



3D Golf BioDynamics Swing Analysis

First Name: Joe	Last Name: Golfer	Test type: Initial Test
Date: 1-Sep-2011	Email: jg@gmail.com	Data Date: 22-Aug-2011
Mass: 184 lbs	Handicap: 0	Height: 6,1"

Summary

Joe, your swing is looking very sound. Here are a couple of things for you to work on:

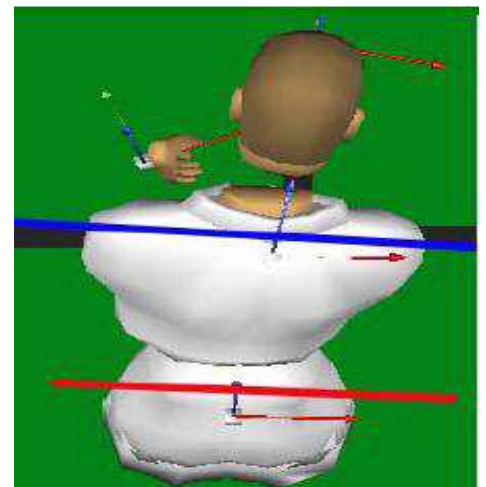
1. Push more laterally with your pelvis to start the downswing (not up with the right hip/leg)
2. Improve your single leg stability so that you can have a sound base from which to build your swing.
3. Eat more food (regularly); It should be HEALTHY food (not junk)
4. Work out

Setup Foundations

Alignment

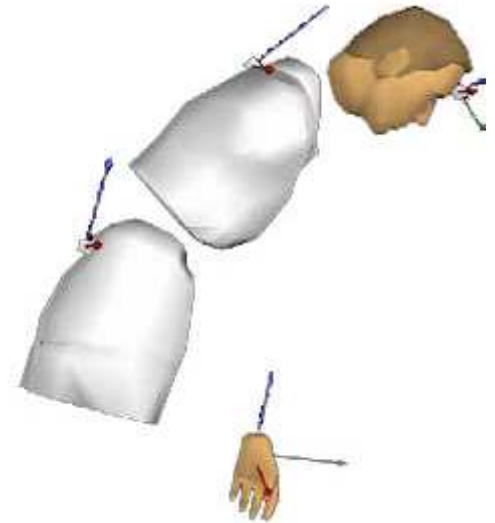
	Corridor	You
Hips	0 to 8 °	13 Open
Shoulders	5 to 12 °	20 Open

Green = within corridor
 Yellow = just outside corridor
 Red = well outside corridor

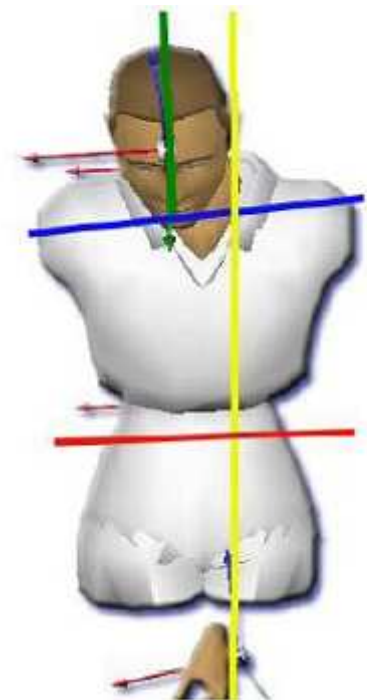




Bending		
	Corridor	You
Hips	13 to 26 °	27 Forward
Shoulders	27 to 40 °	45 Forward
Head	35 to 55 °	46 Forward



Tilting		
	Corridor	You
Hips	0 to 3 °	5 Right
Shoulders	7 to 13 °	11 Right
Head	-3 to 10 °	6 Right

