

Project

Name: Example Data
Description:

Player

Name: Example HC 0 player
Hand: Right
Handicap: 0

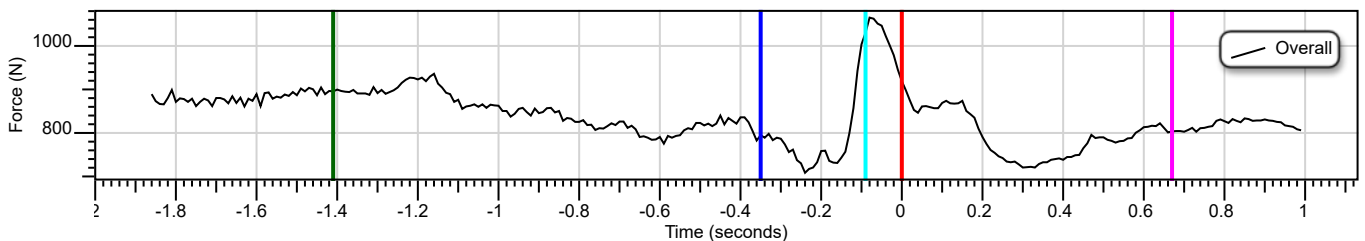
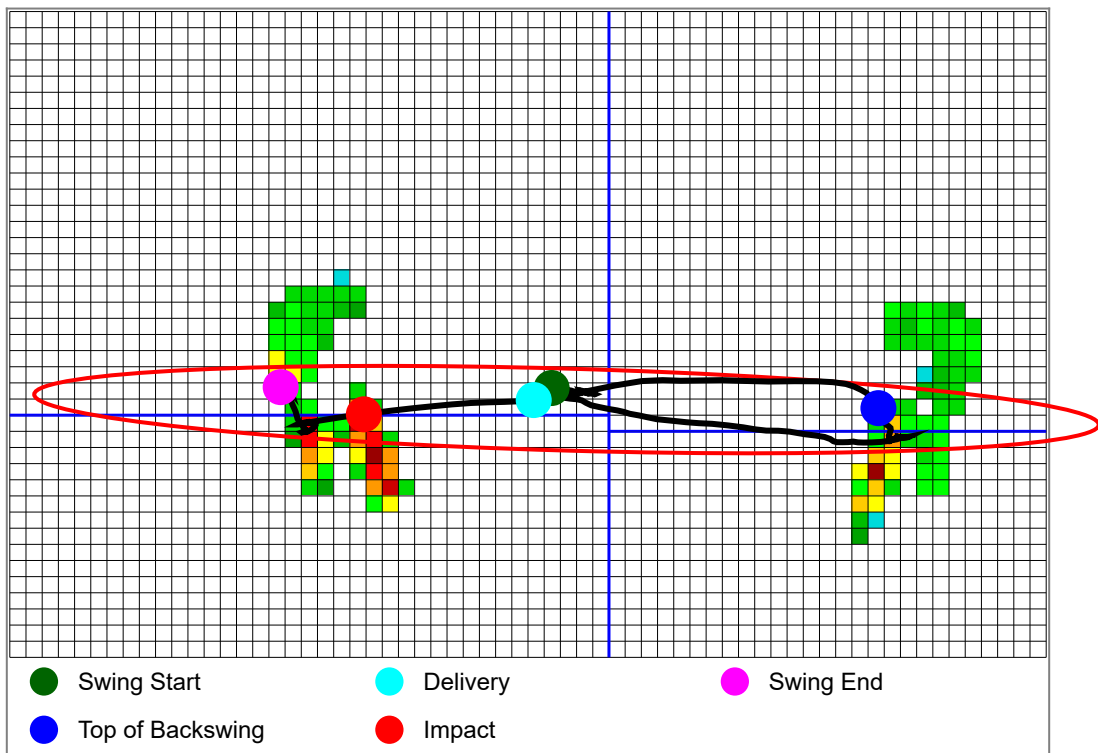
Session

Name: Iron 6 shot
Date: 2/14/2012 12:09:18 PM
Description: Iron 6 shot of a HC 0 golfer. Setup is well balanced. At TOP 90% of the weight are on the rear foot. Until delivery 65% and until impact 91% of the weight has been shifted to the front foot. The course of the COP is roughly parallel to the target line which is characteristic of an efficient shot.

