



CLUBMATE **GOLF** AUSTRALIA
GOLF CLUB COMPONENTS

eTECHREPORT

Welcome to the January issue of Tom Wishon's eTech Report!

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New 2007 Design Preview

We take our new model design work very seriously. When it comes to "leaking" any information about what TWGT has in store for any upcoming new season, we have always taken a lighter and humorous approach. Those of you who frequent our TWGT Clubmaking Forum (access through wishongolf.com) are aware of the back and forth bantering we do about our new designs, consisting of Tom making hints about what he's been working on while Matt Mohi plays "good cop", trying to prevent Tom from saying too much to spill the beans!!

Well Clubmakers, it is now officially "spill the beans time" for what we've been doing all last year to prepare the new, original and innovative model designs for 2007! All of the new designs will soon be displayed in our website and they are available at www.twgolftech.com so you can take a look at a few more photo images.

But we wanted to kick off the first TWGT E-TECHreport for 2007 with an overview of the new models so you can start to become more familiar with what we have created to help all your golfers enjoy this great game a little more this year!

Overall, we are really excited about the new clubhead, shaft and grip designs we created for 2007! For those of you not familiar with TWGT, we do all of our original clubhead, shaft and grip design concepts from scratch. You will not see any other models like ours from any other company because we are very proud that our original design capability is the best in the entire golf industry. So without further ado, TWGT is pleased to unveil our new 2007 design collection!

DRIVERS

1. 525GRT 460cc Titanium Drivers

One of our priorities in 2006 was to design a new family of titanium drivers to complement the high COR model 515GRT fairway woods. The 525/515 series of woods represent one of the most solid, high performance line of woodheads for the better than average to good ball strikers that is available anywhere. The 515GRT fairway woods have proven their performance for two years for the better ball striker who prefers a full face height with a traditional head shape and high COR cup face design on their fairway woods. Now with the new 525GRT drivers, these players have a driver that fully matches the superb performance of the 515GRT fairway woods.

1. Full 460cc head volume/size with 58mm face height and a greater 110mm face to back dimension. Once again, TWGT has proven it can balance the face height + toe/heel length + face to back dimensions to create a very pleasing “player’s” shape that looks superb in the address position.
2. Brand new variable face thickness design which incorporates a new center to periphery area, thicker to thin face design. The result is a combination of on to off center hit ball velocity which is superb. Any golfer who hits 6-10 shots with the 525GRT will notice the distance difference between center and half inch off center is virtually zero.
3. TWGT’s GRT face design is incorporated on the 525GRT drivers to ensure the same launch angle consistency over the face that has proven itself on TWGT driver designs. • TWGT’s GRT face design is incorporated on the 525GRT drivers to ensure the same launch angle consistency over the face that has proven itself on TWGT driver designs.
4. Superb impact sound is another solid plus of the new 525GRT drivers.
5. Available in RH in 9.5° and 11° lofts (yes, despite the fact the new catalog says 10 & 12.5! Fortunately this is the only mis-print we have found so far!) with 0° square face angle on the 9.5° and 0.5° closed face angle on the 11° version.
6. Finished in a deep navy blue gloss with satin polish sole and glass bead blast highlights to match the 515 fairway woods.
7. 11° version available NOW! 9.5° model scheduled for Feb 15 availability.



2. 949MC 460cc Draw Bias and 460cc High Launch Titanium Drivers

The outstanding face performance of the 949MC drivers has been expanded into two new models for 2007. By it’s design, the 949MC drivers are intended for use by golfers who do not slice the ball. However, by changing the heavy tungsten backweight’s position to a specific heel/back location, TWGT has created its first draw bias driver in 10.5° loft for golfers who have a slight fade and wish to reduce that tendency. In addition, we have created a new 13° high launch version of the 949MC, expressly for golfers with a little slower swing speed, golfers with a more downward angle of attack, and golfers who do not slice the ball but need a little higher launch angle to maximize distance.

949MC Draw Bias drivers are available NOW! 949MC High Launch is slated for Feb 15 availability.



