modern Guide to Golf Clubmaking (1st Ed. 1986, 2nd Ed. 1989)

The Graphite Shaft Addendum (1987)

The Modern Guide to Shaft Fitting (1991)

The Modern Guide to Shaft Fitting Addendum (1991, 1992, 1993)

The Practical Clubfitting Program (1997)

The Search for the Perfect Golf Club (2006)

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The Search for the Perfect Driver (2007)

Common Sense Clubfitting: The Wishon Method (2008)

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Contents

Introduction	4
Myth #1.....	5
<i>Modern Golf Clubs Hit the Ball Farther</i>	
Myth #2.....	7
<i>The Lower the Loft on Your Driver, the Farther the Ball will Go</i>	
Myth #3.....	9
<i>You Can't Go Wrong with Well Known Brand Name Clubs</i>	
Myth #4.....	11
<i>Your New Driver has a Larger Sweet Spot</i>	
Myth #5.....	13
<i>When I Buy a Club with an S-flex Shaft, I Know I am Getting a Stiff Flex</i>	
Myth #6.....	15
<i>The Faster you Swing, the Stiffer your Shaft Should Be</i>	
Myth #7.....	17
<i>The Longer the Length of a Driver, the Farther You'll hit the Ball</i>	
Myth #8.....	20
<i>My Clubs are Just Like the Ones the Pros Use</i>	
Myth #9.....	22
<i>Women's Clubs are Designed for Women Golfers</i>	
Myth #10.....	25
<i>I am not a Good Enough Golfer for Custom Fit Clubs to Matter</i>	
Myth #11.....	26
<i>I was Custom Fit at the Big Golf Store (or Pro Shop, or Online)</i>	
Myth #12.....	29
<i>I Bought a Big Company's Adjustable Hosel Driver so I Already Have Been Custom Fit</i>	
About the Author.....	32

Introduction

With 40 yrs in the golf equipment business and being a golf club designer since 1986, I have learned a ton about the science of golf club performance. I've also learned a lot about the way golf clubs are sold to golfers. For each of the golf companies whose models you see displayed on the racks in golf stores and pro shops, the business model for selling golf clubs is the same.

After the product development people create the clubhead, shaft and grip, the marketing department conceives the claims for improvement touted in the ads. The clubheads, shafts and grips are then built to a series of standard specifications so the clubs can be shipped to all the golf stores and pro shops to be stocked and sold off the rack to golfers.

Golfers read the ads and head into their local golf store to look, feel and buy. When the vast majority never hit the new clubs any better than their previous clubs nor achieve the claims for performance improvement in the ads, they simply shake their heads and admit, "Damn this is a hard game, I'll have to work on my swing to hit this club better."

Because golf is a difficult game to master, few golfers question whether out there somewhere is a set of golf clubs that really could enable them to hit the ball farther, straighter, and/or more consistently so they could play the best of their ability and enjoy the game more. After all, the clubs come from a well known company so the fault can't possibly be with the clubs. Or could it?

Unfortunately this scenario has played itself to the same result far too many times. Since day one of my career, I have had a sincere passion for learning how golf clubs can be made to enable any golfer to play to the best of their ability. I've also rolled my eyes at many of the claims attached to promotional ads for golf clubs. That's why I write books about golf clubs. And that's why I sincerely hope you can use a little of what I share in this book to guide you to the best club buying decisions you can possibly make.

Best wishes in this great game,

Tom Wishon

Myth #1

Modern Golf Clubs Hit the Ball Farther

Four things primarily determine the distance you hit a golf ball: the loft angle on the clubhead, the length of the club, the speed with which you swing and how close to on center you hit the shot. There is also this: the longer the length, the lower the loft, the heavier the weight and the stiffer the shaft—the harder the club will be to hit. Over the past few years your swing speed has probably stayed about the same, but the loft angles and the length of your clubs have not.

Little by little over the past 30 years or so, in order to say their clubs “hit farther,” the club companies have been tinkering with the loft angles on the faces of your clubheads—lowering them a bit at a time every so many years. As a result, every club has moved “up” by almost two numbers. So, when you go to a driving range for “demo day” and you hit that new 7-iron farther than your old 6- or even 5-iron, you now know why. It’s because that shiny new 7-iron in your hands was a 6-iron only a few years ago, and probably a 5-iron a few years before that.

VANISHING LOFT DISEASE: Evolution of Men's Wood & Iron Lofts				
CLUB	1960s - 70s (degrees)	1980s (degrees)	1990s (degrees)	2000s (degrees)
1-iron	17	17	N/A	N/A
2-iron	20	20	18	N/A
3-iron	24	23	21	18-20
4-iron	28	26	24	20-22
5-iron	32	30	27	23-27
6-iron	36	34	30	26-31
7-iron	40	38	34	30-35
8-iron	44	42	38	34-39
9-iron	48	46	43	38-43

VANISHING LOFT DISEASE: Evolution of Men's Wood & Iron Lofts

PW	52	50	47	42-47
GW / AW	N/A	N/A	51	46-51
SW	56	56	55	54-58
Driver	11	11	10	7-13
3-wood	16	15	15	13-14
4-wood	19	18	17	15-17
5-wood	22	21	19	17-18
7-wood	N/A	25	23	20-21

Note: N/A = This club was typically not available during this era

Note: Lofts per club for 1960s - 1990s are industry average. For 2000s, this represents the range in lofts among club models offered in 2013

In some ways it would be comical if it didn't have such expensive results. It has resulted in golfers buying several clubs that are, in effect, designed from the factory to be un-hittable in the hands of the average golfer, forcing golfers to buy additional clubs to replace clubs that they otherwise would not have needed.

Again, let me start with some background.

In the world of Clubfitting there is something called the "24/38 Rule." Basically, it says that the majority of golfers cannot consistently hit an iron that has less than 24-degrees of loft or is more than 38 inches in its length. The reason is that a club like that requires swing skills that most average golfers do not have the ability to acquire.