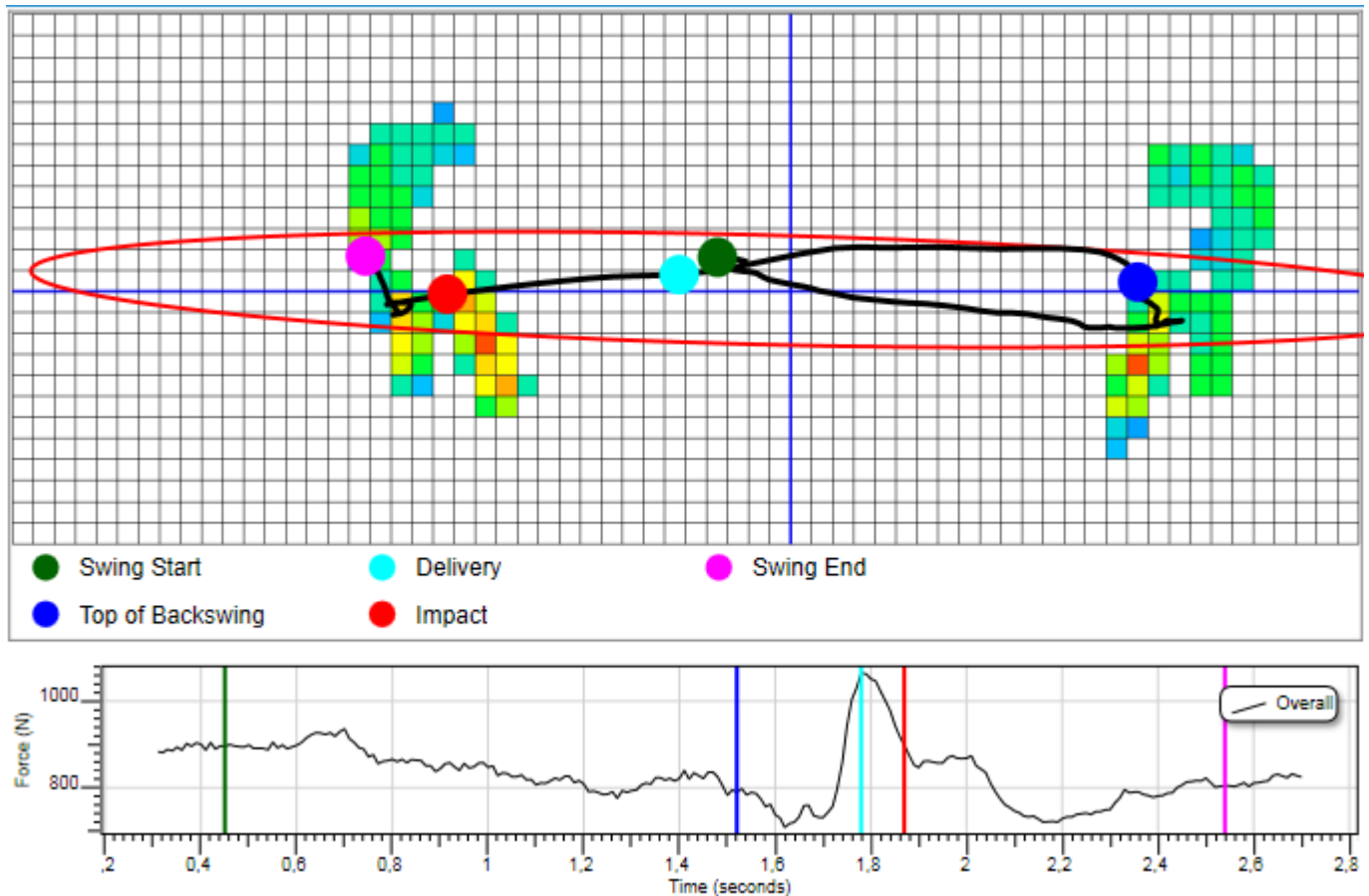
Record

Name: 2011-12-08 17:15:56
Date: 12/8/2011 5:15:56 PM
Description:

Average Force and COP



Description Page - Overview

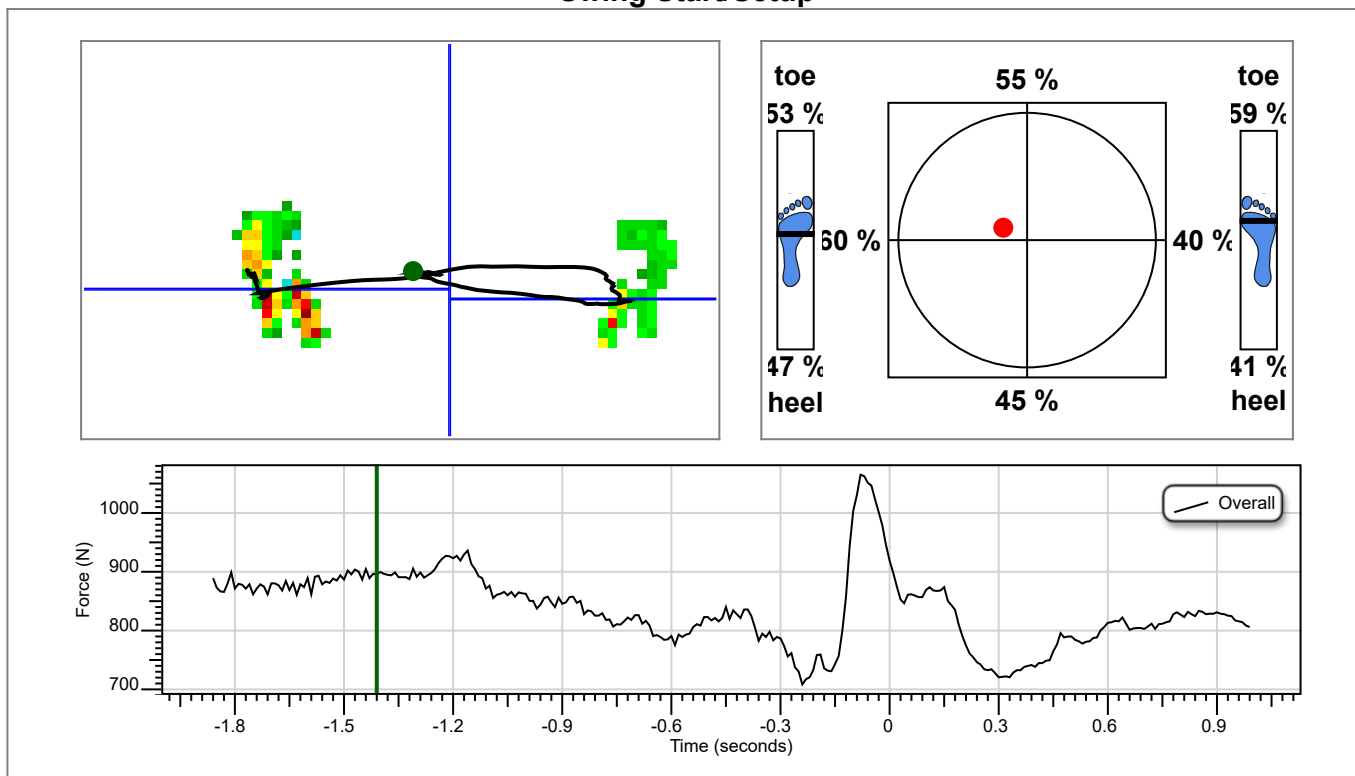


Balance is essential to the success of an efficient golf swing. The upper graph in the overview report shows the force distribution and the balance throughout the swing. The force distribution corresponds to the setup position at swing start. The color scale runs from blue (low forces) through green and yellow to red (high forces). The black curve represents the course of the center of pressure (COP) during the swing. Points of interest of the COP are indicated by the colored dots. The red ellipse encloses the COP curve and represents the characteristics of the weight shift. The height of the ellipse corresponds to body sway during the swing and should be narrow for a stable balance. The width of the ellipse corresponds to the amount of weight shift during the swing. The tilt of the ellipse corresponds to heel / toe tendencies between backswing and impact. For a neutral swing plane the tilt should be close to zero.

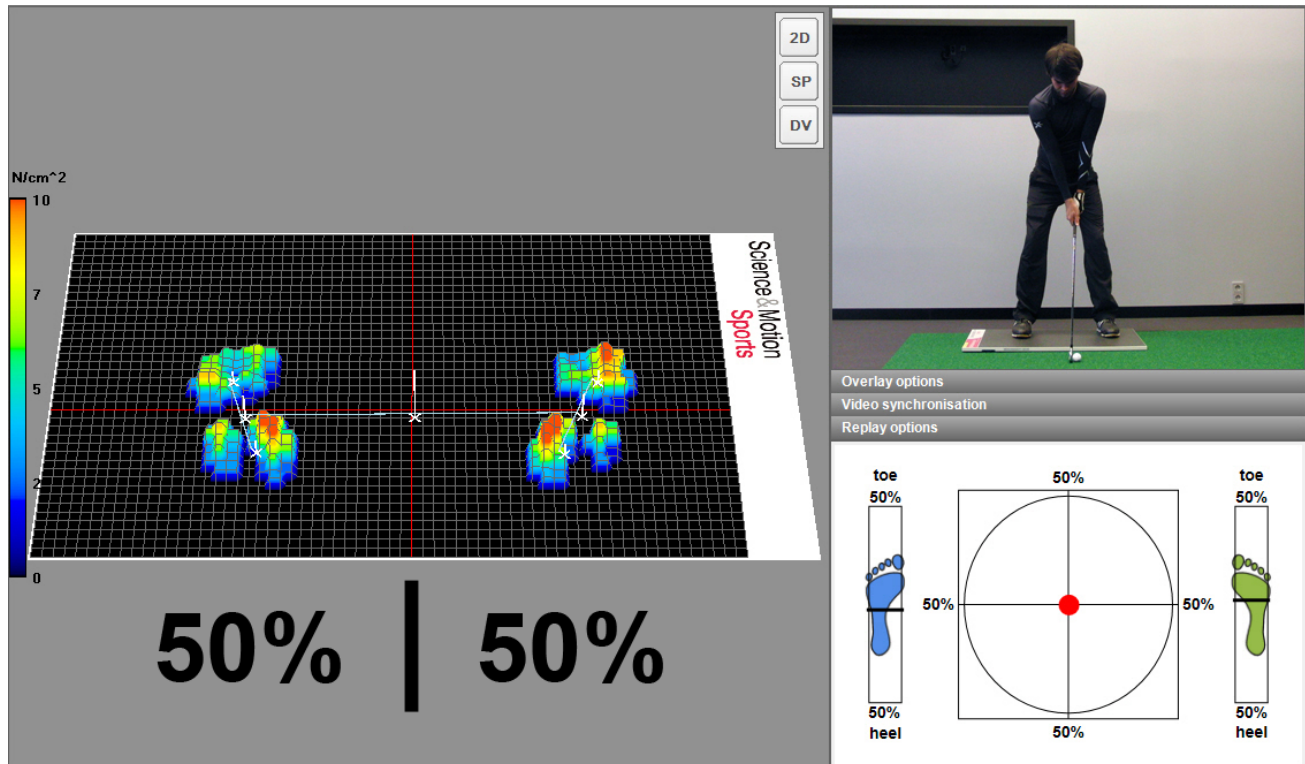
The lower graph shows the total downforce during the swing on a time axis. Points of interest are indicated by colored vertical markers. At delivery the downforce increases for a dynamic swing, whereas at impact the downforce might also decrease in particular for driver shots.

For this iron 6 shot example the COP curve is slightly moving inside in of the backswing, but nicely neutral at delivery position and impact. The weight is significantly shifted to the right during backswing (blue dot) and to the left until impact (red dot). The downforce graph shows a significant peak at delivery position as typical for dynamic swings.