3. 915CFE 460cc Offset Titanium Drivers

The game improvement fitting capability of TWGT's most extensive family of titanium drivers has been expanded for 2007 with the addition of the new 915 460cc offset drivers. Designed in both 11* and 14* High Launch versions, these become the very first offset titanium drivers in the TWGT custom design line. These two different loft versions of the 915CFE Offset also offer Clubmakers a superb match to the 915HL semi-offset fairway woods, or as a game improvement stand-alone driver for the golfer who fades to slices the ball but does not wish to move into a more closed face angle.

Both loft versions of the new 915CFE Offset titanium drivers are IN STOCK!

FAIRWAY WOODS

1. 949MC High COR Semi-Shallow Face Woods

The veteran tool and die maker with our foundry didn't think we could engineer a fairway wood with a 32mm face height and still reach the USGA limit of 0.830 for the COR. but we did, thanks to the experience we have in high strength steel alloy thin face design!

As a result, we believe the 949MC fairway woods stand as another TWGT design first – the first shallow face fairway wood with a COR right at the limit imposed by the USGA.



1. Slight pear-shape head profile with 32mm semi-shallow face height to match the popular 949MC titanium drivers. To contrast, the face height of the high COR 515GRT fairway woods is 35.5mm, so the new 949MC woods will be easier for golfers to hit high from shorter fairway grass conditions.
2. Designed with a new type of cup-face construction with GRT zero roll face, forged from a higher strength steel alloy to allow a super thin, 1.6mm face – the key to being able to reach a COR of 0.830 with a 32mm face height.
3. Greater heel to toe sole radius with rounded leading edge to prevent possible digging and more ease of hitting the ball from tall grass.
4. Available in RH in four different lofts – 14°, 16.5°, 18° and 21.5° for custom wood set makeup. We recommend better ball strikers choose the 14° and 18° models, while average ball strikers select the 16.5° and 21.5° lofts for their custom wood set makeup.
5. Finished to match the 949MC drivers in a black metallic gloss paint finish with satin polished sole.
6. Finished in a deep navy blue gloss with satin polish sole and glass bead blast highlights to match the 515 fairway woods.
7. All four lofts of the 949MC fairway woods are IN STOCK.

UTILITY FAIRWAY/HYBRID

1. 915 F/H Optional Fairway or Hybrid Woods

Two situations in our custom clubhead design line combined to allow TWGT to create what may very well be the most versatile new and original clubhead design in the custom clubmaking industry. In 2006, we decided to discontinue production of the 915CFE fairway woods. Their larger head size



combined with our current ability to achieve a higher COR in our fairway wood design capability to make the older 915CFE fairway woods somewhat "obsolete." In addition, we had been receiving requests to design a line of hybrid clubheads with a face progression more like that of a fairway wood.

The result became the new 915F/H clubheads. Thanks to the addition of a second weight bore, accessible through the toe side of the sole, the 915F/H heads can be custom built to the golfer's choice of a conventional length fairway wood or to an iron length hybrid club! Because of their twin weight bore design, each 915 Fairway/Hybrid clubhead can be built within a length range of 3" and still be assembled to a normal swingweight or MOI.



1. Dual weight bore design allows the 915F/H heads to be built to fairway wood or hybrid iron length as the golfer prefers, within a length range of 3". The second weight bore is located on the toe side of the sole, accepts the same weight plugs as our conventional hosel weight bore, and is covered by a small metal medallion which sits flush to the sole and will not come loose.
2. New, narrow sole surface from face to back allows the 915F/H to play like a hybrid from tall grass – easier to hit down on the ball when needed or minimize the surface contact between sole and turf for more consistent contact with the ball.
3. Variable thickness face design. This is the first investment cast variable thickness face design for TWGT and the results are quite positive for increasing ball speed for both on and off center hits from an investment cast stainless steel head.
4. Bold, bead blasted topline is directly in line with the hosel, and affords easy alignment of the 33.5mm 915F/H face height to the target.
5. Designed in RH in 13° (3-wood or driving hybrid), 16° (4-wood or 1-iron hybrid), 18.5° (5-wood or 2-iron hybrid) and 21° (7-wood or 3-iron hybrid) lofts. Finished in a very striking combination of black metallic gloss with glass bead blast highlights and mirror polished sole.
6. All lofts in the 915 F/H are IN STOCK NOW !