Thirty years ago the 24/38 line fell on the other side of the 3-iron. So, when you bought a typical 3-iron through pitching wedge iron set, you could reasonably expect to hit each of those clubs. Because of the "vanishing loft disease," the 24/38 line has now moved to the shy side of the 5-iron—making the 3-, 4- and even the 5-iron un-hittable for most golfers.

So, what are you supposed to do? It's simple. The club companies want you to buy three more clubs to compensate for the corner that they painted you into. You are now supposed to buy "hybrid" clubs, which are easier-to-hit

substitutes for the 3-, 4- and 5-irons that are no longer hittable by the majority of golfers. In addition, as all the irons have now moved up and away from the sand wedge, you are now supposed to buy something called a “gap wedge” to fill in the “gap” they created with their loft-shrinking marketing stunts.

Myth #2

The Lower the Loft on Your Driver, the Farther the Ball will Go

Yup, that's true...with some of your fairway woods, hybrids and irons. But even with the swing speed of a Bubba Watson, there is a point that the driver loft will be too low even for him to generate his longest driving distance. Sure, for Bubba that loft number is a single digit; but for the rest of us with our much slower swing speeds, to achieve our maximum possible distance we need a higher loft, one that for many golfers is a number with a “teen” after it.

I know that sounds counter intuitive so I'll explain it this way.

Imagine you have a garden hose turned on full blast and you're trying to get as much distance as possible out of the water spray. Now, suppose someone turns the water pressure back and you see the loss of distance in the spray. So, what do you automatically do to try to get some of that distance back? Exactly! You raise the angle of the nozzle.

It's the same thing with the driver.

If you're among the relatively few golfers who have a very high swing-speed (i.e., the hose is on full blast), you need a lower loft to get maximum distance. If, like most golfers, you have a slower swing speed (i.e., the water pressure is lower), you need a higher loft to get more distance. What you CAN NOT do is match a low swing speed with a low lofted driver! That's the equivalent of lowering the water pressure and lowering the nozzle angle, and wondering why the water isn't going as far.

So, how fast can you reasonably expect to swing your driver with control?

Here are some numbers that might give you a sense of where you probably fall.

- Average Lady Golfer: 65 mph
- Average Male Golfer: 87 mph
- Average Lady Tour Player: 95 mph
- Average Male Tour Player: 113 mph
- Female Long Drive Competitors: 105-120 mph
- Male Long Drive Competitors: 135-155 mph

In the chart at the end of this myth I have boldfaced and underlined the box at each swing speed where you will get maximum distance. Notice anything strange?

Based on a level angle of attack, you will not achieve maximum carry distance with any loft lower than 15 degrees, until your swing speed with control gets at or near 90 mph. Now, I ask you: when was the last time you walked into a golf retail store and saw a driver with 17 degrees of loft, or 15 degrees? How about a 13-degree? May we then assume that all of you have swing speeds with control of 100+ mph—a speed greater than the average LPGA Tour player and only a bit less than the average PGA Tour pro?

Are you getting the picture here?

Have you ever wondered why you sometimes hit your 3-wood or even your 5-wood as far or even farther than you hit your driver? Now you know why.

Think about that the next time you walk into the next fifteen-thousand square foot, big-box retail golf store, and see row after row of 9- and 10-degree drivers on the rack.

You think those clubs were designed for YOU?

TOTAL DISTANCE IN YARDS FOR CARRY + ROLL					
Swing Speed (mph)	Driver Loft 9°	Driver Loft 11°	Driver Loft 13°	Driver Loft 15°	Driver Loft 17°
50	81	87	93	96	<u>99</u>
60	117	127	133	137	<u>140</u>
70	155	164	171	176	<u>180</u>
80	198	206	212	<u>216</u>	211
90	229	237	240	<u>245</u>	236
100	262	<u>269</u>	265	258	252
110	<u>295</u>	288	281	273	264

*Note: The total distances shown here are achieved using a **level angle of attack** into the ball with average fairway conditions at sea level. If you have an upward angle of attack, you can use a lower loft; if you swing with a downward angle of attack, you need to use a higher loft. In addition, if your fairways are firm/hard, you want to lower the loft by 1-2 degs to gain the most roll. Who can tell you what is your best driver loft to achieve your maximum distance? A trained, experienced clubmaker.*

Myth #3

You Can't Go Wrong with Well Known Brand Name Clubs

It's no revelation that consumer spending is heavily driven by marketing. High on the list of successful marketing techniques are campaigns intended to associate a brand or product with image and status. In a nutshell, the more you see or hear about a brand or a product, the more advanced the product's technology sounds, the more cosmetically pleasing it looks, the more expensive it is, then the better it must be, right? Golf clubs are no different.

The big golf club companies employ marketing techniques to build their image from which the belief in quality comes, followed by the demand from golfers to buy the clubs. They pay pros all over the planet to play a version of their clubs and put the company's name on their golf bags and hats to be seen during televised tournaments. They air lots of television

commercials and place tons of print and internet ads which either show the pros that play their clubs or tout the latest and greatest design features of the clubs. The marketing entices the pro shops and golf retail stores to stock the clubs so the golfers come in to buy.

If the pros play their clubs and if I see their clubs everywhere I turn, they must be the best clubs for me. Right?

On the other hand, in every merchandise area there are also quality brands and products that fewer consumers have heard of. In the face of the brands and products with high visibility, it can be very easy for consumers to believe the lesser known products are of lower quality. After all, a lack of visible marketing must mean few people are buying them which in turn says they're not that good. Right?

Among the themes in marketing are claims for performance. With cars, a claim for a specific gas mileage or horsepower, or accessories like GPS are common elements in the car companies' marketing. With computers, it can be processor size/speed, screen resolution, size and weight. With cell phones, claims for multi-tasking and high speed connectivity are stressed. With golf clubs, same thing; how many times have you heard a claim for 10 more yards or straighter shots?

Now think about whether these items all deliver what they claim. Cars? Computers? Cell Phones? Yup, they almost always do what the companies say they do. If they don't, you complain and get your money back. Golf Clubs? If you don't get those 10 more yards or hit more fairways and greens, the sales person tells you to go take some lessons as if it is your fault the clubs don't perform as advertised. After all, it's a tough game, right?

