

## Carrydown or Depletion, What to look for?

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As to what to look for? It's a little more complicated than a one line answer, sorry for the long post.

*Disclaimer: none of the following is based on scientific data.....just my observations over many years.*

I view depletion as a reduction of something; that something being oil in the case of the bowling environment.

### Here's the simple explanation:

Depletion of oil on the lane results in earlier reaction (ball could lose energy too soon....lose of down lane reaction).

Carrydown of oil on the lane typically results in later ball reaction.

Now for the dissertation:

### Depletion of oil

#### Givens:

- 1) The ball is traveling at its fastest speed as it leaves the hand (facilitates skid).
- 2) Axis Rotation is at its greatest at release (facilitates skid).
- 3) During the balls path down the lane track flare increases exposing fresh cover stock (facilitates depletion of oil).

#### Axiom #1

Oil depletion occurs at a greater rate in the mid lane versus the head area in my humble opinion.

#### Reason being:

- 1) Ball speed and axis rotation are at their greatest during the first part of the lane.
- 2) Ball speed and axis rotation decrease in the mid lane as flare increases.
- 3) Track flare is a contributing factor to mid lane oil depletion.

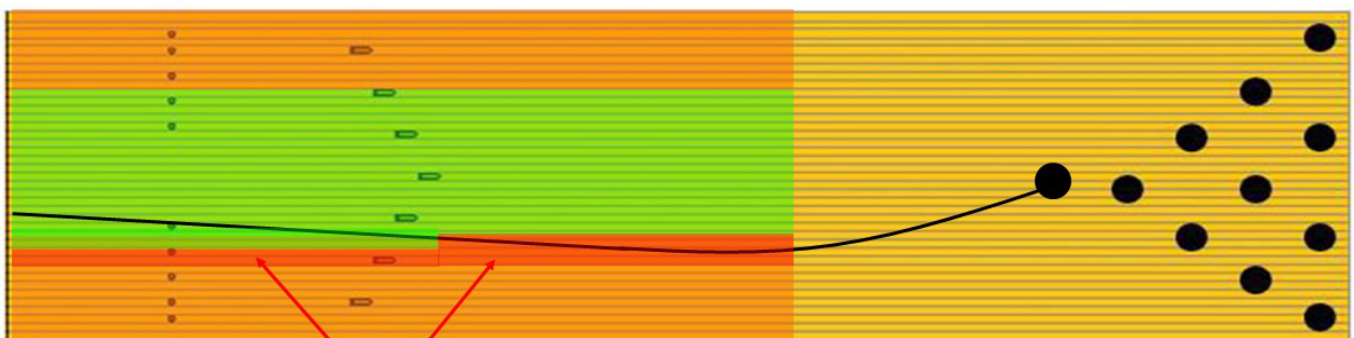
#### Axiom #2

I had a great reaction then the heads starting hooking. Really?

#### Maybe not:

Depletion of oil in the mid lane moves shortens the skid zone and moves Hook Zone closer to the foul line.

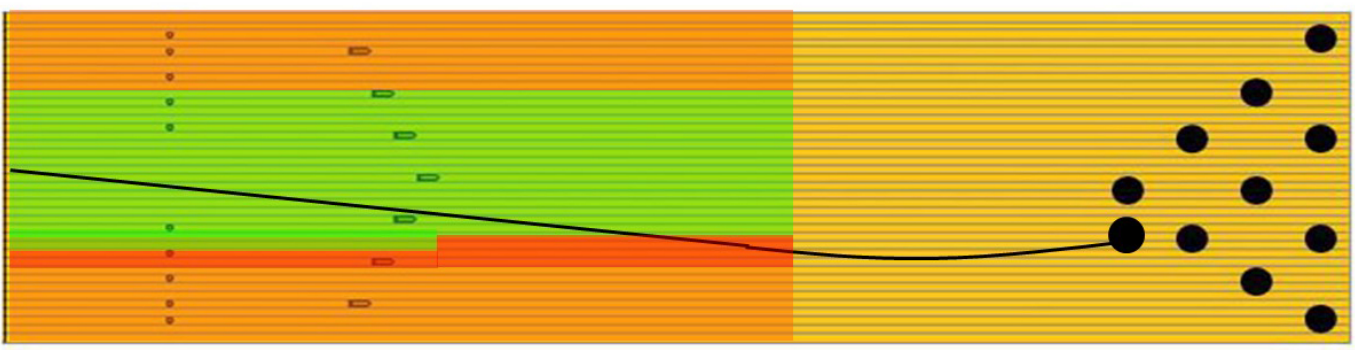
What once was a good reaction we now see the ball over reacting down lane. (slide #2)