CONVENTIONAL IRON SETS

1. 969W Wide Sole Irons

The new 969W irons are designed to be the most game improvement, investment cast 431 stainless steel irons in the TWGT clubhead design line. Simply creating a wider sole is not a guarantee that a wide sole will deliver more game improvement. The leading edge and face to back shape of the wide sole has to be carefully crafted to prevent digging or bouncing the sole into the ball.

In the new 969W irons, TWGT has created what may very well be the best wide sole design in the game. With its heavily radiused and raised leading edge, reduced sole radius between leading and trailing edges, and reduced bounce on the heel side of the sole, the 969W irons are ideal for virtually all turf conditions and for average to less skilled golfers who swing over the top and swing down to the ball more steeply.

1. By far the widest iron sole design in the TWGT custom design iron line for lower CG with more ease of playability from tall grass, fairway grass or even very closely mowed fairways.



2. Heavily beveled and rounded leading edge reduces digging behind the ball for golfers with a more steep downswing.
3. Very thin topline and slightly flatter topline slope from toe down to the heel frames the ball very well for easy alignment and no sense of a thick topline appearance to the golfer.
4. One-piece, investment cast 431 stainless steel construction allows TWGT to offer a superb game improvement iron for an attractive price. Available in #4-9, PW and AW in RH. Finished in a brilliant mirror polish with glass bead blast highlights.
5. 969W irons are scheduled to be in stock by Feb 15.

1. 560MC Forged Irons

While the 560MC forged carbon steel irons with their unique fully CNC machined back cavity were introduced in the summer of 2006, because their entry into the market was late for the 2006 season, we know that most Clubmakers have not yet experienced the superb design and performance of the 560's. As a result, we at TWGT view the 560MC forged/milled irons as a new model definitely worth talking about!



1. The deepest cavity back in a true forged carbon steel iron today, formed by full CNC machining the entire back cavity. The result is an MOI that is 50% higher than the MOI of a typical more shallow forged cavity back.
2. The 560MC sole grind is utterly superb. Tom Wishon called the 560MC sole design the "finest sole grind I have ever done on a production iron design." The sole design blends a greater face to back radius with a heavily radiused leading edge to reduce the incidence of "fat" shots and enhance the ability of the sole to travel through tall grass.
3. Because of their much deeper back cavity, the 560MC irons possess a slightly larger overall head size than other forged cavity back irons. This adds to the off center shot forgiveness by allowing the MOI to be much higher than other forged cavity back irons.
4. Easily a choice for middle handicap players in addition to forging aficionados.
5. Available NOW in RH in #3-9, PW, AW in satin nickel chrome plating finish over 1035 carbon steel.

WEDGES

1. CX-Micro Wedges

One of the new TWGT original design clubhead models which may garner the most publicity in 2007 are the CX-Micro wedges. Slated for a major review in the March issue of Golf Digest, the CX-Micro wedges combine a CNC Milled Face with an all new "micro-groove" scoreline design to greatly enhance any golfer's ability to stop the ball on the green.

Very controlled testing with a Trackman launch monitor, known throughout the industry to offer the most accurate measurement of backspin, revealed a consistent 1000 to 1100rpm increase in spin over wedges of the same loft, same headweight and with conventional U-shaped scorelines. All CX-Micro wedges are designed to be within the USGA's rules for scoreline shape/size and face milling.



1. CNC Milled Face remains within the USGA's rule for milling roughness but offers a greater coefficient of friction between the "land area between scorelines" and the ball.

2. TWGT's new Micro-Groove U-shape scorelines are 0.6mm wide with 2.0mm edge-to-edge line spacing puts 5 line edges in contact with the ball compared to 3 with conventional 0.8mm x 2.6mm line dimensions for more line edge friction between the face and the ball. USGA minimum line to line dimension is 1.91mm so the CX-Micro Micro-Grooves are within the USGA rules for scoreline shape and dimensions.
3. CX-Micro wedges are also designed with a 0° bounce sole grind on the heel side of the sole to allow opening up the face without elevating the leading edge, a key for hitting soft finesse shots.
4. Face profile is traditional with a straighter leading edge shape from toe to heel.
5. Available in RH in 52° gap wedge, 56° sand wedge and 60° sand/lob wedge in both satin nickel/chrome plating as well as our platinum nickel plating finish. LH is available in the 56° sand wedge in both head finishes.
6. A limited stock of all CX-Micro wedges are available NOW! Replenishment will be around Feb. 1.