Plain and simple, the reason a high percentage of golfers who buy the well known brand name clubs off the rack rarely achieve the performance claims in the marketing is because these clubs don't fit each individual golfer's size, strength, athletic ability and swing characteristics.

To get that performance improvement through custom fitting, you need to have your clubs fit and built from scratch to fit to your swing by a good,

experienced custom clubmaker. To do that, the clubmaker is going to build your custom fit clubs from clubheads from a company you haven't heard of. Why? First, because few of the big golf companies ever sell their clubheads as components. Second, because the Clubmaker needs to have a source for high quality golf club components offered in a wide variety of lofts, lies, face angles, weights, flexes, and sizes so he can fully meet each golfer's unique custom fitting requirements.

Even if the big golf companies sold their components, the Clubmaker still would not be able to find all the custom options he needs to fit each golfer. Here's an interesting fact in the face of all this brand, image and status marketing. Do you know what companies designed the first adjustable hosel woods, the first variable thickness clubface, the first high COR face fairway woods, the first high COR face irons, the first graphite and metal construction woodhead, the first milled face wedges, the first hybrid clubs to replace long irons, or the first clubheads with movable weights to alter shot shape?

If you guessed some of the golf club companies with well know brand names, I'm sorry, you're wrong. All these design innovations and about 50 more golf club technology firsts were invented by smaller golf club companies you probably haven't heard of. But these are the same companies from which your custom Clubmaker will obtain the clubheads from which he or she will fit and craft the custom made golf clubs that can enable you to play to the best of your ability.

Myth #4

Your New Driver has a Larger Sweet Spot

Actually, there are some drivers which really do have a larger "sweet spot," but only if you are prepared to re-define that term as a face that doesn't lose as much of its ability to flex inward built into a clubhead that won't twist as much when your swing causes you to hit the ball a little off-center. The problem is, there is no such thing in the golf industry as a "sweet spot-o-meter." There is no gauge that you can use to determine which clubs do or do not possess what they claim. Currently, the only "measurement devices" that are used to inform you of a club's "sweet spotted-ness" exist in the ads that attracted your attention in the first place!

The “sweet spot” is a term that’s commonly found in those golf club ads; but it’s misused by almost everyone. Technically the sweet spot is a point inside the head called the Center of Gravity that’s about the size of the sharp end of a pin. It can’t get “larger” and it can’t get “smaller.” It just... is.

IF you have a club that has the right loft for your swing type and swing speed, IF it strikes the ball square, IF it hits the exact center of the golf ball directly in line or slightly above this tiny sweet spot and IF the face is well designed—then the ball will fly the greatest possible distance for your particular swing. Any deviation toward the heel or toe from this perfect contact and the head will start to twist, not only imparting a curving flight to the ball, but causing a loss of distance.

The farther your point of contact is from this tiny sweet spot, the more distance and accuracy you lose. To be more specific, depending how well the designer manipulated the face thickness over its entire area, you will lose at best about 3-4 yards flight distance and at worst, as much as 10 yards, for each half-inch you miss the center of the face.

When club companies talk about an “increased sweet spot,” what they’re really saying is one of two things. First, they’ve done things in the clubhead’s design to increase the moment of inertia (MOI) of the clubhead. In other words, they put weight on the sides and/or in the back of the head to make it twist a little less (with the accent on little) when you miss the sweet spot. The second possibility involves what I’ve been talking about, the design of the face itself.

You probably know that a driver face flexes inward when you hit the ball. The more you can flex the face, the higher your ball speed will be when it comes off the face. By making the outer edges of the face a little thinner than the center, it’s possible to make the face flex a little more when you hit the ball off center so you won’t lose as much distance.

Typically, this takes the form of a face that is a little thicker in the center, but then thinner in the areas all around, something called a “variable thickness face.” Something, by the way, that was invented by one of the golf companies you probably haven’t heard of, not by one of the large compa-

nies you have. However, let's subject all this to a reality check.

Since the driver with the larger sweet spot they sold you probably has a longer length than most of the pros use on the PGA Tour, and since the longer the length the more you hit the ball off center; why not simply go get fitted for a driver with its length matched to your swing so you don't have to worry as much about sweet spots and twisting—large, small or in-between?

And while you're at it, why not really do your game a favor and have the driver fitted for the proper loft, face angle, shaft, weight, and grip size at the same time? Then you'll really discover what the words "game improvement design" mean.

Myth #5

*When I Buy a Club with an S-flex Shaft,
I Know I am Getting a Stiff Flex*

Sorry, but my guess is that you have no idea how stiff the shafts are in your golf clubs. You see, the "S" flex code (or X, R, A or L) you see on your shaft is virtually meaningless.

Most golfers know that shafts come in a variety of flexes: X for extra stiff, S for stiff, R for regular, A for amateur but which really means senior flex, and L for ladies. What most golfers don't realize is that those letters (and only those letters) represent just about everything upon which there is almost universal agreement when it comes to the flex of your shafts.

You say you want a "stiff" shaft in your driver? Fine. Whose definition of "stiff" do you want to use? Because one shaft company's "stiff," is another company's "regular," which is another company's "A-flex." Worse, the flex rating of one model of shafts might be a hopeless variance with that of another model, even within the same company!

If it sounds as if the concept of shaft flex is hosed to the point of insanity you are exactly right. If a part of the reason you buy a golf club is because it has a stiff, regular, senior, or ladies flex shaft in it, you have no idea what

flex you're actually getting—nor do the sales people in the big golf store or the pro in the pro shop selling the clubs.

The reason for all this confusion with shafts? Simple. There are no standards in the golf industry to ordain the actual stiffness of each letter flex, so each shaft maker and golf club company is free to define their flexes any way they want. The S-flex from one company might be for a golfer with an 80-90 mph swing speed, while the S-flex from another is designed for a 100-110 mph golfer. The same goes for all the other flex letters! Even same flexes within different shaft models made by the same company do not necessarily have the same swing speed rating.

It's an interesting way to make one of the central equipment components for an entire industry, isn't it? Try doing that in any other sport! In tennis where string tension is a racket's equivalent of shaft flex in a golf club, string tension is measured and set in pounds per square inch of force.

