1. Dynamic custom fitting – introduction.

SIMON HUBBARD:
Dynamic custom fitting – introduction. This section looks at the process involved to perform a dynamic custom fit. It focuses on the process used for fitting a player for their irons, although the method to carry out a fitting for other types of club, such as the driver, fairway woods or wedges, can be used in the same way. The dynamic fit is the technique that will provide you with the most exact data to perform an accurate fit. Over 75% of golfers buy clubs off the shelf believing that because they have bought an expensive set of clubs this will undoubtedly improve their game. This is unfortunately not true in a large number of cases.

Most manufacturers’ clubs are built to their own standard set of specifications, and the player will have to be lucky to fit this standard. This further complicates things because there is no industry standard to work from. It is no good to say a player requires clubs that are two degrees upright because each manufacturer will have their own version of standard.

When making a recommendation, you should work in the actual figure required. Some professionals prefer to take static measurements prior to the dynamic fit and then refer to a height fit chart. On its own, the static fit is used primarily for a beginner who has not yet developed a golf swing. It should be noted that the static fit has limitations and is only recommended for players new to the game. The importance of custom fitting and the need to have correctly fitted equipment should be introduced at an early stage of a golfer's career. The static fit is what is often offered when making mail orders or orders over the internet.

2. Stages of the fit.

SIMON HUBBARD:
The stages of the dynamic fit. The dynamic fitting process is where an evaluation of a golfer is made hitting golf balls, taking measurements at impact with the golf ball and observing the ball flight. A dynamic fit would consist of the following parts: personal interview, warm-up, taking static measurements, length fitting, lie fitting, shaft fitting, grip fitting, club head design, and finally set make-up.

3. Personal interview.

SIMON HUBBARD:
Personal interview. This is the first step in your routine, and it should continue throughout the session. Try to involve the player as much as possible during the fitting process by asking open-ended questions throughout each part of the process. It is useful to ask questions while the player hits shots. This allows you to discover how much the player knows about his or her own game, how the individual would like to improve their ball flight and to back up your own observations, as well as making the customer feel at ease. It is important to develop a relevant set of questions and the data be recorded for future reference on a fitting form. A copy of the sample form can be found in the attachments section.
JOHN GREGORY:
We have to put the player at ease. They may well be very nervous. You might well have just met that player, and you need to seek out some very, very important pieces of information. You may well want to use a questionnaire during this section. Maybe one like the PGA have put together, or you might want to introduce one of your own, using and containing what you feel as the most relevant questions. Important questions I feel should be on there is likes, dislikes and tendencies of the player’s current game, their goals, any physical issues, their favourite and least favourite club. Obviously, there are many other questions that you might want to introduce, but I believe those are key questions.

Having done that, you might well want to take the player’s set of clubs and measure some of the key clubs, for instance the driver, a long iron, a mid-iron, a short iron and the putter, the favourite and least favourite club. This will start to help you understand what you have achieved from the personal interview and will help you to start a plan to put forwards to the recommended new set.

4. Warm up.

SIMON HUBBARD:
Warm up. It is important for the player to hit shots to warm up first, preferably with their own clubs. The warmup provides an opportunity to assess the player’s swing capability. In addition, it allows some of the personal interview questions to be asked. Some of these may include performance goals, what the player hopes to achieve and, of course, to stop doing; the types of shot played with the most and least confidence; the player’s favourite and least favourite clubs; the state of the player’s game, whether it is improving, deteriorating or steady; how often the player practices; the routine followed at the range; how the player assesses good or bad shots. The main objective with this part of the session is to get the player to feel relaxed, at ease and swinging naturally.

5. Static measurements.

SIMON HUBBARD:
Static measurements. Prior to hitting balls, measurements may be taken to establish a club that will be the starting point for the session. This can be established by using a height-based fitting chart or more accurately by taking a measurement from the wrist crease to the floor. Get the golfer to stand up straight and measure the wrist crease to the floor with a long ruler. Take the left-hand measurement for a right-handed golfer. It will then be necessary to get the player’s height and then reference made to a relevant chart. This will allow you to determine the initial length and lie for the golfer. The player’s and measurements will be taken, the results of which are looked at in more detail in the grip fitting section.
JOHN GREGORY:
To find the player's height, the gloved hand wrist to floor measurement and the hand size, the hand measurements. OK? We relay that information to a chart.