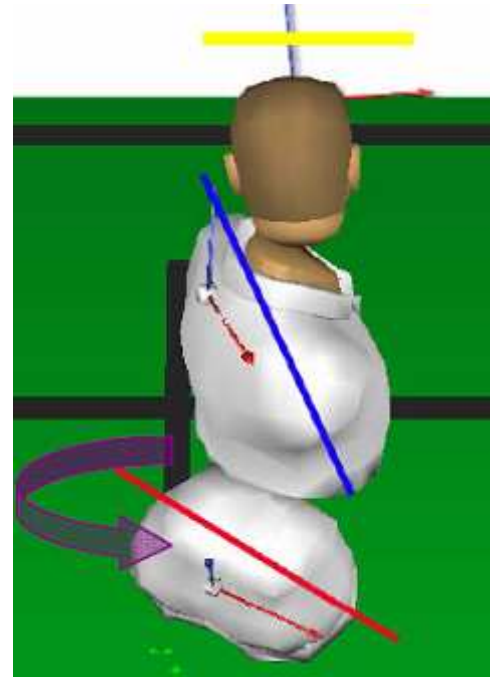




Backswing

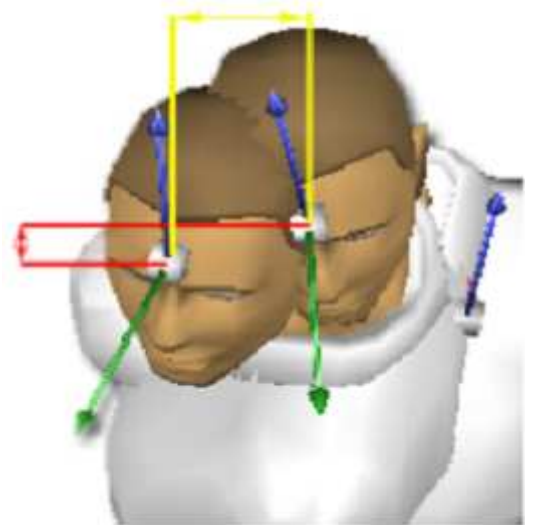
Rotations

	Corridor	You
Shoulder Turn	-85 to -98 °	-94 Closed
Hip Turn	-37 to -48 °	-33 Closed
X-Factor	-40 to -50 °	-61 Closed
X-Factor Stretch	-15 to -25 °	-11 Closed
Head Turn	-20 to -40 °	-11 Closed



Stability

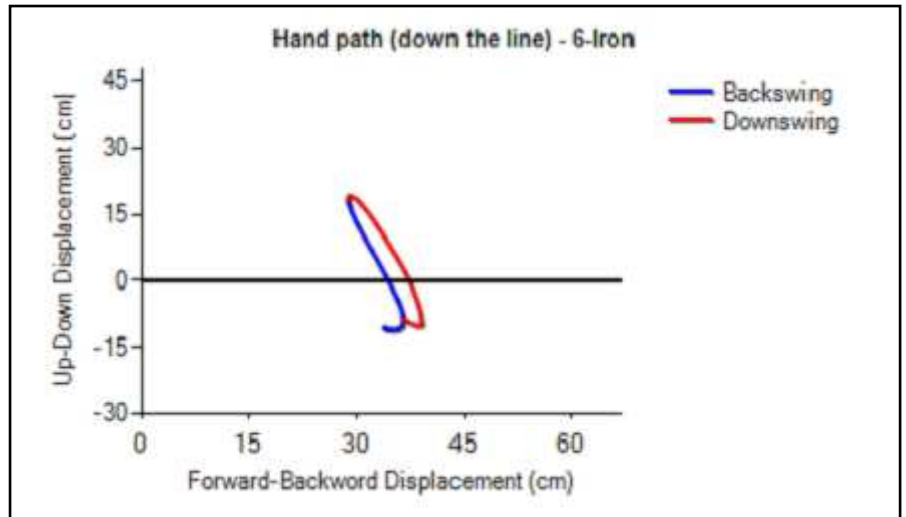
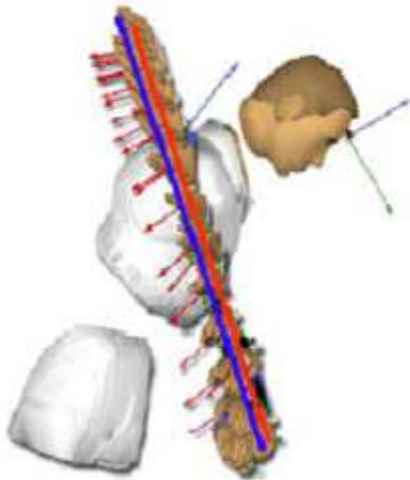
	Corridor	You
Head sway (Address to top)	0 to 3"	1.9 Away
Head lift (Address to top)	-1.5 to 0.5"	-1.3 Down
Head thrust (Address to top)	-0.75 to 0.75"	1.6 Forward
Hip drop (Address to top)	-1.25 to 0"	-0.3 Down
Hip sway (Address to top)	-0.5 to 0.5"	0.7 Away