#2

Oil Depletion...too much reaction

The move left (right hander's) is not to find more head oil, but to get the ball into the fresh oil in the mid lane restoring our original ball reaction. (slide #3)

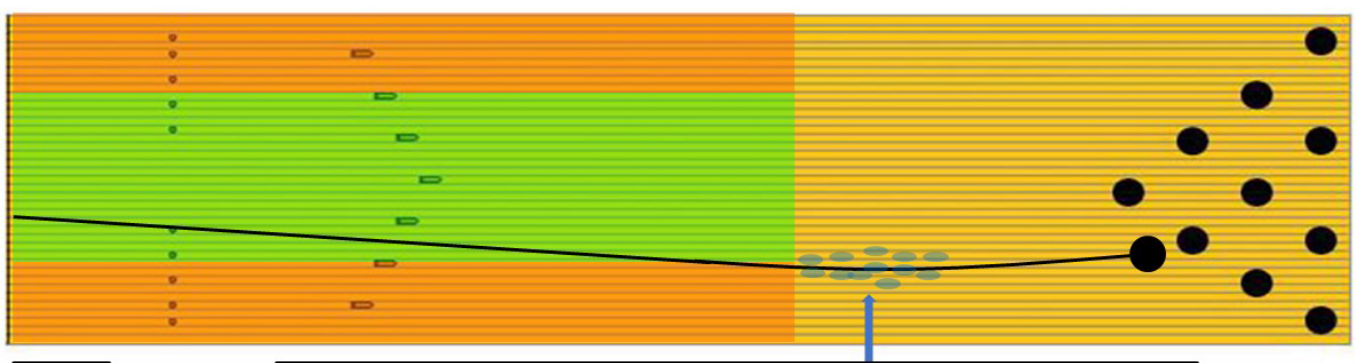


#3

Feet & target moved left

**Carrydown**

Oil picked up on the balls surface in the mid lane is re-deposited on the lane after the ball leaves the end of the oil pattern. (slide # 6)



#6

Carry down...bad ball reaction

The additional oil past the end of the pattern reduces the traction between the ball and the lane surface. Less traction...less reaction.

**Oil depletion and carry down similarities.**

Excessive oil depletion in the mid lane can cause the ball to progress through the Skid and Hook Stage prematurely. Turning rotational energy into transitional energy too soon and the ball often hits flat.

Carry down moves the Hook Zone further down lane, reducing the balls chances of getting into the Roll Stage. Often resulting in the ball hitting flat.

**Thus, similar effects on ball motion down lane.**

**General guidelines:**

Move feet and maybe target left .....ball reaction restored.....probably dealing with oil depletion.

Move feet and maybe target left .....ball reaction not restored.....change to a weaker ball and deliver another ball on the same line. Ball reaction restored.....oil depletion.

Ball reaction not restored..... possibly carry down.

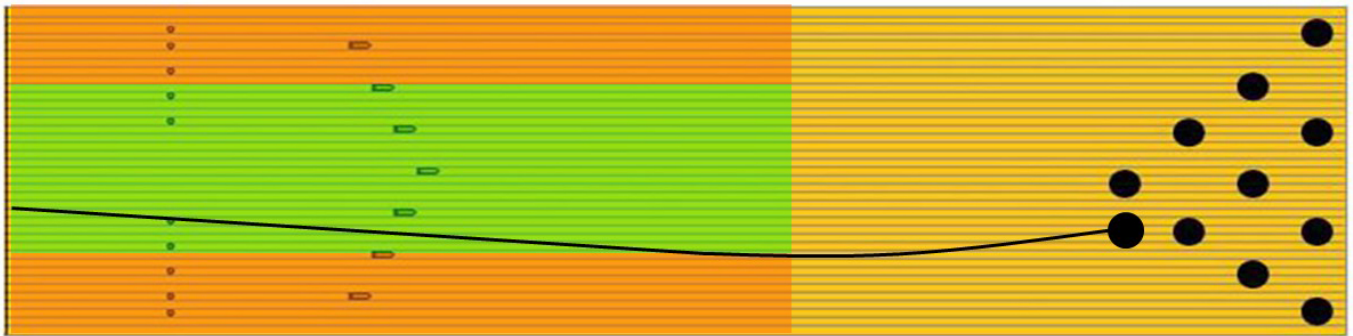
Carry down.....move feet and target right of the original target to get around carry down. Sometimes, this move will require balling up to a stronger cover stock.