If Alistair was a beginner, we would learn nothing by continuing on into the dynamic fit now, and it's important to take that information from the static fit and simply stop there.


SIMON HUBBARD:
The correct length of a golf club allows the player to maximise distance without losing accuracy. Determining length as a first step provides a definitive building block for the other fitting steps, and the length of a golf club has a direct influence on the playing lie of a club. As a club is made longer, the lie of a club must be made flatter, and vice versa. It should be noted that taller people do not necessarily need longer clubs, and shorter players do not need shorter clubs. A golf club that is too long will tend to lose consistency of strike and cause an erratic shot pattern.

To fit length dynamically, you need demo clubs fitted with various length shafts and a roll of face impact tape. Place the impact tape on the face of the trial clubs. Request the player to hit a few shots with each of the length fitting clubs, not too many shots as the tape will become too marked to be able to make a clear judgement. If you are not sure, then just apply a fresh piece of face tape. The striker pattern on the impact tape needs to be interpreted. If the club is too short for the player, the strike pattern will be more towards the toe of the club. If the club is too long for the player to control, the strike marks will be scattered around the impact tape.

7. Length fitting.

SIMON HUBBARD:
Look for the most consistent strike marks towards the centre of the tape. This should be the correct length for the player. Establish which club offers the most consistent strike from the impact label dispersion. This club is then used, or a club of this length, for the remainder of the fitting session.

JOHN GREGORY:
What we are going to do is apply tape to the face of the golf club. This will indicate, after a few shots, where the strikes that Alastair is making are coming from. This will help us to understand how the length of the golf club is for Alistair. All of the specifications that we are changing and testing for are going to have a huge impact on Alistair’s feel. So not only are we looking at strike patterns when we are fitting, we are asking the player how the club feels. Does it feel too long, too short? So we can establish the correct feel for the player. So, the face tape has been applied to the clubface. We will ask Alistair now to hit a few balls for us.

What we have established here is Alistair hit four balls, hit two good shots out of the centre and then a little bit of a heel hit. What we have established, obviously, that isn't actually achieving what we want to achieve with length fitting. We are after seeing on centre hits. We are after finding the
longest club that Alistair can consistently control. It would indicate to us that the club is maybe a little bit too long as the strikes are towards the heel. What we will do now is we will try a club of a slightly shorter length and test that club again to see how the strikes materialise then.

8. Lie fitting.

SIMON HUBBARD:
Lie fitting. Lie is the determining factor regarding the direction of the ball’s flight off the clubface. To get the correct lie for a player, the following steps should be used. The first thing is to ensure that it has been established that the club being used is the correct length. In addition, a strike or lie fitting board and lie impact labels will be required. Place lie tape on the sole. Then get the player to hit shots from the strike board. Encourage the player that it will not damage the board or the club. Shots tend to fly higher when hit from the board, and this should not be taken into account as it is only the lie angle you are looking to establish. Again, hit the player to hit a few shots, being careful that too many shots are not hit to avoid damaging the tape.

9. Lie fitting.

SIMON HUBBARD:
Observe the marks on the sole tape. If they are in the centre, then the lie of this club is correct for the player. If the marks are towards the heel, the lie is too upright for the player, and a club with a flatter lie will need to be specified. If available, a club with a flatter lie should be used to confirm the correct specification. If the marks are towards the toe, then the club is too flat for the player, and a more upright club will need to be specified. Again, a club with a more upright lie angle should be tried to confirm the required lie angle. If clubs with different lies are available, then continue until the marks become centred.

10. Lie fitting.

SIMON HUBBARD:
If only one club is available for the club, the table shown on this page and available in the attachments will help to establish the required lie angle.

JOHN GREGORY:
We can use this club, and we can apply tape to the sole of the golf club. I’m going to ask Alistair to hit a few shots off of the lie board which will scar the sole of the club, or the tape on the sole of the club. This will indicate to us whether the current lie of this golf club is correct or incorrect.

Excellent. Let’s have a little look. We can see there that the toe of the club is in a down position. You may want to renew the tape and have another hit to see what has happened. What we are going to do is we are going to use the same tape, hit another shot. Thank you, Alistair.
Very good. Now, identifying the centre of that second strike, you will notice once again we are a little on the toe side as a centre strike. Please keep in mind that for every quarter of an inch that the marking is off centre equates to one degree. We have found that the markings are towards the toe so the lie angle is too fat for Alistair. We have another club here of a similar make-up, similar length, with a slightly more upright lie angle. Alistair, would you kindly try a couple of shots?