Ideal Hand Path

Your Hand Path

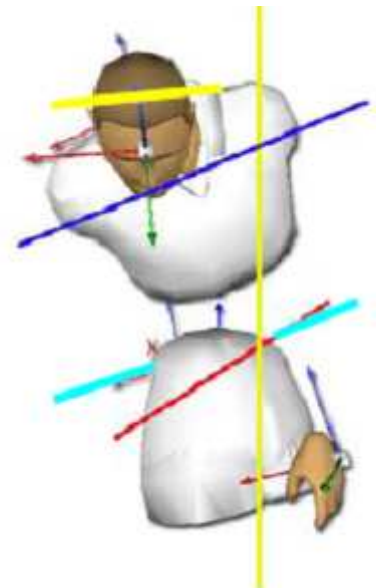


Blue = backswing Red = downswing

Downswing

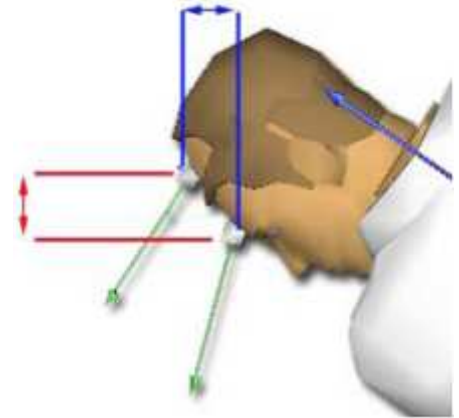
Impact Zone

	Corridor	You
Hip Turn	35 to 55 °	48 Open
Shoulder Turn	35 to 55 °	46 Open
Head Turn	10 to 40 °	-15 Closed
Hip Tilt	10 to 15 °	13 Right
Hip Bend	0 to 10 °	8 Forward





Stability (Spine Angle Control)		
	Corridor	You
Head drop (Address to impact)	-2.5 to 0.5"	-2.8 Down
Head thrust (Address to impact)	-0.75 to 0.75"	1.4 Forward
Head sway (Address to impact)	-1.25 to 0.75"	0.5 Away
Hip sway (Address to impact)	-4.25 to -5.75"	-2.9 Toward
Hip thrust (When Hip rotation = 0)	-0.75 to 0.75"	1.0 Forward



Body Speed		
	Corridor	You
Hips	>= 430 deg/s	441
UT	>= 640 deg/s	765
Arm	>= 880 deg/s	943
Hand	>= 1400 deg/s	1,472
Club	>= 1400 deg/s	2,005