PUTTERS

1. S2R Milled Face and Milled Sole Putters

TWGT has created the new S2R putters for Clubmakers to have a more conventional line of high quality, original design putter heads. S2R offers golfers a Smooth, Straight Roll in 4 different heel and toe, cavity back putter head design styles, each with a fully CNC milled face and TWGT's new, unique milled sole.



1. Four different heel/toe steel putter head designs, two with conventional stem type hosel and two which receive a double bend shaft. Designed to allow custom Clubmakers to offer a more conventional heel and toe style, custom putter design to a wider range of golfers.
2. Full face milled for flatness and accuracy. Each S2R putter also features TWGT's unique tri-level milled sole – the area of the sole just under the leading and trailing edges of each putter are CNC milled slightly upward to reduce the tendency to scuff the putter on the takeaway or stroke through the ball, while the center section of the sole is milled flat to allow the putters to sit perfectly square.
3. Four models in RH and one in LH. Each S2R is finished in dark platinum nickel plating for striking looks and non-glare surface in the sun.
4. A limited stock of all CX-Micro wedges are available NOW! Replenishment will be around Feb. 1.

SHAFTS

1. Series 7-B2P Graphite Driver and Fairway Wood Shafts

The latest unique custom designed graphite shaft from the combined shaft design talents of Tom Wishon and Robin Arthur is the new Series 7-B2P, designed in separate driver and fairway wood shafts for average to better than average golfers. The 7-B2P shafts feature a more butt weighted design with the separate fairway wood shaft being 10 grams heavier than the driver shaft.

2. Series 9-TQC Graphite Wood Shafts

A unique combination of a soft butt section with a medium-firm center and tip section shaft combined with a very low torque - designed to offer more control



for the golfer with an average transition and tempo + midway to late release

Soft Butt Stiffness/Low Torque Design offers the golfer with average swing characteristics more control with a medium-high flight for longer carry and roll

Soft Butt Stiffness Design is offset by the medium firm center + tip section and very low torque to deliver a solid feel with no sense of too much flexibility.

Very Low Torque can only be a benefit for average golfers when the bend profile is softened to allow the low torque to offer more control with no sense of a "boardy feel" – the secret to the performance and feel of the 9-TQC.

Both new shaft models will be available in late February or early March.

GRIPS

1. TacTrac One-Piece Seamless Urethane Grips

Utilizing an all new grip molding technology from a new grip making company, TWGT is pleased to introduce a completely new type of urethane grip material we believe golfers are going to be very pleased with! The TacTrac seamless urethane grips offer just the right amount of tackiness in feel with the right level of grip firmness. Molded directly on top of an all new soft plastic underlisting, the TacTrac grips are also more durable than other urethane material grips.

Custom designed by TWGT in Men's Standard, Men's +1/32" Oversize, and one flat-front Putter grip in black/silver with a Ladies Standard in dark burgundy/silver, the TacTrac grips offer a distinctly new feel and performance not yet seen in the grip industry. As with all TWGT original design grips, the lower hand diameter of the TacTrac grips is larger than other grips – a feature that many Clubmakers and golfers prefer.

Because TacTrac grips have to be direct molded on top of a plastic underlisting, Clubmakers will note that the grips require a little more force to install than conventional urethane which is applied over a rubber underlisting.

TacTrac grips are expected to be in stock by the end of February.



New Revelations on Driver Head MOI

In case you haven't heard, the whole reason you're about to see the new "square shape" drivers hit the market in 2007 is the big companies' effort to offer standard drivers which have a higher Moment of Inertia, specifically the MOI, that dictates how much resistance the head will have when impact occurs anywhere on the toe or heel side of the face. But in this case, even by using conventional shaped drivers with slightly lower MOI measurements than the new OEM models, Clubmakers will be able to offer their golfers a much higher MOI on the drivers they custom fit.