Well done. Good hit. Through testing different lie angles in relation to the static fit, we have now found a correct lie angle.

11. Shaft fitting considerations.

SIMON HUBBARD:
Shaft fitting considerations. There are a number of considerations that you will need to take into account when fitting the correct shaft for the player. Your experience and knowledge will be tested. The quality of the questions you ask the player and the feedback you get back will play a large part in the final selection. The observations you make on ball flight will be vital. There are now over 6,000 different shafts available on the market. Getting the correct one is paramount.

Some points to bear in mind are the shaft will influence the position of the club head at impact. The shaft is the only component which changes shape during the swing. It is most vital that due consideration is given to the choice of shaft type, flex and weight. Where possible, steer the golfer towards accuracy over distance. More flexible shafts generally give more accurate results for most golfers. High-frequency or stiff shafts require greater force to be applied to make the shaft bend and therefore work properly.

The weight of the shaft has a direct relationship on how fast the club can be swung. Lighter overall weight allows longer assembly, which in turn may yield more distance. But usually at the cost of accuracy. Lighter weight shafts may be swung faster. A plus for the older player, ladies or those that lack swing speed or strength.

Swing tempo is important for accuracy. A smooth tempo will allow for a lighter weight shaft. A fast tempo can produce less consistent swings and may require a heavier shaft. There is no industry standard of flex at present so one manufacturer’s regular flex could be equivalent to another company’s stiff flex. Comparisons of flex between two different shafts can be made using a shaft deflection board or a frequency analysis machine if this is available. Different bend points in a shaft may affect ball trajectory. It is suggested that a high bend point in a shaft will cause a lower ball flight, and a low bend a high ball flight. This effect on flight is debatable, but shafts with different kick points may affect the feel of the club as high kick point shafts will feel stiffer, and shafts with a low kick point will generally feel more flexible. If a shaft flex is incorrect for a player, he or she will have difficulty in returning the club square to the ball and apply the ideal dynamic loft to provide the optimum launch angle.
12. Shaft fitting considerations.

TOM WISHON:
Hi, my name is Tom Wishon. I wanted to talk to you a little bit about one of the most confusing parts of the golf club, the shaft. It has been said many times in our field that the shaft is the engine of the golf club, and actually that's not really true. The shaft doesn't provide power. You, the golfer, are the engine. You are providing the power. The shaft is more like the transmission to be able to transmit that power to the club head, to the ball to hit the shot. When we look at the shaft, we have to look at this and say, "What does the shaft do? What does it contribute to the shot?"

There are five fitting elements that we look at when we custom fit a golfer for the right shaft for their clubs. First of all, we have the weight of the shaft, how many ounces or grams the shaft weighs. This is very important because the shaft, more than any other element in a golf club, controls the total weight of the golf club. How much that whole golf club weighs. That's very important because the total weight of the golf club has to be matched to the golfer's strength and swing elements by largely how much force, how much effort they are putting into the golf club, whether they are a hitter versus more of a rhythmic swing. In general, we look at the stronger the golfer, the more forcefully they swing. The more they hit, the higher the shaft weight might need to be to match that golfer's natural tempo. On the other hand, the weaker the golfer, physically weaker, the smoother they swing, the more passive they look in terms of their swing technique and tempo, the lighter weight the shaft needs to be to also make the whole golf club lighter to match the golfer. Shaft weight is a critical fitting element for all golfers.

Then we have what we call the overall flex of the shaft, how much it resist spending. Within the flex, we can make certain portions of the shaft stiffer or more flexible. What we call distribution of the stiffness and that is called the bend profile. Some of you may be aware of that through terms like tip stiff shaft or tip flexible shaft or a butt firm or butt flexible shaft. That is what really is a generic comment to how the flex is then distributed over the whole length of the shaft.

When we fit shaft flex, we're looking at being able to fit these different swing elements to the shaft. The golfer's swing speed, downswing transition move, downswing acceleration or tempo, and the golfer's wrist cock release. When do they un hinge their wrist cock release coming into hitting the shot? The higher the swing speed, the more forceful they start the downswing and the transition, the more they accelerate the club on the downswing, the stiffer the shaft has to be for the golfer. The opposite of that is true. Lower swing speeds, more passive downswing transition start, more passive downswing tempo, the more flexible the shaft has to be.