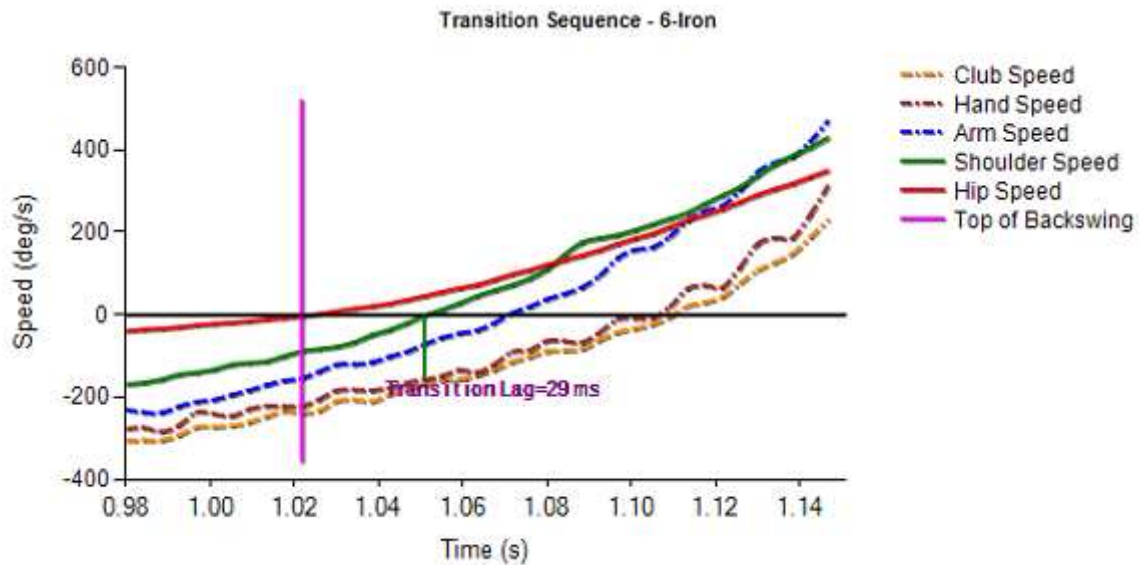
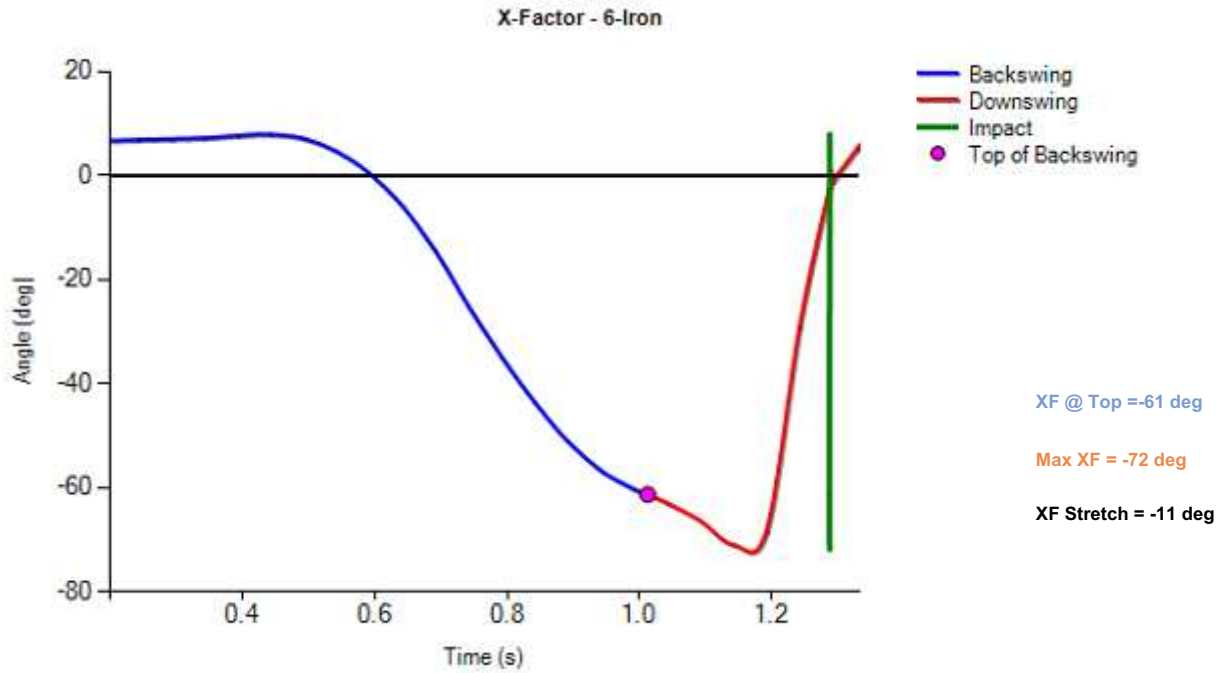
Transition Sequence				
order that body segments change direction				
	Hips	UT	Arm	Hand
Ideal	1	2	3	4
You	1	2	3	4

Timing Lags		
	Corridor	You
Hips to UT	25 to 40 ms	17
UT to Arm	15 to 30 ms	13
Arm to Hand	5 to 20 ms	25
Hand to Impact	15 to 45 ms	46