Whaat? You mean TWGT is coming out with a super high new MOI driver this year? No, that's not what we mean. We mean **you have had the ability to custom build drivers in which the head has a higher MOI than any of the new OEM square drivers for years – you just didn't know it.** Well, for that matter, neither did we until we got a little deeper into an R&D project we have been working

on this winter. And man, is this not only cool, but it puts the big companies who only offer standard made clubs off the rack in a real second place position to you when it comes to really offering golfers a driver head with a higher MOI!

You're well aware by now that the stock drivers all of the major brand name companies make and ship to their retailers are between 45" and 46" in length. We can't tell you who makes what lengths in between, but this is the standard length range for all the big brand name companies' men's drivers which are sold off the rack to millions of golfers every year. As a clubmaker who works in the world of swingweight and/or MOI of the assembled club, you should be aware of how much the OEMs driver heads have to weigh to be able to end up with a D0-D2 swingweight with their 65-75 gram graphite shafts. That's right, somewhere between 188 and 198 grams is what the headweight has to be for today's OEM brand name driver heads.

The MOI of a clubhead as measured about the vertical axis through the center of gravity is now limited under the rules of golf to a maximum of 5,900 g-cm² with an additional tolerance of 100 g-cm². This means any driver with an MOI of 6,000 g-cm² or lower is OK with the USGA

First a word on g-cm², the USGA ordained form of measurement of the MOI. In simple terms, two things cause the MOI to increase or decrease. First one's easy. The heavier the clubhead, the higher the MOI. For proof, look at the array of high MOI "branding iron style" putter heads that have come on the market in the past 3-4 years, all trying to achieve a higher MOI than the one before. There are putter heads in the industry today which have an MOI in excess of 10,000 g-cm²! Why are the big companies only able to achieve an MOI in a driver head of 5,000 to 5,250 g-cm²? Headweight, that's the main reason.

Putter heads with an MOI over 10,000 g-cm² weigh well over 400 grams. Driver heads, as we just mentioned, weigh between 188 and 198g. At least the heads on the OEM standard made drivers do. If you are a really smart and good clubmaker, most of the driver heads on the custom fit drivers you build weigh more than that.

Why? Because smart Clubmakers fit and build *far, far* more drivers at lengths shorter than the OEMs' standard range of 45-46" than they do at those OEM standard lengths. TWGT is firmly convinced that perhaps 80% of all male golfers currently using a 45-46" driver would hit the ball farther, straighter and more consistently on center if they were properly custom fit into a driver that is at least an inch or more shorter than the OEMs standard driver lengths. Thousands of Clubmakers have tens of thousands of golfers who enjoy the game more now because of just that – a shorter driver that is properly swingweighted or MOI'd for that golfer's ability.

Here's how you will continue to build drivers with a higher head MOI than any of the big companies will offer this year. The headweight of a driver built in a range from 43.5 to 44" with the same 65-76g graphite shaft, and 50 gram grip to a swingweight of D1 will be 205 to 212 grams.

From TWGT's recent studies, the average increase of the MOI for the average 460cc driver today when ONE GRAM is added to the headweight is 35 g-cm². That means if you fit a golfer into a driver that is 44" in length with a driver head that has a starting MOI of 4800 g-cm², that same head will have an MOI of 5,220 g-cm² when you finish building it to a D1 swingweight. If you built it 43.5" in length, which *many, many* golfers need to really improve their driving consistency, the driver head's MOI would be 5,430 g-cm².

Next time some golfer waves his new square driver in front of you bragging about his 5,000+ MOI, just smile at him and tell him that you can beat that by several hundred or more! (And by making the driver a little shorter, you'll do the things on the driver the golfer needs to hit the ball farther, straighter, and more on center than he does now!)

Clubmakers, you have always had an advantage over the competition from the get-go because you have the ability to custom fit golfers with the best specifications that will allow each different golfer to get the most from their size, strength, athletic ability and swing characteristics. The only difference with this little revelation about driver head MOI is that you now have a NUMBER to put in front of your golfers to PROVE that you can make a better golf club than they can buy off the rack. In a world that is all too often fraught with marketing hype, you now have something of scientific fact that might make a little sense to golfers who are more difficult to convince of your skills.

Three Scientific Reasons to go Shorter, Not Longer, with the Driver

Thanks to TWGT's understanding of the science of clubfitting, we are pleased to offer Clubmakers some facts of physics in understandable terms for why so many golfers cannot consistently hit a standard 45-46" length driver they buy off the rack, and why they would be better off with a shorter driver length to get more from their swing ability.