Within this, we have the concept of what we call the bend profile, whether we can make the shaft more firm in the tip section or more flexible in the tip section or do the same thing over the whole shaft. The key element we have in that is the wrist cock release. As you well know, you have seen golfers when they hinge the wrists at the top, proper swing technique says that you want to hold that wrist cock angle until very late in the downswing, and then you release the wrist cock angle to send the club through the ball. Well, not all golfers do that. Because that is a definite skill element in the swing and the game. You have golfers who are able to hold that wrist cock angle release until very late. We have some golfers who start to unhinge that wrist cock angle very early. Others who do it about midway down the downswing or any points in between.
Basically, the fitting of the shaft to the wrist cock angle is like this. The later you can hold and retain that wrist cock angle, the sooner, the closer you get to impact before you unhinge the wrist cock, the firmer the tip section should be. And vice versa. The earlier you may release the wrist cock angle, the more flexible the tip has to be. In addition, golfers who start the club with a great deal of force, what we call a hard transition, they tend to do better with shafts that are designed to be a little stiffer in the back half of the shaft. Golfers who start the downswing with a very smooth and gradual acceleration of the club, they are going to be better suited to shafts that are designed to be more butt flexible in their bend profile.

We also have two other elements in the shaft that we need to look at. One of those is what we call torsional stiffness, the shaft's resistance to twisting. People in the golf industry think of this under the term the torque of the shaft. When we make a downswing, to bring that club down to impact, we start that club down with a particular amount of force. Some of us are real hitters and we use a very hard transition. Others very smooth and gradual as we build up the force. We also have our downswing tempo. Some golfers are really pouring on the coal and accelerating the club with a fast downswing tempo. Others are more passive, just gradually bringing that club up to speed by the time it gets to the ball.

When we look at the torque, what we are looking at them is the heart of that transition, the more forcefully we start that club down, the lower the torque of the shaft may need to be. On the other hand, if it's very smooth and passive, we don't usually look and worry about the torque and higher degrees of torque in the shaft are better for those kinds of golfers. Generally speaking, in fitting torque, we don't really have to work or worry about that too much because the shaft manufacturers and designers are smart. They pretty well know that in the shafts they are going to design to be more tip stiff or more stiff, they are going to keep the head from twisting on the downswing. Same time, when the shaft companies design shafts for slow swingers, shafts that are more tip flexible, they are designing these shafts with higher degrees of torque because they know that those golfers don't apply the torsional forces as much on the shaft on the downswing.

Basically, when you have fit the flex and the bend profile of a shaft properly to a golfer, the torque comes along, and it's basically designed within normal parameters for that golfer's flex and bend profile.

Finally, we have what we call the balance point of the shaft or the weight distribution of the shaft. In other words, we can have shafts where the tip half is heavier than the butt half. We can have shafts that are opposite. What this does is this starts to affect the swing weight balance or the MOI of the finished golf club. How much weight will end up being put in the head so we get the swing weight matched to the golfer’s tempo, downswing transition, downswing acceleration force?

Those are the five elements that we look at when we fit the shaft. The weight, the flex of the bend profile, the torque, and the weight distribution or balance point. How do you know if you are going to get the right shaft for your game? This is a difficult one. I can absolutely guarantee you that if you walk in to most of the standard club off-the-rack, big-box retail stores, they can't do this for you. They don't have the shaft knowledge to be able to really pinpoint what shaft and all five fitting elements are right for you in your swing. This is where you really need to go and see a really good
custom club maker who has spent the time to study all of these elements of comparing the movements in the swing, the strength of the golfer to the design elements of the different shafts. If you do, then you will end up having the perfect transmission to put your power from your engine into that club head and hit the ball as well as you possibly can.

13. Shaft fitting considerations.

SIMON HUBBARD:
To get the most accurate results, a small piece of specialist equipment is required to read the player’s swing speed. If the player hits an erratic shot, omit it from the evaluation. Calculate the average of the readings from the information gathered and the observations you make about the player’s swing characteristics, you should be in a position to make your shaft recommendation. Depending on the shafts that are available, either from the club manufacturer or your supplier, select the most suitable one for the player. Referring to your own shaft selection charts or something that is supplied to you. For your reference, a sample selection chart is available in the attachments section.