Swing Start/Setup

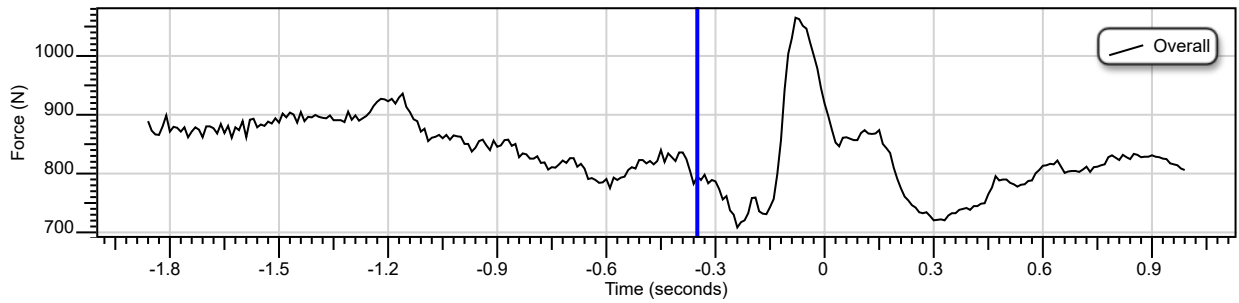
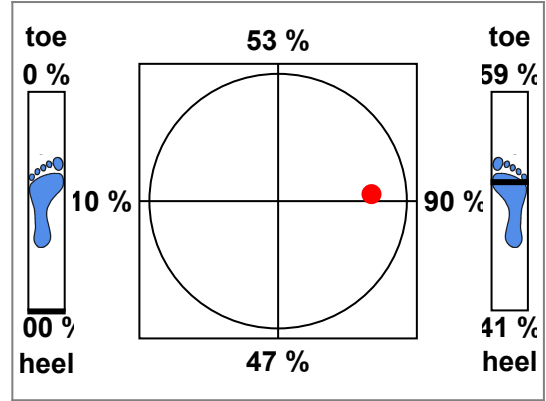
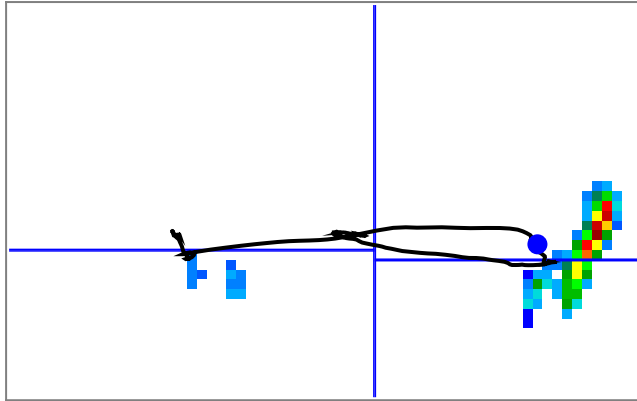


Description Page - Swing Start/Setup

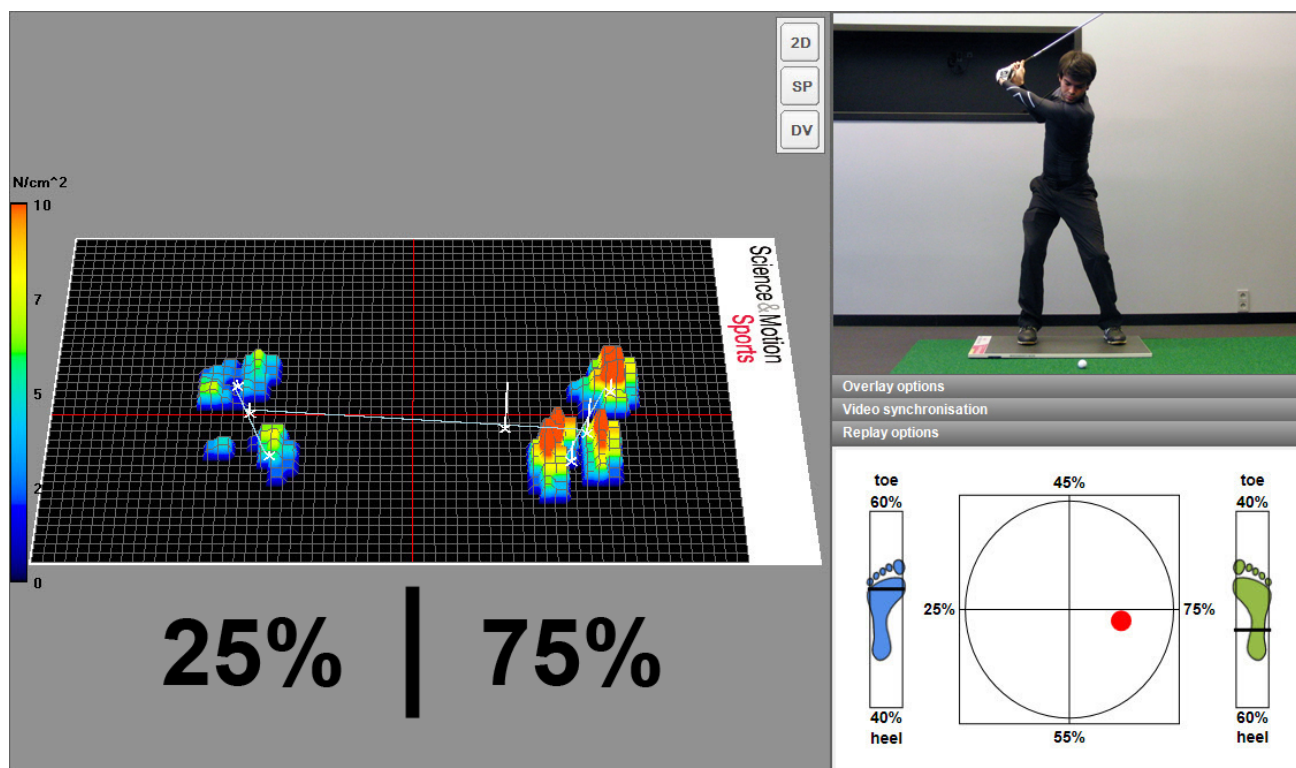


A solid setup position is critical for an efficient golf shot. The body weight should be evenly distributed (50/50%) in both left/right foot and toe/heel direction. The more balanced the setup, the less compensation will be needed during the swing. The aim is to minimize compensatory movements during the swing in order to maximize the power at impact. If the balance is not centered at setup it should be corrected. For this player 50% of the weight is set on the front foot (blue) and 50% on the rear foot (green) at setup. In the left foot 50% of the weight is at the toe and 50% at the heel. In the right foot also 50% of the weight is at the toe and 50% at the heel. The overall balance for this specific player is rated as excellent. As indicated by the red dot the balance is perfectly in the center.