1. Longer Drivers Have Lower Headweight Which Reduces the Possible Energy the Golfer can Deliver to Impact with the Ball for any Given Swing Speed

One of the most familiar and basic formulas of physics is $E = 1/2 mv^2$, which applies in golf to the line or transfer of energy from the clubhead to the ball. Energy is equal to one-half the mass of the clubhead times the velocity the golfer can swing the clubhead. In short, if the golfer can swing a driver with a heavier headweight the same speed they can swing a driver with a lighter headweight, the shot hit with the heavier clubhead will have a higher ball speed and fly farther.

This is part of the science which explains why golfers could possibly hit a club with a graphite shaft farther than a club with a heavier steel shaft. First, by changing from a heavy steel shaft to a light graphite shaft, the total weight of the club is lower, which in turn means the golfer should generate a higher swing speed with the same swing effort. Second, the headweight in the club built with the light graphite shaft will be greater for the same swingweight than the headweight in the club built with a heavier steel shaft. Thus the golfer should get a two boosts for more distance with graphite shafts over heavier steel shafts – one from the higher swing speed that results from the lower total weight, and the other from the higher headweight in the club that is swung at the higher swing speed.

Clubmakers need to realize the second bit of science explained above can also pertain to shorter length drivers, especially when swung by less skilled golfers. A 45-46" driver will have a much lighter headweight at the same swingweight as a shorter length driver. Typical driver headweight for a 45-46" length driver is in the range of 188g to 198g. The usual headweight for a 43.5" to 44" driver will be in the area of 205g to 212g. Thus if the golfer swings the shorter driver the same speed as the longer driver, which, when you read point #3 in this discussion is very likely for many golfers, the shorter driver will transfer more energy to the ball for the same swing speed and hit the ball farther.

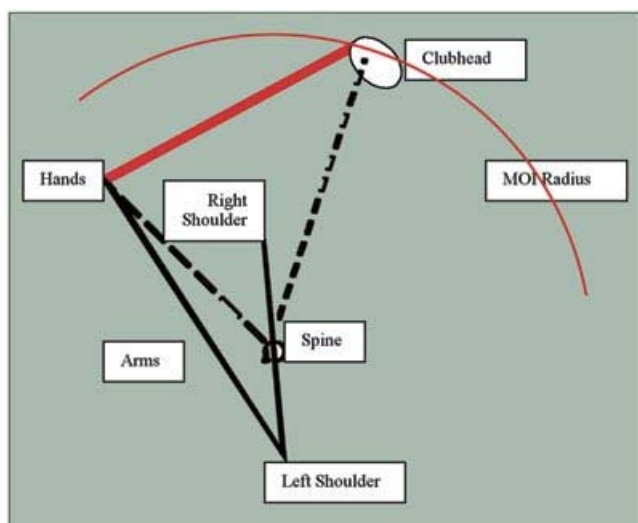
2. Longer Drivers Have Lower Headweight Which Reduces the Moment of Inertia of the Driver Head and Potentially Robs the Golfer of Forgiveness When the Ball is Hit Off Center

If you took the time to read the technical discussion previous to this one in this E-TECHreport, you know the science behind this point #2. The heavier headweight that comes with a shorter length driver automatically increases the MOI of the driver head at an approximate rate of 35 g-cm² for each ONE gram of headweight increase. Thus, shorter length drivers can offer even more off center hit forgiveness than will longer length drivers.

3. Longer Drivers Increase the MOI of the Driver in the Full Swing and Put More Load and Stress on the Golfer Which can Cause the Swing to Break Down and/or Become less Repeatable