JOHN GREGORY:
The shaft is a huge contributor to the feel of the golf club. The areas that we are going to be fitting is the weight, the key point, the torsional qualities and the flex. We would do this, we would fit the shaft by observing ball flight and by measuring the speed of the player to identify the correct shaft. Player feedback in feel factors is crucially important to note. We are going to get a measurement of a club head speed, find an average speed of five or six golf swings. Having done that, we would relay that information to that chart to find a shaft.

15. Weight preferences.

SIMON HUBBARD:
Weight preferences. There are two types of weight when referring to golf clubs. Deadweight is the total weight of the golf club, all the component parts when assembled. Swing weight is a measurement of the weight distribution of a golf club. The deadweight or swing weight will change if any small alterations are made to the golf club. The weight of a golf club has an effect on its feel. Generally, a slower swinger of a club would prefer a lighter club to achieve greater distance, whilst a heavier club tends to suit a more powerful swing. To fit club weight, use various trial irons of different weights, impact tape and a supply of lead tape. Try to establish which weight of club will produce a consistent impact strike and shot pattern whilst producing a favourable feel for the golf club. In this case, it is vital that player feedback is sought.

SIMON HUBBARD:
Grip fitting. The main objective with the grip is to find one that is comfortable for the player to hold. The more grip types you can let the player try, the better. A cut down shaft with each of the grips you supply can be useful. While taking the static measurements, the player's hand size will be measured and reference made to a chart. The measurement is taken from the wrist crease to the top of the middle finger, and then a measurement of the longest finger is made. Alternatively, a Ping colour-coded chart can be used. There are examples of two grip fitting charts available in the attachments section.

17. Grip fitting.

SIMON HUBBARD:
The correct grip size can be determined by placing the top hand – the left hand for a right-handed golfer – on the club and checking if the two middle finger tips just touch the palm of the hand, as shown in the picture. Next, we can see a grip that is too small because the player's fingers are digging into the palm of the hand. Next, we have a grip that is potentially too large because the player cannot get their fingers around the club.

18. Grip fitting.

SIMON HUBBARD:
The main objective when it comes to ascertaining the correct grip size is to promote feel, consistency and to keep the player’s confidence. There has been a school of thought that worked around the idea that if a grip is too thick, it will inhibit hand action in the swing and cause a shot that will fly to the right of target. And too small a grip size will increase hand action to send the ball to the left of the target. Although this theory is not disputed, it is also thought that an incorrect grip size may cause the player problems because of the hands repositioning on the club during the swing, having to apply too much pressure and the general lack of feel. These issues can contribute to problems with the accuracy and distance of shots, and all of them being applicable to over or undersized grips.

The main priority is to give a player and appropriate sized grip that feels good to him or her. This means that the advice on the different types of grips available needs to be given also. The benefits of rubber, cord, half cord, round or ribbed, smooth or wrap effect all need to be explained and tried. It is vital that you listen carefully to feedback from the player as it is the feel the grip promotes that is so important.
19. Head design and set make-up.

SIMON HUBBARD:
Club head design and set make-up. There is no longer a standard set of golf clubs, in other words the traditional three plus nine, three woods and nine irons. It is down to your skill, the knowledge you have of the player's game, either through prior knowledge or the dexterity of the questioning during the initial interview to establish the player requirements. The modern club fitter can include more lofted woods or rescue clubs to replace the longer, more difficult irons. A gap wedge or a high loft wedge may be a much more useful tool to have in the bag for a better variety of shots around the green, for example. The available loft options are especially useful when making recommendations to beginners or players that are not able to generate high club head speeds.

Offer a head style that will benefit the player but also be appealing in appearance. Because the player is hitting shots when you perform a dynamic fit, it is useful to have the various heads available for the person to try or at least to have a look at. The player will need to be informed on what benefits the various clubs will provide. An offset or progressive offset may assist shot direction and trajectory. A club with more weight concentrated towards the sole will have a lower centre of gravity and will help to get the ball airborne more quickly, and if the player suffers from a great deal of off-centre heads, a club with more perimeter weighting may be the solution. The recommendations you make for the most suitable club head design and suggested set make-up should be based on the player's ability and ball striking capability. The proposals will also need to be based on the available budget that the player has.