Top of Backswing

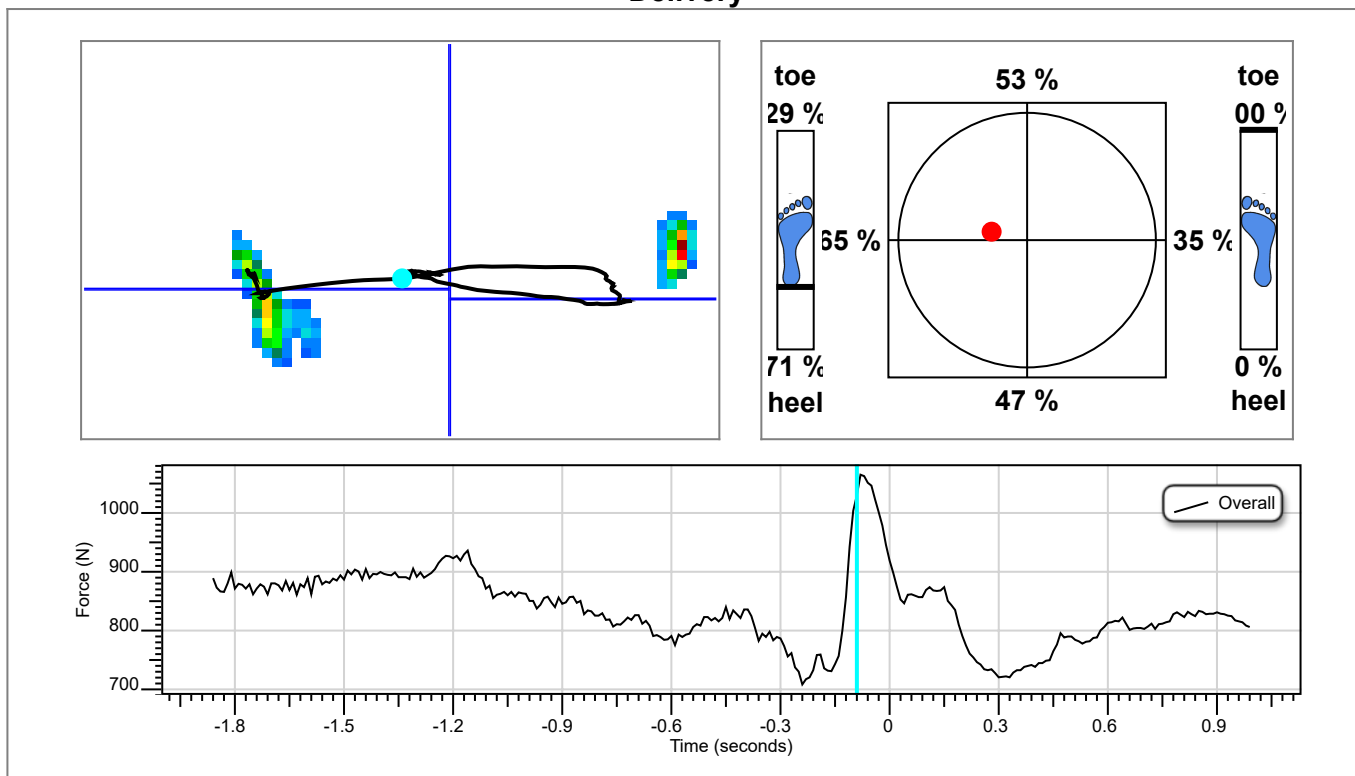


Description Page - Top of Backswing

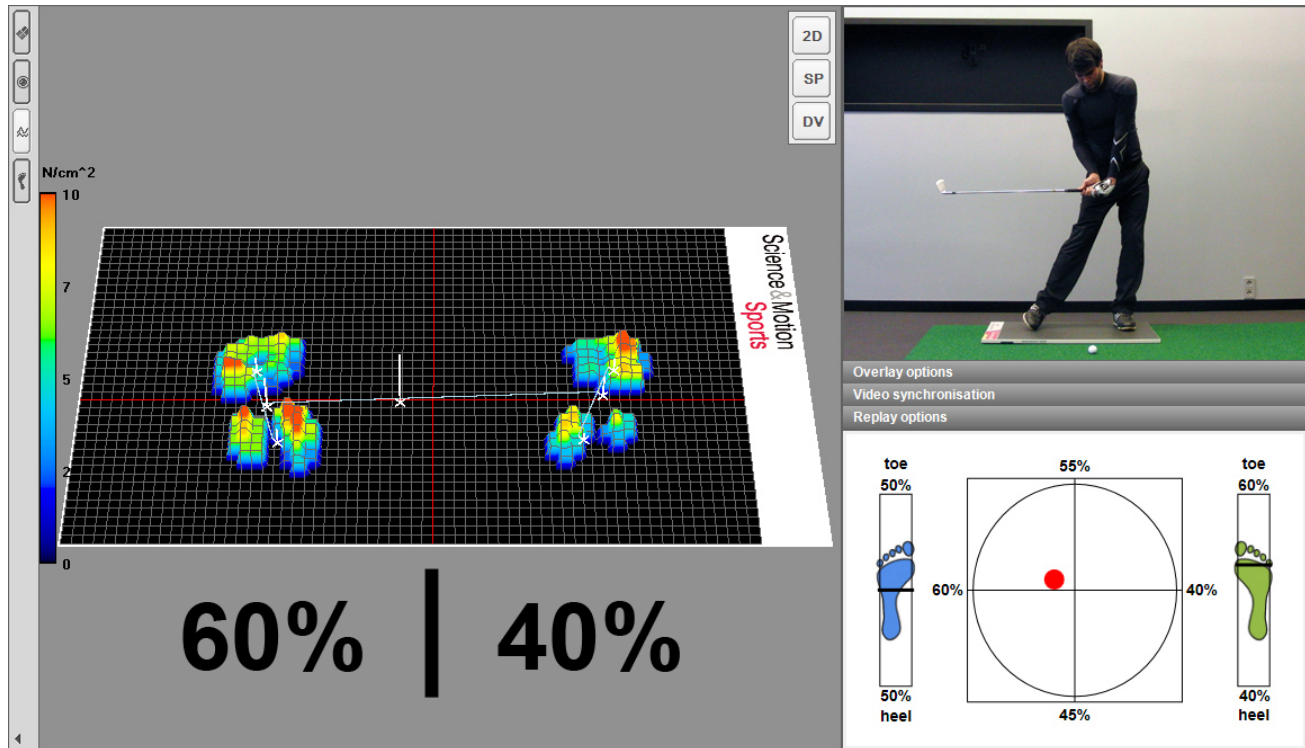


In the backswing the golf club and the arms are moving to the rear foot to build up tension. The COP should be 75-85% on the rear foot and slightly more to the heel of the rear foot / to the toe of the front foot. An often seen mistake is too much weight at the toes with a subsequent transformation of the swing plane. Any toe/heel movement during the backswing indicates compensatory rebalancing. An increased weight shifting to the heels or to the toes should be avoided. If the center of gravity moves towards toes or heels the swing plane will be displaced accordingly. This often results in