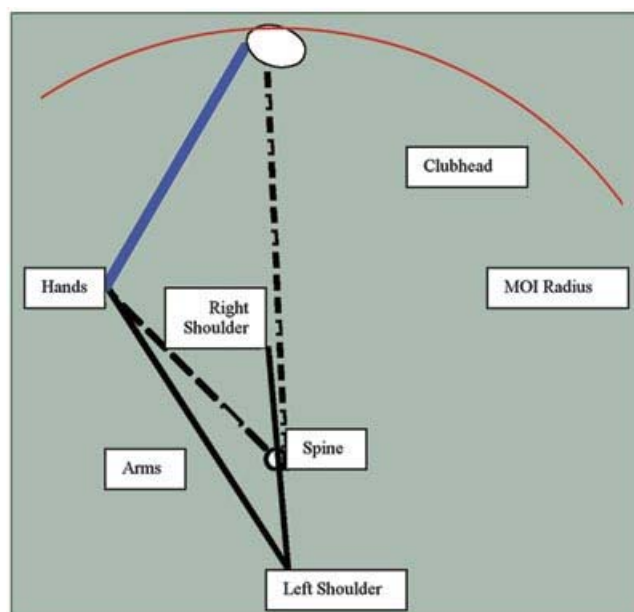
Virtually every teacher of the swing agrees that in a good, repeating golf swing, the spine remains stable during the backswing, downswing and finally, though impact with the ball. The spine is the axis around which you rotate your body and the club in making a full swing. As such, there is an important Moment of Inertia that includes the driver plus your hands, arms and shoulders as all are rotated together around the axis of your spine.

The longer the length of the driver and the farther the driver head is from the spine during the downswing, the higher this MOI will be, and from it, the more stress or load will be put on the golfer as he/she swings the club. How the golfer reacts in their swing to the greater load of a longer length driver determines a golfer's ability to increase swing speed or not when using a longer length driver. This is a pretty complicated factor so let's stop and take a look at a couple of diagrams to help explain what we mean.



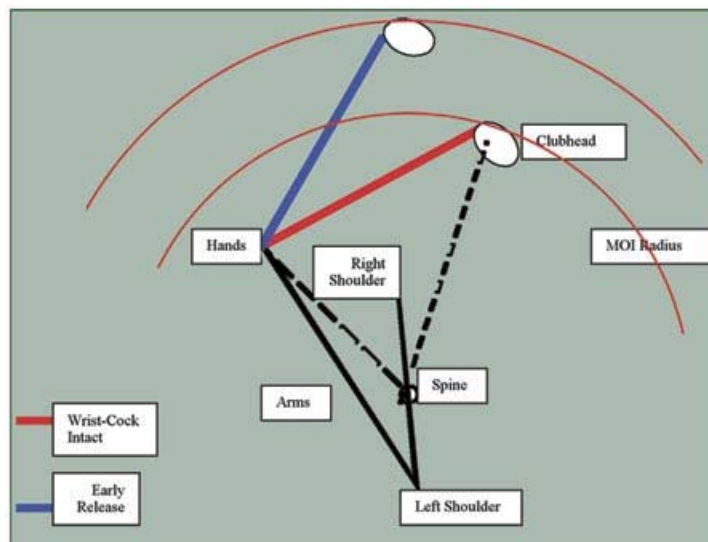
In Diagram #1, we show the position of the club and the hands/arms in relation to the shoulders and the spine near the end of the backswing. The dashed line from the spine to the clubhead is the radius of rotation for the clubhead around the spine's axis. MOI is defined as *the mass of the club times the square of the radius of rotation*. So the longer that dashed line, the higher the MOI about the spine axis, and from it, the more load placed back on the golfer. In addition, the longer the driver length, the longer the dashed line, so the MOI and load on the golfer increase when golfers use longer length clubs.

Diagram #2 shows how the dashed line representing the MOI radius of rotation about the golfer's spine will be increased when the golfer unhinges the wrist-cock early in the downswing. The early release moves the clubhead and its mass farther from the golfer's spine, which in turn increases the MOI about the spine and places more load back on the golfer. In many cases, a longer driver does cause the golfer to unhinge the wrist-cock angle earlier than will a shorter driver because of the greater load put on the golfer by the higher MOI of the longer length.



In Diagram #3, you can now see the actual difference in the radius of rotation about the spine for the two different golfers that comes from an early release.

While a longer length driver will only increase this radius of rotation slightly, and from it, increase the MOI and load on the golfer, it is not uncommon for the load from a longer club to actually cause some golfers to begin to release the club earlier than they would when using a shorter length club. In addition, it is not uncommon for the longer length driver and its greater MOI and load to also cause golfers with the tendency toward an outside/in swing path to aggravate that unfavorable swing path even more.