Timing Sequence				
order that peak speeds occur in downswing				
	Hips	UT	Arm	Hand
Ideal	1	2	3	4
6-Iron	1	2	3	4
-	0	0	0	0



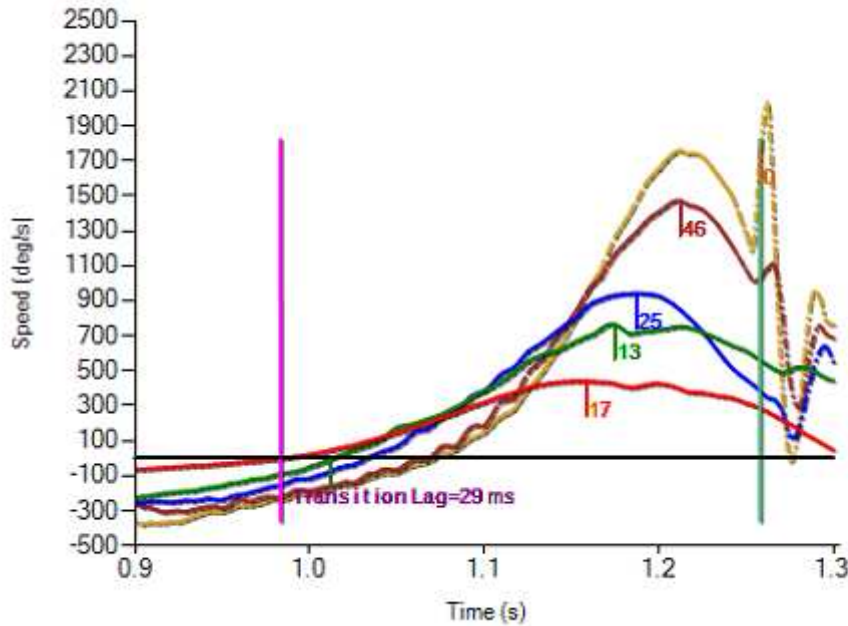
Dynamics





Dynamics

Timing Sequence - 6-Iron



- Club Speed
- Hand Speed
- Arm Speed
- Shoulder Speed
- Hip Speed
- Top of Backswing
- Impact