Thus, when you get a new racket and have the strings set at the same 55 pounds as the strings in your old racket, you'll be playing with the same "flex" that you're used to. Not so in golf, however.

You might be measured for your swing speed in a retail golf store; but I am here to tell you that virtually none of the major golf club companies ever provide their retailers with a reference chart to indicate what swing speed matches up with which flex in each shaft model they offer. So, the recommendation of the retail sales person will quite possibly be either a guess; or it will be based on which flex they have more of in their store inventory at the moment.

The proper way to do it is to have an experienced custom clubmaker measure your swing speed, then observe your swing mechanics to look for things like your downswing tempo, how much force you use to start the downswing, and where in the downswing you unhinge your wrists. The clubmaker will then observe how high or low you hit the ball with different clubs to determine what real shotmaking improvements could be associated with the shaft's performance for your game.

He or she will then reference the files of shaft information that they

get from experts in the custom clubmaking industry, or from research on shaft testing that they or other clubmakers have done and made available to each other. Clubmakers will have far more precise data of what shafts equate to what swing speeds, than will any person working in a pro shop or big box golf store.

After that, the Clubmaker will make a recommendation and probably build a test club(s) for you to hit to obtain feedback. Some clubmakers have a device that will allow them to instantly change shafts in different clubheads so you can actually test hit the different shaft options. The clubmaker might also have a launch monitor that can be used to actually measure the launch angle, ball speed and backspin contribution of the shaft as you swing the club. And in the end, the experienced clubmaker will come up with a far more accurate recommendation of which shaft is likely to perform and feel best to you.

Myth #6

*The Faster you Swing,
the Stiffer your Shaft Should be*

At several points in this book I mention that a good custom clubmaker will, at some point, measure your swing speed. Among the reasons this is done is to narrow down your shaft possibilities to only those that have the appropriate amount of flex for that speed. You might then conclude that's the end of it. If you have a higher swing speed, you get a stiffer shaft; and a less stiff shaft if your swing speed is lower.

But it's not always true. Swing speed is only the beginning of the shaft fitting process and, if the shaft fitting is done properly to incorporate all the other swing elements which dictate your best shaft, you might wind up with a shaft that is quite different from what you might have originally thought.

Among the things you will learn in this booklet are: a) the flex letter code printed on your shaft means nothing; and b) that the shaft does not act like a buggy whip to slingshot the ball down the fairway. So, if the flex of the shaft does not slingshot the ball down the fairway, what does it do?

What looks like a buggy whip effect is not caused by the shaft at all. It's caused when the golfer releases his wrist-cock angle during the downswing. That's when the shaft's stiffness or flexibility does its work. The purpose of a shaft's total flex design is to work in conjunction with your downswing force and your wrist-cock release (along with the clubhead loft, the clubhead center of gravity, and whether you swing up, level or down at the ball) to determine the final launch angle, trajectory and backspin of your shot. The flex also has a lot to do with the "feel" of the club both before and when it impacts with the ball. Shaft bending feel is a huge part of shaft fitting for some golfers but, for now, let's just stick with the wrist-cock release issue.

When you start the downswing, as long as you keep your wrist-cock angle hinged, your arms and the club are both moving at the same speed. Once you start to unhinge the wrists, the arms begin to slow down while the club accelerates to a higher speed. The clubhead, which has been lagging behind the shaft all this time, now reacts to your arms slowing down and shoots forward to actually push the clubhead ahead of the shaft.

That, in turn, causes the shaft to bend forward which increases the loft at the moment of impact, which in turn increases the spin and launch angle of the ball, which influences it's trajectory, which ultimately effects the distance the ball will travel.

The thing is, not all swing speeds are "created equal."

Let's take three hypothetical golfers. One unhinges his wrist-cock angle quite early in the downswing, the other in the middle, and the third at the very end. The golfer who releases too early will have his shaft bend forward too soon. This causes it to rebound back to arrive at impact in a straight position and all those possible trajectory effects from the shaft will not happen. Compared to an early release, it is better to be the second golfer and release your wrists at the midpoint of the downswing; or, best of all, to be the third golfer who releases at the very end, a split-second before impact. In short, the later you unhinge your wrist-cock angle, the more the shaft flex can have an effect on the flight of the ball.

The point here is that all three of those golfers could have exactly the same

measured swing speed! But should all be using the same shaft? Not hardly.

But there is even more to it than that. To really get the proper shaft for your clubs you also need to consider how smoothly or forcefully you make the transition from the end of the backswing to the start of the downswing, how aggressive or smooth your downswing tempo is, when you unhinge your wrist cock angle and how consistently you do each of the above.

Plug those factors into the equation, and then your trained clubmaker can select your shaft. Just saying “X swing speed = Y shaft” won’t cut it. Now, one more question before I let you go on to the next myth.

When you bought your set of clubs off-the-rack at the big box golf store by the freeway, did anyone talk to you about the effect of your transition force, downswing tempo, or wrist cock angle on the shaft they recommended for you?

Or, maybe I should put it another way: how lucky did you feel that day?

Myth #7

*The Longer the Length of a Driver,
the Farther You’ll hit the Ball*

This topic really is a sore point with me because so many golfers cannot hit their driver to the best of their ability because of it.

If you wander into any golf retail store, you’ll notice that the men’s drivers from all the golf club companies are between 45 1/2 and 46 1/2 inches in length. Yet, in every year from 2005 through 2012, the average driver length among all players on the PGA Tour was 44.5 inches.

Now, does that not strike you as being slightly odd? I mean, here are the best players on the planet—players for whom distance off the tee is absolutely critical to their chances for success—and they are routinely using drivers that are shorter than the ones that are being peddled off the rack to you!

Let me tell you another story. For almost the entire 20th century leading

up to the 1980s, the standard driver length for men was 43", for women 42". Did humans all of a sudden get 3" taller starting in 1980? Nope. What happened was simply a result of competition to sell more golf clubs in an overcrowded golf equipment industry, and to do so at the expense of the vast majority of golfers' potential for playing proficiency.