20. Final decisions.

SIMON HUBBARD:
Final decisions. Take time in making the decision. If possible, tell the customer you will call them or ask them to return in a day or two. This will allow time for a measured presentation of customers' assessed needs. It also tells the client that you are taking the choice of their equipment seriously, and you are not going for the hard sell. Another professional touch is to assemble a club to the recommended specifications and get the player to return so that you can make a final check, and the player can hit some shots with the suggested club requirements before going ahead with the order.

21. Static fitting.

SIMON HUBBARD:
Static fitting. This section has focused on dynamic fitting but, as a footnote, if a static fit is carried out, measurements from the golfer will be taken and a set of golf clubs fitted around these measurements. Golf balls are not hit during a static fit. The measurements taken would then allow the PGA professional to establish the following specifications for club length. This would be done with the use of a length fitting chart. Lie angle, estimating from the address position. Grip size. And set make-up. The method for taking the measurements for club length, grip size and applying the recommendations for the set make-up are the same as in the dynamic fit process.
22. Static fitting.

SIMON HUBBARD:
Static fitting lie procedure. A static fit for lie involves putting the golfer into a good address position. This position will be created using your skill and knowledge as a coach. The club fitter will then need to look at the relationship between the sole and the ground. Having a selection or sample of demo clubs with different lie angles would also help to determine the estimated lie angle for the player. For static lie estimation, the toe should be slightly raised, leaving enough room to slide a two pence coin a third of the way under the sole of the club. This is to allow for the bending or bowing of the shaft during the swing, which causes a flattening of the lie of the club at impact. A reminder of face plane tilt. At impact, if the lie of an iron is too upright, the face of the club will aim left even though the leading edge is square to the target and similarly will point to the right if the lie is too flat. The more loft the iron has, the more the face plane tilt and the more the directional problems are increased.


SIMON HUBBARD:
Dynamic custom fitting – summary. On completion of this section, you will understand that the dynamic fit provides the most reliable information to make recommendations to a player. A minimal amount of equipment is necessary to be able to carry out a comprehensive custom fit. Custom fitters will often take static measurements as an introduction to a dynamic fit. A relatively small financial outlay is required to establish a custom fitting service. Static fitting may be useful if a player is new to the game. Please make use of the documents attached. And, finally, view the complete custom fitting a lecture on the next screen.

24. E-lecture.

JOHN GREGORY:
The purpose of this e-lecture take you through the process of a dynamic custom fit. I think it’s important to remember you don’t have to incur too many costs to be able to start this service. Sometimes, you look at what the club companies and the manufacturers offer, and you feel you have to compete with that, and you do not. I feel you can start a custom fit service for as little as £200. Six clubs will do the job to be able to get across and find the specifications required. What we have used as our six demonstration clubs... They are all six-irons. They all have the same flex of shaft in them. We have three here of varying lengths. The flex of the shaft is the same. The heads are the same, the swing weight has been made to be the same. We have a club, the middle club, what we call the middle-of-the-road club, shall we say, of a given length that we feel is correct as a standard option. In the industry, there are no standards, and that’s important to remember in most specifications and components of golf clubs. So, you have to select what you believe to be your own personal standard.

In comparison to that, we have a club that is one inch longer and a club that is one inch shorter. This gives you the opportunity to be able to measure a player for length. Also, two further clubs built to
the specifications of the middle of the road club at different lie angles to the middle-of-the-road club, one more upright and one flatter. This gives you the opportunity to be able to test the player for lie. And then finally a club of a lighter total weight. It has a lighter shaft in it, and as a result the total weight is lighter. This gives you the opportunity to test for different shaft weights.

You need to acquire one of many options that you have available to you a way of measuring accurately swing speed. This will help you to decide on the flex of the shaft that will be recommended. Also, you will need to purchase some face stickers and some sole stickers. The face stickers is how we length fit, and the sole stickers is how we lie check. Finally, you need to purchase a way of measuring wrist to floor accurately to be able to start your static fit and move onto the dynamic fit.

We start all custom fits with a personal interview. This is a very important part of the process. We have to put the player at ease. They may well be very nervous. You might well have just met that player, and you need to seek out some very, very important pieces of information. You may well want to use a questionnaire during this section, maybe one like the PGA have put together, or you might want to introduce one of your own, using and containing what you feel is the most relevant questions. Important questions I feel should be on there is likes, dislikes and tendencies of the player’s current game, their goals, any physical issues and their favourite and least favourite club. Obviously, there are many other questions that you might want to introduce, but I believe those are key questions.