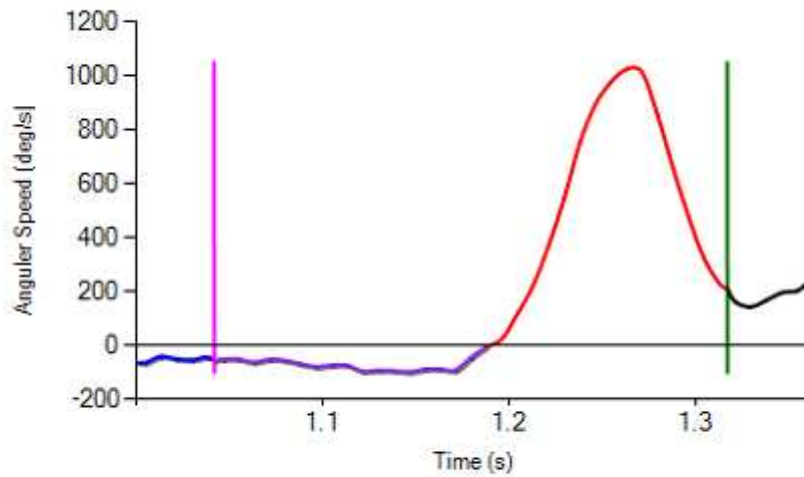
Max Hand Speed=1,472 deg/s

Max Arm Speed=943 deg/s

Max UT Speed=765 deg/s

Max Hip Speed=441 deg/s

Rate of X-factor Stretch & Recoil - 6-Iron



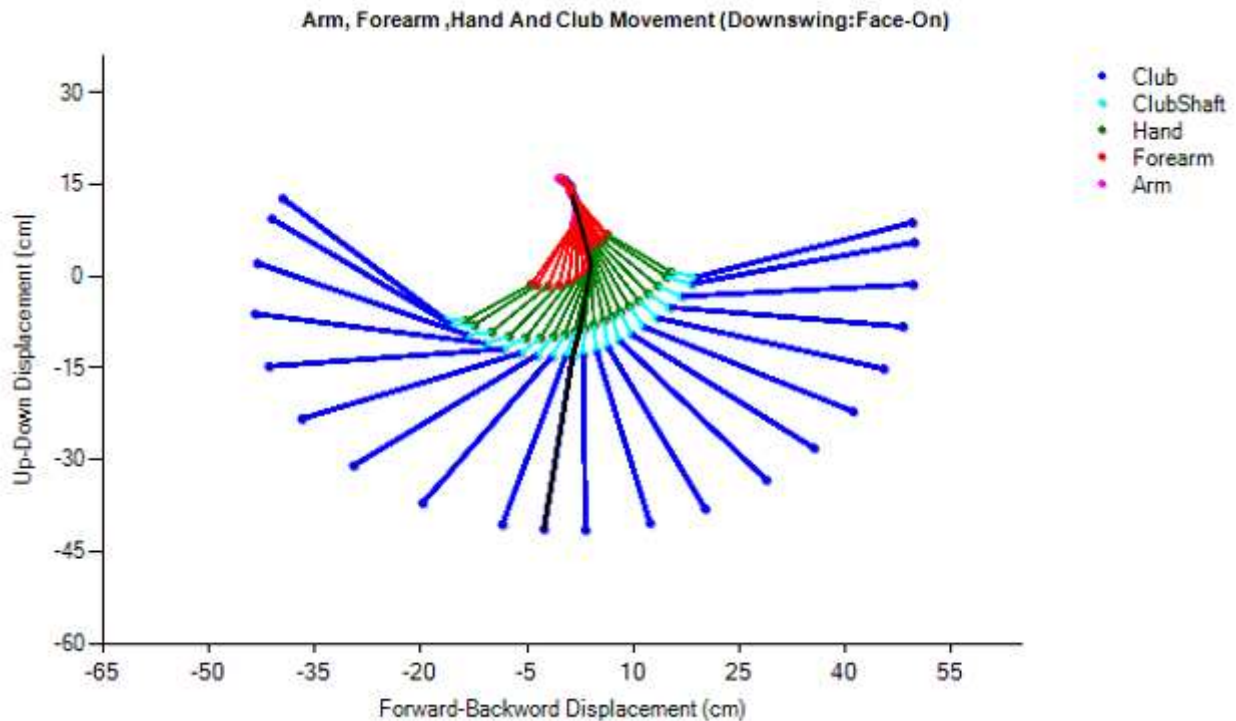
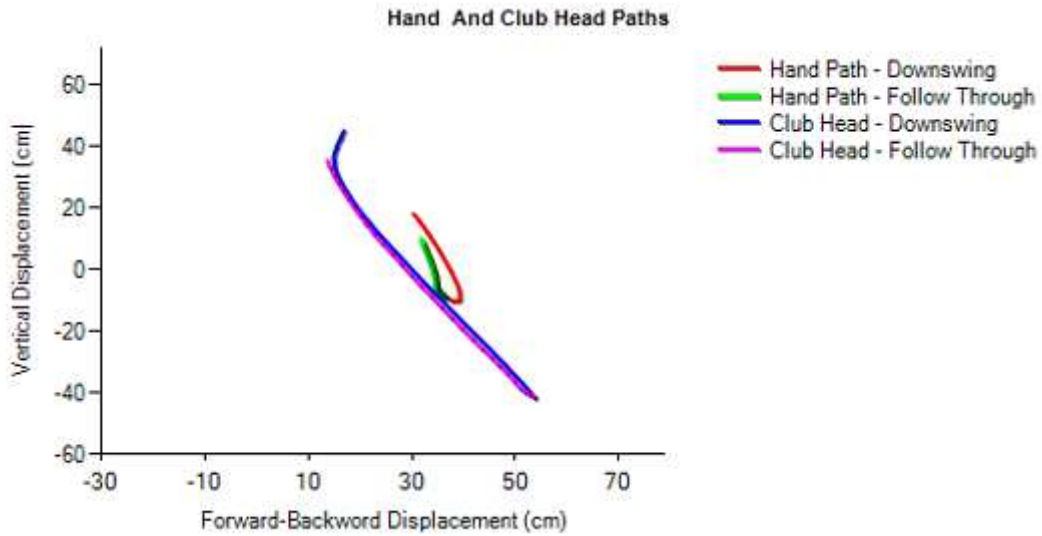
- Backswing
- Stretch
- Recoil
- Impact
- Top of Backswing
- Post Impact