Every golfer on the planet thinks that a longer driver length means a higher clubhead speed, which in turn means more distance. The fact is, the only golfers who actually do experience a higher clubhead speed from a longer length when they hit the ball are golfers with a later to very late unhinging of their wrist-cock angle on the downswing. That's maybe 25% of all golfers, if that.

The next problem also deals with percentages, but this one's far more certain. Among 100% of all golfers, the longer the length of the driver, the more chance they have of hitting a higher number of off-center shots. That fact right there is why the average driver length on the PGA Tour has been 1 to 2 inches shorter than the length of the drivers being sold off the rack to you and your friends. Even the pros, as good as they are, know they cannot hit a longer length driver as consistently solid and on-center and as accurate as one a little shorter.

In my estimation from over 30 years of Clubfitting research, the drivers presently sold off the rack in shops are too long for 90% of the men and 98% of the women golfers who buy them. Let me tell you precisely who can successfully use one of the 45 1/2" to 46 1/2" drivers that populate every golf store on the planet.

If you are a golfer with a smooth tempo, if you swing with an inside/out to square swing path, have a late release of your wrist-cock angle, and a good sense of swing timing and rhythm, then you are in luck. Go right ahead with my blessing and use that pole. If that's not your swing, then go get a new driver fitted and built from scratch; only this time get it not only built to the right length for your swing; but also get the shaft, loft, face angle, grip size and swingweight that's also best for your swing.

The pros on tour know they can't hit the length of the driver you bought off-the-rack as consistently on center or as straight as they can one that is

shorter. Believe me, they've all tried because they all know how valuable another 10-15 yards off the tee could be to their bank account. They also know how tough it can be to grow their bank account when they're hitting their second shot with the ball sitting in four inches of rough.

The irony is that here you are hitting most of your drives on the toe or heel, watching the ball slice into the trees, praying you can make that one good swing out of ten with your driver that is 2" longer than the average tour player's driver and thinking the whole time that it's your fault.

So, how do you know what is the right length for you?

The way a good clubmaker determines proper length is by first measuring the distance from your wrist to the floor and referencing that dimension to a chart to obtain a starting point only for what will be your driver length recommendation. After that, the clubmaker looks at your swing path, tempo, release and your golf athletic ability to determine if your best length is a little longer, the same or maybe even a little shorter than what the chart starts out saying.

WRIST TO FLOOR MEASUREMENT FOR INITIAL CLUB LENGTHS		
Wrist to Floor	Driver Length	5-iron Length
27" to 29"	42"	36 1/2"
29+" to 32"	42 3/4	37
32+" to 34"	43 1/2	37 1/2
34+" to 36"	44	38
36+" to 37"	44 1/4	38 1/4
37+" to 38"	44 1/2	38 1/2
38+" to 39"	44 3/4	38 3/4
39+" to 40"	45	39
40+" to 41"	45 1/4"	39 1/4
41+" to 42"	45 1/2"	39 1/2
over 42"	46 and up	39 3/4 and up

Note: the wrist-to-floor measurement is used as the starting point only for determining club lengths for the golfer. Final length determination includes adjustments based on the golfer's swing path, swing plane, downswing tempo, point of release and overall golf athletic ability. To obtain the measurement, wear flat sole shoes, stand comfortably erect, shoulders perfectly level, arms hanging relaxed at the sides. The measurement is made from the major wrist crease at the base of the palm of the upper hand in the grip on the club.

Notice that these are all decisions that are best made by an experienced custom club fitter working face to face with YOU—not by the marketing and sales departments at some club company 1000 or more miles away.

Myth #8

My Clubs are Just Like the Ones the Pros Use

Not... on... your... life.

The clubs you buy in the retail stores are to the clubs the pros use, as the Chevrolet SS in your driveway is to the one Jeff Gordon drives in NASCAR races. I'll use a set of Payne Stewart's clubs as an example; and, trust me, this process is the same for most pros on any pro tour.

In 1999, I had the pleasure of designing what tragically turned out to be the last set of clubs Payne Stewart played in competition. His set required four separate visits by Payne to my workshop over the course of six months.

At the end of 1998, Payne had just concluded a contract with the former Spalding company that required him to play the company's investment cast cavity back irons, but he was most eager to get back to playing with a forged carbon-steel blade design. I kept spare "raw forgings" from sets that I had earlier designed for just such projects as Payne's.

Payne's first visit was for me to find out everything he liked to see when he set the club down behind the ball. This would include things like: overall size, leading edge shape/radius, topline thickness, toe shape, toe transition curve, hosel offset, sole width, sole radii, and many other subtle areas of head shape and design. Between visits one and two, I ground, filed, bent and formed Payne's visual preferences into each head in the set.

During visit number two, Payne stood right next to me as I worked each head into a nearly final form. Payne would insert a shaft in each head, assume an address position, look, look again, scratch his head and, in whatever way he could, express what was good, bad, or indifferent about each clubhead. From this, I now had a much clearer picture of what he wanted and could final grind each head after he left. Matters like center of gravity positions were my responsibility to manipulate according to the ball flight trajectory wishes that Payne had expressed versus what he had played previously. During the third and fourth visits, the still not completely finished heads were assembled with different shaft options. Payne hit shot after shot with each club, commenting only when he felt it appropriate to clarify his desires for the feel of both the clubhead and the shaft during the shots. Only when Payne gave final approval to each club was his job complete, and mine shifted into another gear.

All tour players require a minimum of two identical sets of clubs, one to travel with and one to keep in a safe place, should the nightmare scenario occur of their clubs being lost or even stolen. Because of that requirement, I also had to make templates for each head profile along with all sorts of measurements and photographs that would allow me to re-make the backup set completely from scratch without having any of the original clubs to guide me. All totaled, I probably spent somewhere in the area of 300 hours from start to finish on the two identical sets.

For those golfers who believe the pros all use the same clubhead model sold off the rack to everyone, I'll never forget when I learned the facts of life about that one. Back in 1997 when the former Lynx Golf Company succumbed to their competition and closed down, I was part of the team that completed the negotiations to buy all the assets of Lynx. After all the papers were signed, the day came when the semi-trailers rolled in with all of the "physical assets."