With all this science in mind, the question that still has to be answered is how do we know what golfers are going to be ok with a longer length driver and what golfers will not? First of all, the only possible reason a golfer should think about using a longer length driver is if they are able to increase their swing speed while not decreasing control over the club. The only way to do that is to be able to prevent the dashed line from the spine to the clubhead from increasing in length until late in the downswing, just before impact. In other words, golfers who have the ability to hold the wrist cock angle until late in the downswing, and thereby not increasing the MOI and load in the downswing, are about the only people who have the ability to increase swing speed with a longer length driver.

But at the end of the day, when you think that the average driver length on the PGA Tour has been 44.5" for the past two years, and you remember that the standard length of OEM drivers sold off the rack in retail golf stores is 45-46", why would any golfer choose to play with a driver length of 45-46"? Golf is a game of percentages, and this information offers a pretty strong case that going shorter for the vast majority of golfers is going to be better rather than worse for their game and shotmaking consistency.

Search Arsenal Expanded

With the release of the second book in the Search series, *The Search for the Perfect Driver*, TWGT now has two different publications all working hard in the consumer market to elevate the image of custom Clubmakers and the benefits of real custom fitting. *The Search for the Perfect Golf Club*, the debut volume in the Search series, is still selling well in hardback form and conveying the message to golfers that real custom fitting is much better than buying standard made clubs off the rack.

There is no question that the sales of the two Search books through all of the major retail bookselling firms is beginning to make golfers aware of the services of custom Clubmakers and the benefits of real custom fitting. But waiting for the sales of these books to gradually do their job and send golfers to you to be custom fit is too much of a "reactive" behavior.

We can't stress enough to Clubmakers that being "proactive" with the Search books and the very inexpensive booklet of excerpts, *12 Myths That Could Wreck Your Golf Game*, will definitely increase the number of sets you fit and build and will increase your business in custom clubmaking. By being proactive we mean that all Clubmakers who wish to increase their business must begin planning NOW for the 2007 season and how you will get the message about custom fitting out to as many golfers in your area as possible.

If you sit back and wait this season, you may have a handful of fittings which simply show up as a random result of golfers in your area finding the Search books and digging up your name from the phone book or elsewhere. But if you start planning how to find golfers in your area to be able to give each a copy of the 12 Myths booklet, you will be pleasantly surprised how busy you can be this year.

The best results are going to come from each of you digging up the schedule for all of the charity golf tournaments in your area. Visit the golf courses and ask them for a copy of their 2007 tournament schedule. All charity tournaments want players, so finding the contact people who run each event won't be difficult. Call the tournament director and tell him/her you want to offer them a free 12 Myths book for each player in the field. There is no question if you do this, you will have more business. Hundreds of your fellow Clubmakers found this out in 2006 and are chomping at the bit to continue this low cost marketing approach in 2007.

Do it. If you do, it *WILL work* to increase your business in custom fitting.

Join Us on the TWGT Clubmaker Forum

2007 signals the fourth year of the popular, enjoyable and very educational TWGT Clubmaker Forum. Housed on our www.twgolftech.com web site for Clubmakers, the Clubmaker Forum is FREE, safe and a super way to "meet" fellow Clubmakers from all over the world who share an interest in custom clubmaking, clubfitting and learning more about every conceivable aspect of golf equipment.

You do have to register to join. But that's extremely simple, safe, and painless and will open up a new world of golf equipment information and camaraderie that you'll find very enjoyable. At present there are 2,900 clubmakers who have joined the TWGT Clubmaker Forum. When you join, you do not have to post. Of the 2,900 clubmakers who have registered for the Forum, some 1,200 have posted questions or answers or opinions on over 4,500 different clubmaking topics. So if you don't want to post, you don't have to – you can simply scan and read the information to your heart's content and remain anonymous.

One of the best reasons to participate is the fact that the TWGT Forum does not have any "flamers" or, for lack of a better term, does not have any "jerks". Golfing and clubmaking friendships have been formed from the Forum because it is all about pure enjoyment and fun.

When you become a part of the Clubmaker Forum, you will join the nicest group of passionate fellow Clubmakers you will ever "meet."

See ya on the Forum this year!!

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