Max_Recoil=1,050 deg/s

Max Rate of Stretch = 131 deg/s



Dynamics





Club Data

	Address		Impact		
Shaft lean (Viewed from face on to golfer)	1.5°			8.3°	
Shaft plane (Viewed from target line)	57.5°		GBD (n = 1) T/Man	62.0° (n = 0) 0.0° (n = 0)	
Face angle (Viewed from above)	-5.2°		GBD (n = 1) T/Man	1.1° (n = 1) 0.0° (n = 0)	
Angle of attack			GBD (n = 1) T/Man	-7.3° (n = 1) 0.0° (n = 0)	
Club path (Viewed from above)			GBD (n = 1) T/Man	3.5° (n = 1) 0.0° (n = 0)	
Club head speed (Estimated)			GBD (n = 1) T/Man	80.7 mph (n = 1) 0.0 mph (n = 0)	36.1 m/s 0.0 m/s



Joe Golfer

Swing parameter	22-Aug-2011		6-Iron	
	Address	Top of Backswing	Impact	Finish
Pelvic Rotation (deg)	12.9	-32.9	48.0	104.1
X-Factor (deg)	6.7	-61.4	-2.0	42.4
Upper Torso Rotation (deg)	19.5	-94.3	45.9	146.6
Pelvic Bend (deg)	26.6	17.3	8.2	12.5
Spine Bend (deg)	18.1	-8.5	33.7	-45.6
Upper Torso Bend (deg)	44.7	8.8	41.8	-33.1
Pelvic Tilt (deg)	5.3	-12.5	12.9	4.3
Spine Tilt (deg)	5.5	-40.9	13.5	-0.2
Upper Torso Tilt (deg)	10.8	-53.4	26.4	4.1
Head Rotation (deg)	-1.8	-11.1	-14.9	91.6
Head Bend (deg)	45.9	49.6	65.8	4.0
Head Tilt (deg)	5.6	-0.9	5.2	22.2
Pelvic Sway (inch)	0.0	0.7	-2.9	-8.7
Upper Torso Sway (inch)	0.0	1.3	-1.2	-6.8
Head Sway (inch)	0.0	1.9	0.5	-8.6
Hand Sway (inch)	0.0	20.6	-3.3	5.8
Pelvic Thrust (inch)	0.0	1.3	1.9	6.4
Upper Torso Thrust (inch)	0.0	1.2	0.4	-0.8
Head Thrust (inch)	0.0	1.6	1.4	-4.6
Hand Thrust (inch)	0.0	-5.2	2.4	-7.2
Pelvic Lift (inch)	0.0	-0.3	0.9	1.7
Upper Torso Lift (inch)	0.0	0.1	0.9	6.1
Head Lift (inch)	0.0	-1.3	-2.8	8.5
Hand Lift (inch)	0.0	29.2	2.0	35.8
X-Factor Stretch (deg)	-11	Peak club twist velocity (deg/s)		2,571.8
Max. Pelvic Speed (deg/s)	441	Spine Angle (Address)		51.0
Max. Upper Torso Speed (deg/s)	765	Spine Angle (TOB)		51.9
Max. Arm Speed (deg/s)	943	Spine Angle (Impact)		54.3
Max. Hand Speed (deg/s)	1,472	Hip sway (Downswing hip rot=0)		-1.0
Max. Club Speed (deg/s)	2,005	Hip thrust (Downswing hip rot=0)		1.0
Max. Club Head Speed (mph)	83	Hip lift (Downswing hip rot=0)		0.0
Hip - Upper Torso lag(ms)	17			
Upper Torso - Arm lag (ms)	13			
Arm - Hand lag (ms)	25			
Hand Impact lag (ms)	46			
Backswing Time (ms)	808			
Downswing Time (ms)	271			
Total Swing Time (ms)	1,079			
Min hip sway on downswing (inch)	5.1			