poor impacts and mishits (heel or toe shots). A neutral balance is essential to minimize compensations during the swing in order to reduce miss hits. For this player the weight is perfectly balanced between toe 45% (both feet) and heel 55% (both feet) at top of backswing. Within the front foot you see 60% toe and 40% heel balance. In contrast the rear foot should be around 40% toe and 60% heel balance. Between front and rear foot the weight is 75% at the front and 25% at the rear foot which is ideal for a mid-iron shot. However if using a driver the weight should be more between 80-85% on the rear foot to create more power to impact.

Delivery

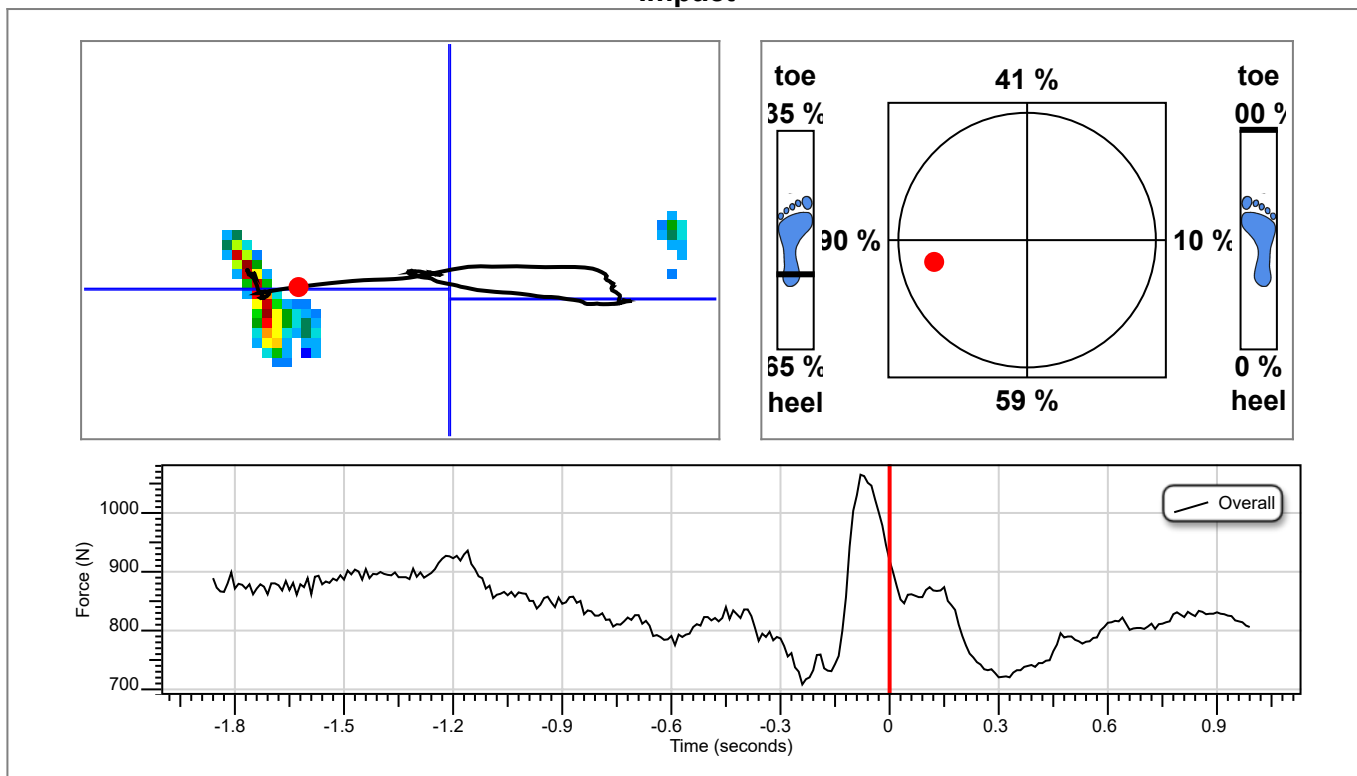


Description Page - Delivery (mid down)