While this may seem like a lot to digest.....once familiar with the process.....it only takes several shots for me to

make a decision what the athlete is dealing with....depletion or carry down.

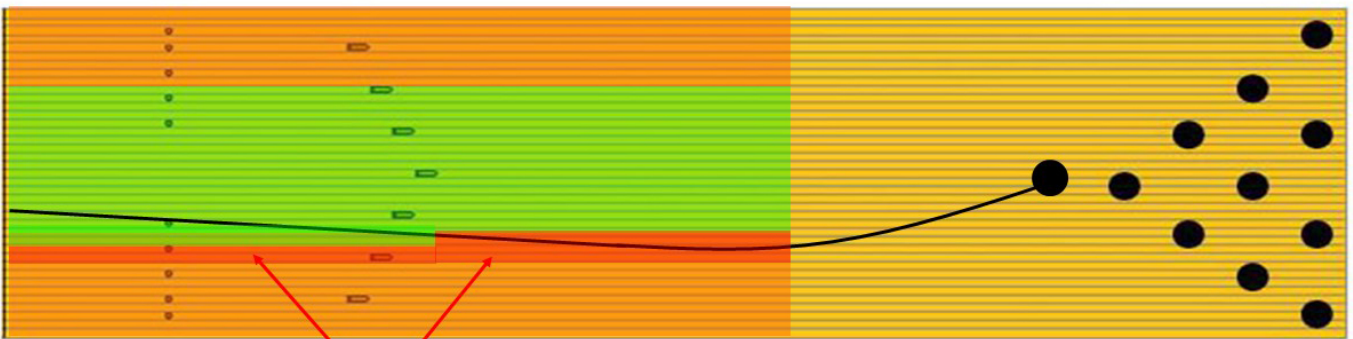
Appendix:

