**Efficiency SUMMARY**

**Golf Sample**

---

**Transition Sequence**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

**Correct Order**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

**Peak Speed Sequence**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

**Correct Order**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

**Peak Speeds**

- **Degrees Per Second**
  - 707
  - 844
  - 1005
  - 1821

**LPGA Tour Ranges**

- 425-500
- 690-760
- 1035-1140
- 1400-1775
**SWING SUMMARY**

**Alignment at Address**

- **PELVIS TURN**
  - **You:** 5° Open
  - **LPGA Range:** 7° to 10°

- **UPPER BODY TURN**
  - **You:** 15° Open
  - **LPGA Range:** 7° to 10°

Your pelvis and/or upper body orientation(s) was (were) not within range at address.
Your upper body was "open" compared to the intended range.

**Posture at Address**

- **PELVIS BEND**
  - **You:** 27°
  - **LPGA Range:** 14° to 28°

- **UPPER BODY BEND**
  - **You:** 41°
  - **LPGA Range:** 36° to 47°

Your posture was within range at address.

**Pelvis Position at Top**

- **PELVIS TURN**
  - **You:** -30°
  - **LPGA Range:** -44° to -25°

- **PELVIS SIDE BEND**
  - **You:** -1°
  - **LPGA Range:** -13° to -5°

Your pelvis position was not within range at top.
Your "lead hip" was too "high" at the top. (Potential "Loss of Posture")
**Pelvis and Upper Body Turn**

You

-30°  Top
81°  Impact

LPGA Range

Summary

-44° To -25°
43° To 61°

Your pelvis and/or upper body turn(s) was (were) not within range
Your pelvis was "over rotated" at impact.
Your upper body was "over rotated" at impact.

**Pelvis Movement**

You

27°  Address
37°  Top
-3°  Impact

LPGA Range

Summary

14° To 28°
12° To 28°
-3° To 6°

Your pelvis bend and/or side bend(s) was (were) not within range during the swing
Your pelvis (lower back) was too "arched" at the top.
Your "lead hip" was too "high" at the top. (Potential "Loss of Posture")

**Upper Body Movement**

You

41°  Address
6°  Top
32°  Impact

LPGA Range

Summary

36° To 47°
-2° To 13°
27° To 45°

Your upper body movement was not within range during the swing
Your upper body was leaning too "far away" from the target at address.
Motion Analysis Summary

**Motion Analysis:**

**Summary:** The kinematic sequence of the golfer’s swing is overall good. The transition phase of the swing is showing the correct kinematic sequence order. The correct sequencing of the body segments from top of backswing are as follows: 1. Pelvis - Red, 2. Thorax (Torso) - Green, 3. Composite Arm (Lead Arm) - Blue, 4. Club- Brown. This sequence stays in-tact at the transition portion of her golf swing.

The kinematic sequence in the downswing into impact does require some attention. The correct sequence into impact is as follows: 1. Pelvis - Red, 2. Thorax - Green, 3. Lead Arm - Blue, 4. Club. The downswing is this golfer’s swing is as follows: 1. Pelvis - 2. Lead Arm, 3. Thorax, and 4. Club. This sequence invariably indicates a situation where speed generation is limited due to the incorrect sequence and invariably a less than optimal swing in terms of efficiency.

Determining the reason behind the incorrect sequencing is the next step in the process. A physical assessment will assist in determining if the sequencing issue is due to physical dysfunction or mechanical inefficiencies.

Secondly, a review of the kinematic sequence outside of peaking order indicates greater separation between lead arm and thorax would be ideal. A greater separation would result in a larger amount of speed translation into the lead club and invariably the club at impact. Finally, acceleration and deceleration of each segment is very good. Though we do see a slight deceleration and reacceleration of the lead arm in the downswing. Suggestion is to correct peaking order first and then address segmental acceleration/deceleration.

The overall speeds of the pelvis and thorax are very good and within the LPGA Tour ranges. A lower than average speed of the lead arm is present and does indicate an inefficient transfer of energy from the thorax to lead arm. This is an area to review in greater depth and determine the cause of this speed translation. After completion of a series of physical screens a better determination of if this drop is due to physical dysfunction or mechanical inefficiencies can be determined.

Review of positions during the swing indicate at address the upper body is slightly more open and outside of LPGA Tour ranges. Pelvis bend and upper body bend is excellent at the address position. At the top of backswing pelvis side bend is slightly outside Tour range at -1 degrees. Upper body turn is 20 degrees more than the LPGA ranges at the top of backswing and approximately 12 degrees at impact. The excessive upper body rotation may be a factor in the poor sequencing in the downswing. Upper body side bend (tilt) is slightly out of range at address and top with over 10 degrees at impact.

Overall, a greater amount of separation between the pelvis, thorax, and lead arm would provide a greater amount of speed translation. Deceleration of all three segments is good though the lead arm has a re-acceleration component within the downswing. Peaks speeds are good except for a slight drop off into the lead arm and most likely linked to the re-acceleration of this segment. Pelvis bend at top and upper body side
Motion Analysis Summary

bend are two areas which may require attention. The suggested next step is a physical assessment to determine if physical dysfunctions are present limiting the execution of the swing. After completion of physical assessments determinations can be made in terms of the appropriate instruction and training for improvement.