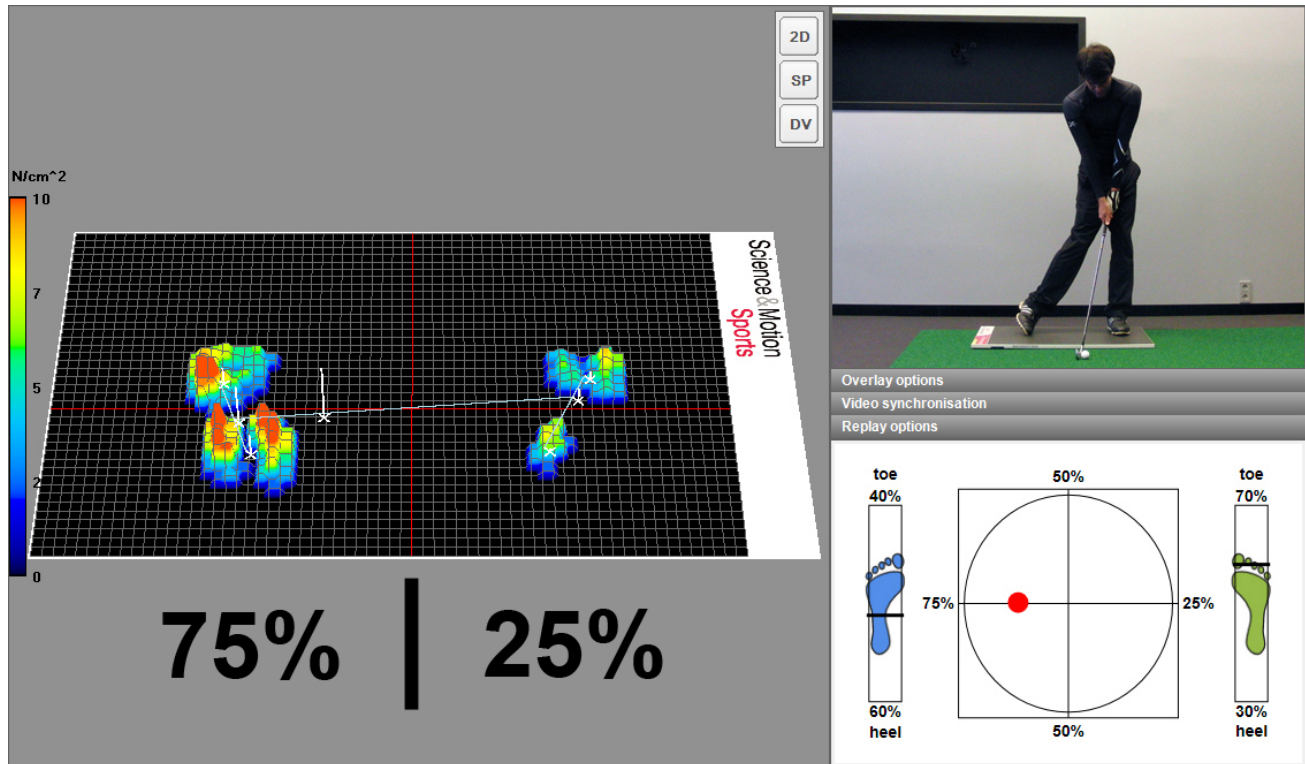


The delivery (mid down) position in the downswing is defined as having the shaft in a horizontal position. The goal of this position is to minimize the angle between left forearm and shaft to create maximum lag. To transfer maximum power to the ball it is necessary to displace weight from the rear foot (40%) to the front foot (60%). The weight shift to the front foot supports increasing club head speed to impact. The most common mistake during downswing is having the weight too much at the toes. The balance at the toes supports a swing that works across the ball from out to in, promoting a pull, slice or fade. A neutral COP in toe / heel direction helps to bring the club head back to impact in a neutral position for solid ball contact. For this player the weight is almost perfectly balanced between toe 55% (both feet) and heel 45% (both feet) at mid down position. Within the front foot you see 50% toe and 50% heel balance. In contrast the right foot should be around 60% toe and 40% heel balance.

Impact

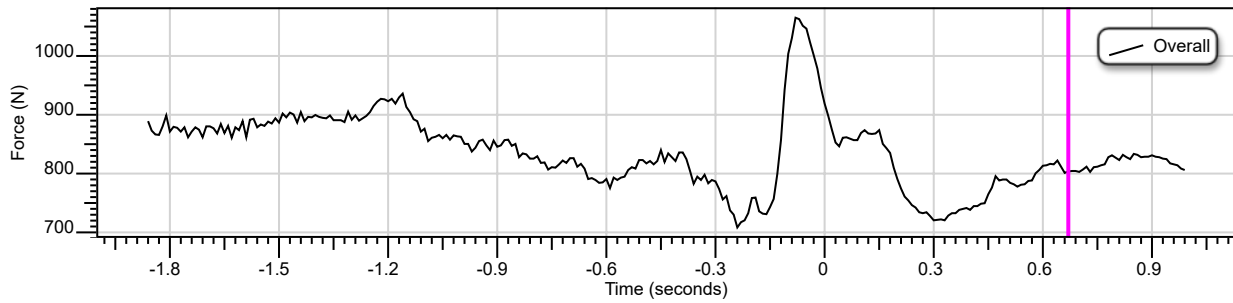
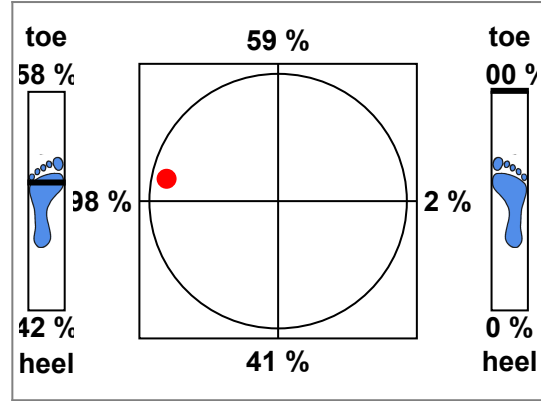
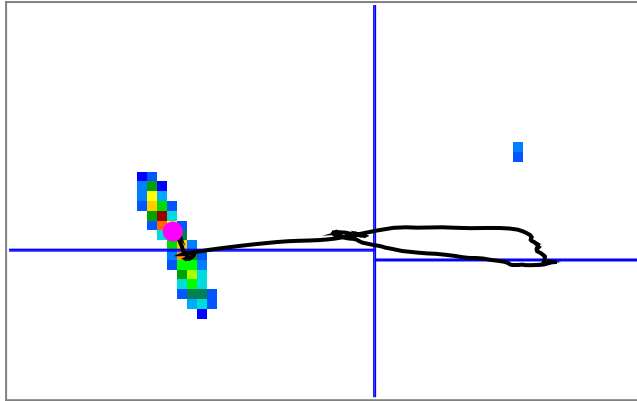