I opened boxes and boxes and more boxes of Lynx branded clubheads. As I was looking over many of the clubheads that carried familiar Lynx model names, it hit me that while I remembered the model names, what was in my hands were most certainly not the same models Lynx had shipped to their retailers to sell off the rack to golfers.

During the many years Lynx had been in business, the array of tour pros they had signed to carry their bag and play their clubs included quite a number of current and future members of the World Golf Hall of Fame. Plain and simple, what I was seeing were examples of how some of their tour players did not like this or that about the production model and insisted Lynx make them a different version.

It's something you should keep in mind the next time you see an ad implying you will be playing clubs that are "just like the ones the pros use." Trust me. You won't.

Myth #9

Women's Clubs are Designed for Women Golfers

You see sets of clubs at your local golf store all displayed under a sign reading: "Women's Clubs." What could be more sensible than to assume that these clubs are uniquely designed for women?

Well... sometimes this is true, but in many (if not most) cases, it is simply not so.

In the following chart is a comparison of the men and women's clubs from one of the most recognized golf club companies in the game. And while you're looking at it, check out the men's and women's driver lengths and swingweights. According to this company, women are supposed to buy drivers that are longer than the 44.5" average driver used on the PGA Tour! Yes, the PGA Tour, where the best MALE players in the game compete.

A COMPARISON OF MEN AND WOMEN'S GOLF CLUBS									
Women's Model					Men's Model				
	Lofts	Length	Face Angle	Swing Weight		Lofts	Length	Face Angle	Swing Weight
Driver	9.5°	45"	square	D0	Driver	9.5°	46"	square	D0
	10.5°	45"	square	D0		10.5°	46"	square	D0

A COMPARISON OF MEN AND WOMEN'S GOLF CLUBS									
Women's Model					Men's Model				
Fairway Woods	Head Loft	Length	Lie	Swing Weight	Fairway Woods	Head Loft	Length	Lie	Swing Weight
	#3 - 15°	42"	57°	D0		#3 - 15°	43"	57°	D0
	#4 - 17°	41.5"	57.5°	D0		#4 - 17°	42.75"	57.5°	D0
	#5 - 19°	41.25"	58°	D0		#5 - 19°	42.25"	58°	D0
	#7 - 21°	40.75"	58.5°	D0		#7 - 21°	41.75"	58.5°	D0
	#9 - 23°	40.5"	59°	D0		#9 - 23°	41.5"	59°	D0
Irons	Loft	Length	Lie	SwgWt	Irons	Loft	Length	Lie	SwgWt
#3	18°	38.5"	60°	C2	#3	18°	39.5"	60°	D0
#4	20°	38.25"	60.25°	C2	#4	20°	39.25"	60.25°	D0
#5	23°	37.5"	61°	C2	#5	23°	38.5"	61°	D0
#6	26°	36.75"	61.75°	C2	#6	26°	37.75"	61.75°	D0
#7	30°	36"	62.5°	C2	#7	30°	37"	62.5°	D0
#8	34.5°	35.5"	63°	C2	#8	34.5°	36.5"	63°	D0
#9	39°	35"	63.5°	C2	#9	39°	36"	63.5°	D0
PW	44°	34.75"	64°	C3	PW	44°	35.75"	64°	D1
AW	49°	34.5"	64°	C3	AW	49°	35.5"	64°	D1
SW	54°	34.25"	64°	C5	SW	54°	35.25"	64°	D3
LW	54°	34"	64°	C5	LW	54°	35"	64°	D3

This is a classic example of how business gets in the way of what's good for the golfers. If I were a fly on the wall when these specifications were drawn up, I'm betting the discussion went something like this... "You know, women's club sales don't comprise more than 8% of our total numbers so just use the men's heads for the women with different colors but just cut their L-flex shafts shorter. That way we don't get stuck with the extra tooling expense for a separate women's model."

The majority of women's driver heads are the same as a men's model, built with a little lighter weight L-flex shaft and cut to a length that is shorter than the men's, but still the same length as what the average male PGA Tour player uses. And it gets worse when you look at the loft of those drivers.

Rarely are the lofts on the ladies' drivers offered higher than the men's; which means they're not nearly high enough given the average woman's 65mph swing speed. There are hardly any women's drivers offered in the entire golf industry with the 15, 16, or 17 degree lofts that most women golfers need to get their maximum distance.

As a result of the above, how many women have found themselves on the tee with a driver they can't hit (because it's too long) and, even when they do connect, the ball doesn't come close to flying as far as it should (because it's the wrong loft)?

Worse yet, how many women have quit the game because they are "just no good at it," not knowing that the fault was not all in their athletic ability but because they were using clubs that were designed from the factory to be essentially unusable in their hands.

The point here is that there are ladies, senior and even some junior golfers who can and should play with the same fitting specifications that you would find in men's clubs. And there are some men who should be playing with what are labeled by the golf industry as "senior," or "ladies" club specifications. The only way to know is to be properly and professionally fitted.

Properly fitted golf clubs know no gender discrimination. They only know if they are properly matched to how their owner swings.

Myth #10

*I am not a Good Enough Golfer
for Custom Fit Clubs to Matter*

Okay, I know what you're thinking and I've heard it a zillion times in my career.

“That’s interesting and all that; I can see why the pros all need to be fit, but I’m just not good enough to benefit from custom fitting.”

Really? Did you ever think it might just be the reverse?

Let me put it another way. A few years ago at the PGA Tour’s New Orleans stop, after finishing his second round, tour pro Alex Cejka took off for the airport thinking he’d missed the 36-hole cut. When his cell phone rang telling him he actually was playing on the weekend, TSA regulations prevented Alex from getting his clubs in time to make his tee time for the third round.

With no other alternative Alex grabbed a set of rental clubs from the pro shop and proceeded to shoot 71-71 to finish the tournament! The point is best expressed by the marketing tag line for the PGA Tour – “these guys are GOOD.” In short, the better the player, the more the player can adjust his swing to pretty much play as well with clubs that do not fit. You and I on the other hand are not that good; as such, we need clubs that are fit to our ability and our swings to help make up for the mistakes we do make in our swings and how we play.