Having done that, you might well want to take the player’s current set of clubs and measure some of the key clubs, for instance the driver, a long iron, a mid-iron, a short iron and the putter. The favourite and least favourite club. This will start to help you understand what you have achieved from the personal interview and will help you to start a plan to put forwards to the recommended set. You need to find the player’s height, the glove hand wrist to floor measurement and the hand size, the hand measurements. Now, we relay that information to a chart. If Alistair was a beginner, we would learn nothing by continuing on into the dynamic fit now, and it’s important there to take that information, static fit and simply stop there.

The next stage of the dynamic fit is the warm-up. During the warm-up, we are going to be observing the player’s golf swing to see if it marries up with anything that was established during the personal interview.

Shot. Well done.

What we are going to do is apply tape to the face of the golf club. This will indicate after a few shots where the strikes that Alastair is making are coming from. This will help us to understand how the length of the golf club is for Alastair.

All of the specifications that we are changing and testing for are going to have a huge impact on Alastair’s feel, so not only are we looking abstract patterns when we are length fitting, we are asking the player how the club feels. Does it feel too long, too short? So we can establish the correct feel for the player. So, the face tape has been applied to the clubface. We will ask Alastair now to hit a few balls for us.
What we have established here is Alastair hit four balls, hit two good shots out of the centre and then a little bit of a heel hit. What we have established, obviously, is that isn't actually achieving what we want to achieve with length fitting. We are after seeing on-centre hits. We are after finding the longest club that Alistair can consistently control. It would indicate to us that the club is maybe a little bit too long as the strikes are towards the heel. What we will do now is we will try a club of a slightly shorter length and test that again to see how the strikes materialise then.

Having tried various lengths of clubs, we have found a club through the strike pattern that we are very happy with, and Alistair is very comfortable with this length of club whilst he has been hitting shots. So, we have come to the conclusion that this, through strike patterns and comfort feel, is the correct length of golf club. We can use this club, and we can apply tape to the sole of the golf club.

I'm going to ask Alastair to hit a few shots off the lie board which will scar the sole of the club or the tape on the sole of the club, and it will indicate to us whether the current lie of this golf club is correct or incorrect.

Excellent, let's have a little look. We can see there that the toe of the club is in a down position. You may well want to renew the tape and have another hit to see what's happened. What we're going to do is we are going to use the same tape, hit another shot. Thank you, Alistair.

Very good. Now, identifying the centre of that second strike, you will notice, once again, we are a little on the toe side as a centre strike. Please keep in mind for every quarter of an inch that the marking is off centre equates to one degree. Having tried this club, we have found that the lie angle is towards the markings are towards the toe, hence the lie angle is a little too flat for Alistair. We have another club here of a similar make-up of a similar length in a slightly more upright lie angle. Alistair, would you kindly try a couple of shots?

Well done. Good hit. Through testing different lie angles in relation to the static fit, we have now found a correct lie angle.

Now we are moving onto shaft fitting. The shaft is a huge contributor towards the feel of the golf club. The areas that we are going to be fitting is the weight, the kick point, the torsional qualities and the flex. We would do this, we would fit the shaft by observing ball flight and by measuring a speed of the player to identify the correct shaft. Player feedback in feel factors is crucially important to note. We are going to get a measurement of a club head speed, find an average speed of five or six golf swings. Having done that, we would relay that information to that chart to find a shaft. The size of grip that was recommended to us earlier was men's standard, so if I could just ask Alistair to kindly hold that grip. How does that feel, Alistair?

ALISTAIR COCHRAN:
That feels normal.

JOHN GREGORY:
Quite comfortable? That's good. Can I just kindly check the top hand's position. If we look here, the top hand's position, the fingers are just touching the palm here, which would identify to me a well fitted to grip. And that's really the main thing I'm looking for. Feel for the player is very, very
important. You may well want to hit some shots using club with that size grip on just to confirm that the feel of that grip to the player is comfortable.

Set make-up would be such considerations as are long irons going to be recommended or are other options going to be taking up, such as lofted woods or even hybrids? They might have the player to create a more consistent game of golf. Also loft of wages should be considered within the set make-up. From the nine-iron, I would advise keeping a four-degree gap through your wedges, otherwise the player may well find that there is a varying distance issue that certainly in the wedge area of the game you do not want to have.

The purpose of this e-lecture was to take you through the process of dynamic fitting. For further information, refer to your study guides.