Description Page - Impact

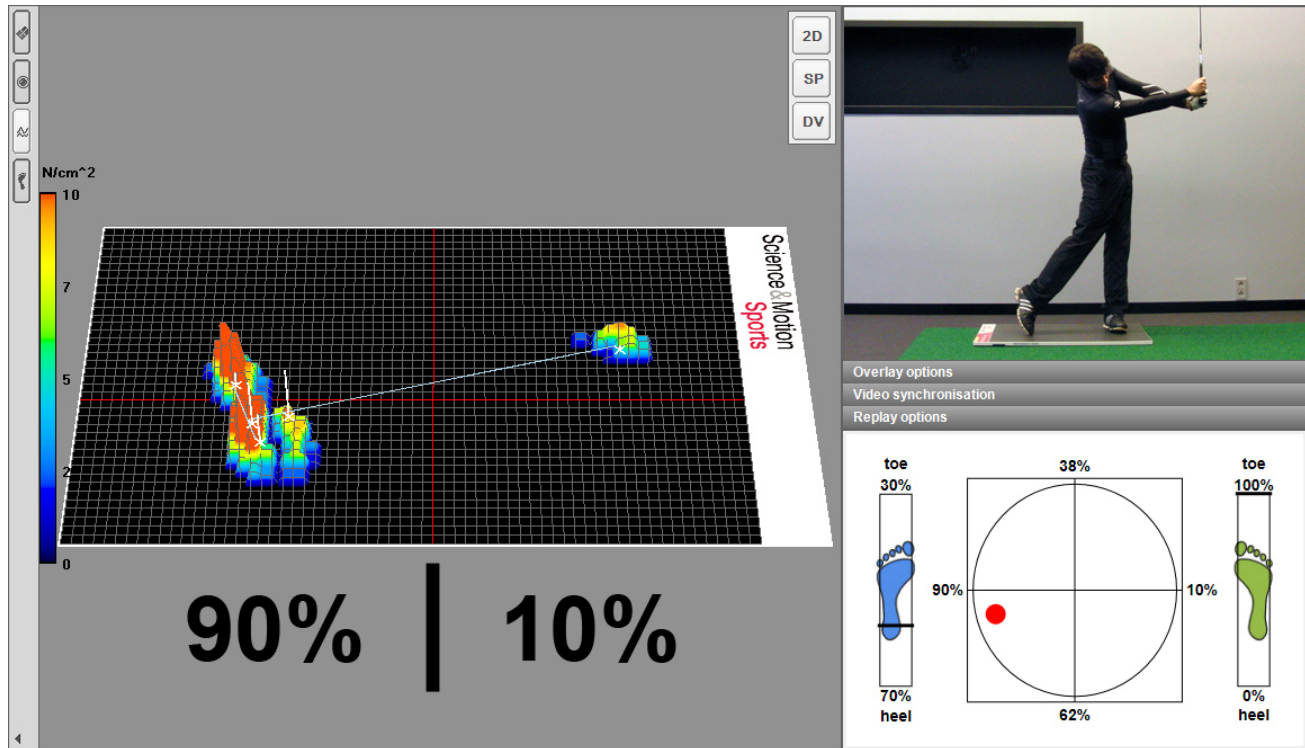


At impact about 75-85% of the weight should be over the front foot. With the correct balance the whole body including hips, shoulders, arms and rear foot are moving into the target direction. The rear knee moves to the front knee and not across to the ball. The front leg should extend itself to enforce the weight shift without straightening yourself up. A poor weight transfer in the forward swing will result in less distance and higher shots. The ideal COP position should be between the center and the heel of the front foot. Shifting the weight too much to the toes at impact is reducing the space for the arms and for the club. To still make good contact the motion to impact has then to be manipulated. Swing manipulations always result in a significant loss of energy. Additionally, the elbows will need to be tightened resulting in an uncontrollable ball trajectory. For this player the COP is perfectly at the front foot (75%) to enforce an efficient golfshot. The balance of 60% towards the heel in the front foot supports a solid hip rotation. As the rear foot is moving up to turn 70% of the weight is seen in the toes. However if hitting more subsequent shots, the consistency of the COP position at impact will be important to guarantee consistent and repeatable shot outcomes.

Follow through



Description Page - Follow through



In the follow through position of the swing nearly the whole weight (90%) should be based on the front foot. The rear foot is standing on the toes because hips are turning into shot direction. Furthermore the upper and lower body straighten themselves up in order to support a balanced finish. Approaching the finish of the swing the forces generated by body and club motion have to be slowed down. A balanced finish is a sign of a good golf swing and ensures a straight and repeatable ball flight. Furthermore the risk of fat or topped shots is then reduced. Therefore you see in the front foot 70% of the weight in the heel to compensate for the toe balance in the rear foot (100%). An unstable position at finish is a consequence of poor balance in general or any compensatory movements during the swing. For this player the COP at finish is stable with 90% on the left foot. The overall balance is slightly in the heels (62%). Overall the COP was moving 75% to the rear foot at top of backswing and about 75% to the front foot at impact. Throughout the swing the COP was moving almost parallel to the target direction. The range of left and right foot together was within a range of 25% which is only a very moderate heel/toe movement and which is characteristic of an efficient golf swing.