Now, let’s be clear—I am not saying that by being custom fit you can somehow go from being an average player to qualifying for next year’s U.S. Open. Buying new clubs—even truly custom fitted ones—is NOT a substitute for learning and “grooving” the proper swing fundamentals. It never has been. It never will be.

I AM saying, however, that equipment that doesn’t fit—the wrong length, lie, loft, shaft, face angle, grip, flex, or weight—will keep you from being all that you could be as a golfer. I have worked with a lot of teaching professionals and I can assure you, golfers who take lessons with properly fit clubs adapt to swing coaching much faster and more successfully than golfers who take lessons using golf clubs that are poorly fit.

To get back to our myth, the pros like Alex Cejka and low-handicap golfers—male or female—are skilled enough to be able to adjust their swing to play well with almost any club. They also tend to self-fit themselves by hitting different clubs until their ability allows them to know what’s right for them and their swing.

You on the other hand probably are not as skilled; which means you need properly custom fit golf clubs even more than they do.

The idea of custom fitting is to have clubs in which each fitting specification is matched to your size, strength, athletic ability, and your swing characteristics. For each club in the bag, the proper custom fitting specifications can reduce some of the shot mistakes caused by your less skilled swing. In addition, professionally custom fit clubs do not typically cost more than what you would pay for standard-made clubs off-the-rack.

This is the essence of clubmaking and design. Unfortunately, it almost never happens because so few golfers ever do more in the search for their perfect golf clubs than to watch TV, read a few ads and then drive to the local golf store or click on their computer.

Many times I have been asked by golfers, “how much will I improve if I am properly custom fit for my clubs?” The average golfer could hit the ball 10 yards longer, hit 2 more fairways or have 2 more fewer times they lose a ball or have to hit sideways back to the fairway because their slice or hook is reduced, hit 2 more greens in regulation, get the ball up and down 2+ more times and get around in 3 to 5 fewer putts per round by simply realizing that the best golf clubs are not chosen by brand name or an ad claim but by their FIT.

Golf clubs are not implements to which you need to adjust your swing—they are tools that need to be built to YOU. They really ARE superbly designed, highly engineered instruments—if you take the time to discover how they can be fit to get the most from your swing.

Yes, it's true, golf is inherently a difficult and often frustrating game; but that's part of its charm, part of the fun. As with any game, however, if poorly fit equipment rigs the game so you can't play as well as you could, suddenly it becomes a whole lot less charming and not fun at all.

Myth #11

I was Custom Fit at the Big Golf Store (or Pro Shop, or Online)

No you weren't; don't even begin to think you can be fully and professionally custom fit at your local big box golf store, pro shop or online. I'm sorry to be that critical. The quality of custom fitting is measured by where you can go to achieve the highest level of visible, immediate game improvement, and I am here to tell you, it is NOT going to be at your local big box golf store, pro shop or online.

Why? Because the potential for immediate game improvement through custom fitting requires each golfer to be individually fit for all 13 of the key Clubfitting specifications for each one of the 14 clubs in the bag. Not 2 or 3 in a limited range of options only in the driver, but 13 clubfitting factors for all 14 clubs in the bag.

The 13 different fitting elements that need to be custom fit to each golfer are summed up here, including the sub-set of fitting elements within the clubhead design.

THE 13 KEY CLUBFITTING FACTORS FOR FULL FITTING BENEFIT			
Length	Loft	Lie	Face Angle
Total Weight	Swingweight	Grip Size	Grip Style
Shaft Weight	Shaft Flex	Shaft Bend Profile	Set Make-Up
Clubhead Design			
<i>center of gravity, offset, moment of inertia, sole design, face design, shape & style</i>			

Golf retail stores and pro shops can only fit within the limitations of the standard off the rack business model of the big golf companies. If you doubt what I am saying, take this list of the 13 key fitting elements into

your local golf store or pro shop and ask the sales person or the pro if they can fit you for every single one for each club in the bag and deliver the clubs so they are accurately built to each one of these factors. Game over. To be fair, I'll be frank about those who call themselves custom clubfitters. There are clubfitters and there are clubfitters. The latter applies to those who may have the ability to assemble or alter a golf club but who have not spent the time nor gained the practical experience to truly know how to professionally custom fit golfers. The former applies to those who are to a golf club what a tailor is to a suit.

The custom clubmakers who study clubfitting technology and have a passion to spend the extra time to analyze and then accurately build the best possible clubs for each golfer are without question the finest purveyors of golf clubs on the planet. So, how do you find a professional clubmaker?

You will find some of them working in their own small stand-alone, brick and mortar, store. You will find some of them working at golf courses and driving ranges. And you will even find some of them practicing their craft at home out of their garage or basement. Custom clubmaking exists as more of a cottage industry.

My point here is: don't be put-off by where you find them. Some of the best clubmakers in the country work out of their home-based shop. So, where a professional clubmaker is working or how good of a golfer he personally may be has nothing to do with how much they can help you obtain custom fit golf clubs that will allow you to play to the best of your ability. So, if location is not an indicator, what's left? What's left is you!

When you hunt for a new accountant, lawyer, doctor, dentist, or mechanic, each a solo professional in their field, how do you do that? The process is the same for a custom clubmaker. Talk to people who may have been custom fit. Talk to the pros at your golf course or driving range. Ask if they know of any experienced clubmakers in the area that they could recommend.

Another way of doing it is through the Internet. Go to the website of the Association of Golf Clubfitting Professionals (AGCP) at www.agcp golf.com or the International Clubmakers' Guild (ICG) website at: [*Page 28*](http://www.club-</p></div><div data-bbox=)

makersguild.com, and click on the AGCP link for "Find a Certified Clubfitter", or the ICG link for "Membership Directory/Guild Google Map". Or, you can visit my web site, www.wishongolf.com, and look for the "Find A Clubmaker" link on the home page. The clubmakers I list are individuals I personally know or have screened and in many cases, have personally taught.

Ultimately, you have to evaluate the clubmaker. If you are looking to have a club or set of clubs custom fit, go talk to him or her. Describe what you want and ask about their process for doing it. Ask them to provide you with a few names of golfers they have fit and contact them to ask their opinion. If what they say is consistent with what you've read in this book—then you've found a keeper.

The important point here is this...

The best golf clubs you will ever own are those that have been properly fitted to your size, strength, athletic ability and swing characteristics for each one of the 13 key clubfitting specifications for each club in the bag. Bar none. Every other popular "stick and ball" sport (baseball, softball, tennis) routinely sells its "sticks" in all the custom fitting options its players need to play their best... except golf.

Yes, you might have to go through a bit of extra effort to find your clubmaker. However, believe me, the results will be worth every bit of it; and, as an added bonus, you'll probably pay no more (and very likely less) than you would have paid for standard off the rack clubs at the big box store.

Myth #12

I Bought a Big Company's Adjustable Hosel Driver so I Already Have Been Custom Fit

I'm sorry, but no you haven't.

At least the fact you see such clubs is in essence these companies saying, "we better do something to get into this custom fitting market because golfers are starting to think fitting is important." So at least you are seeing the

big companies' realization that perhaps golfers are different enough from each other to merit their clubs being different from standard.

Keep in mind that whatever the big golf companies do with their club designs, it has to be able to be pre-built to be shipped to the retail golf stores to be put on display so the golfers can buy the clubs off the rack. You simply cannot sell \$400 million worth of golf clubs every year by building them one club at a time for one golfer at a time. So even the big companies' dabbling in the world of custom fitting has to be done within the confines of their standard off the rack, volume business model.

Remember the chart in Myth #11 that lists the 13 key fitting specifications for each golf club? You're not going to get that in any adjustable hosel driver. Depending on which company you listen to, one company claims their adjustable hosel driver can custom fit the loft only. The next one says loft and face angle. The next one says loft and lie angle. None of them say their adjustable hosel drivers are also fit for Length, Shaft Weight, Shaft Bend Profile, Total Weight, Swingweight, Grip Size, or Grip Style because they aren't.

Actually I happen to know the adjustable hosel device pretty well. In 1995 I designed the very first such adjustable hosel device for metal woods. The model carried the name AHT Woods – the acronym stood for “Adjustable Hosel Technology.” All of these modern adjustable hosel woods follow the same principle of my original design – rotating the hosel device to change the angle of the shaft into the head.

Problem is, when you do that you only change the lie angle or the face angle or both a little at the same time. You cannot change the loft angle by a change of the angle of the shaft into the head. Period. If you ever saw a copy of the marketing material for my old AHT woods design, it only claimed to change lie and face angle, not loft.

So how do these modern adjustable hosel woods change their loft angle? Simple. All these companies decided to break from 40+ years of standardization for loft measurement to come up with a completely “new” way to measure the loft of these drivers so they could say these adjustable hosel devices do what they say they do.

Yet here's an interesting point. For the non adjustable hosel woods that these companies still offer, their loft is measured the "old" standardized way! Hmmm.

Seriously folks, these drivers and their hosel devices are wonderful examples of modern engineering and manufacturing. They really are and from 40 yrs of doing what I do, I know what I am talking about. But they do not do what they claim and they are not representative of being custom fit for your driver.

Having each one of the 13 key fitting specs tailored to your swing for your driver as well as all the other clubs in the bag is the domain only of the professional custom Clubmaker.

About the Author

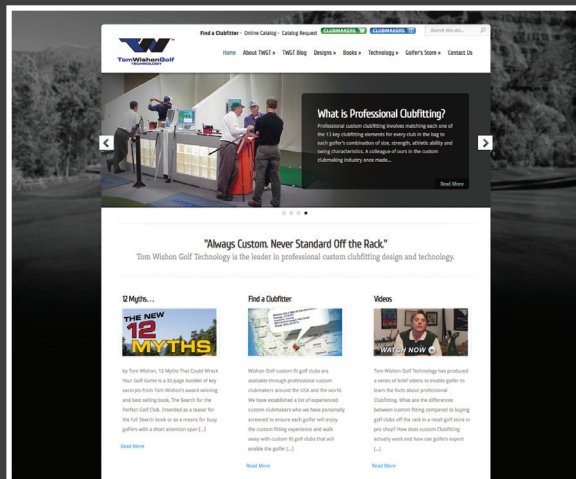
Now an energetic 63 year old senior golfer, Tom Wishon is a former PGA professional with 41 years of experience in the golf equipment industry specializing in clubhead and shaft design, shaft performance analysis, and clubfitting research. He is the only designer from the custom clubmaking side of the golf industry whose clubhead designs have been used to win on the PGA Tour, Champions Tour and in Ryder Cup competition by such players as Scott Verplank, Bruce Lietzke, Ben Crenshaw – Tom also designed the last set of clubs used by Payne Stewart in his final 1999 season and has been responsible for more than 50 different clubhead design technology firsts in his career in the golf equipment industry.

Wishon has written ten books and more than 200 magazine articles for virtually every golf publication in the US and Europe on golf equipment performance and clubfitting technology. His book, *The Search for the Perfect Golf Club* qualified for best seller status and was selected as the 2006 Book of the Year by the International Network of Golf (ING), the largest organization of golf industry media professionals in the USA. The follow up book, *The Search for the Perfect Driver*, won the 2007 ING Book of the Year award from the ING, making Tom the only person to win back to back Golf Book of the Year awards.

Tom Wishon is considered to be the foremost authority in clubfitting research in the game. He continues to teach and share his wealth of knowledge in custom clubfitting through his latest book, *Common Sense Clubfitting: The Wishon Method*, written for golf professional custom clubmakers to learn the latest techniques in accurate custom clubfitting.

Since 2003 Tom has headed his own company, Tom Wishon Golf Technology, which specializes in the design of original, high-end custom golf equipment designs and clubfitting research for independent custom clubmakers worldwide (www.wishongolf.com).

Read clubfitting informational articles and view a series of brief videos.



[www.wishongolf.com]



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