Slides 1-7



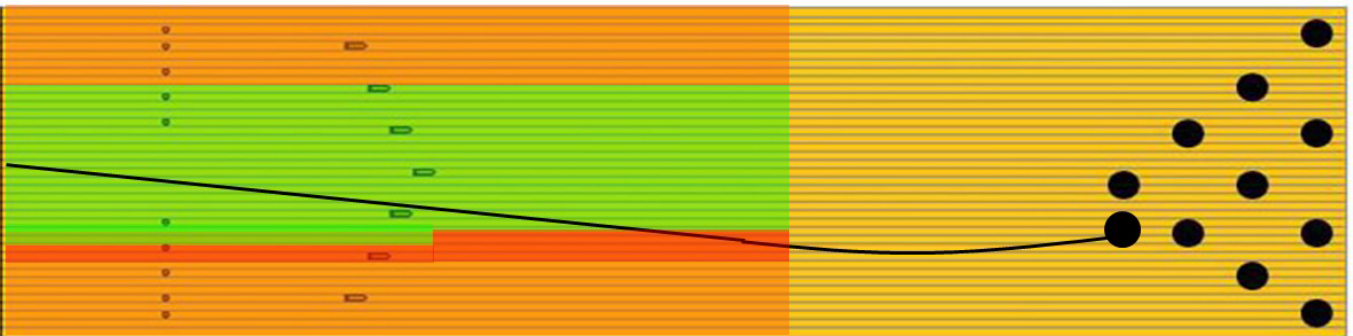
#1

Fresh Shot...good ball reaction



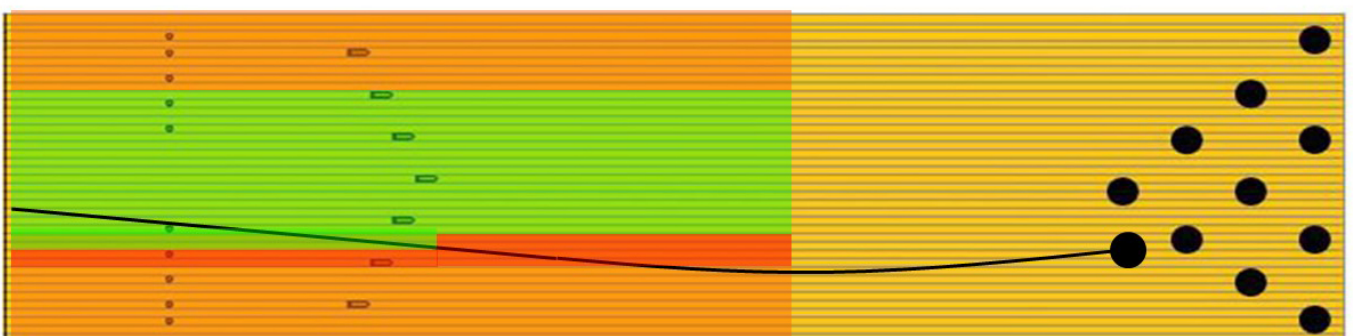
#2

Oil Depletion...too much reaction



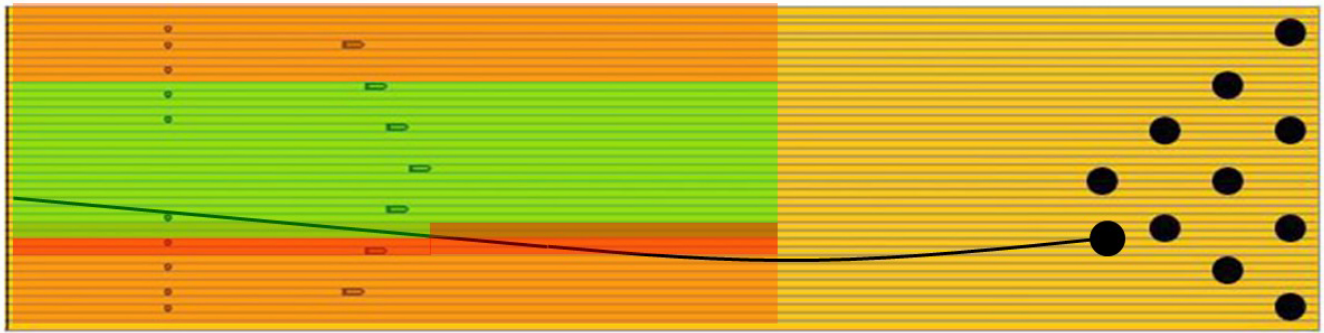
#3

Feet & target moved left

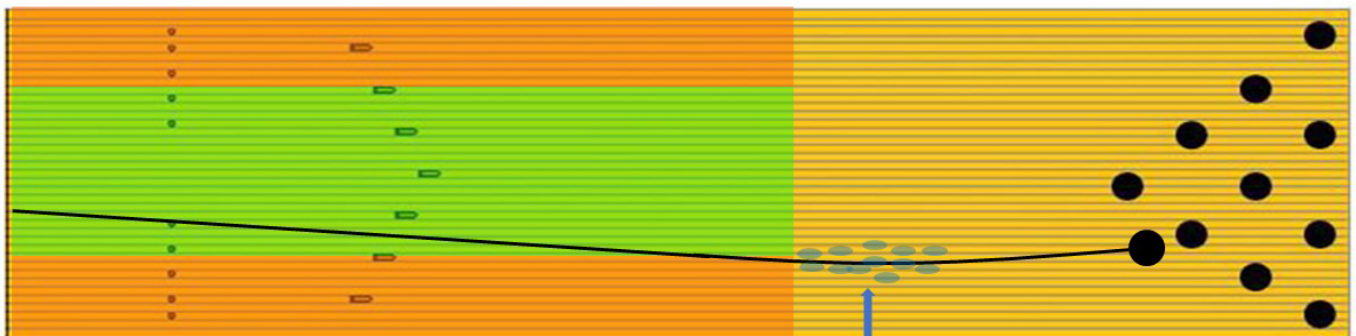


#4

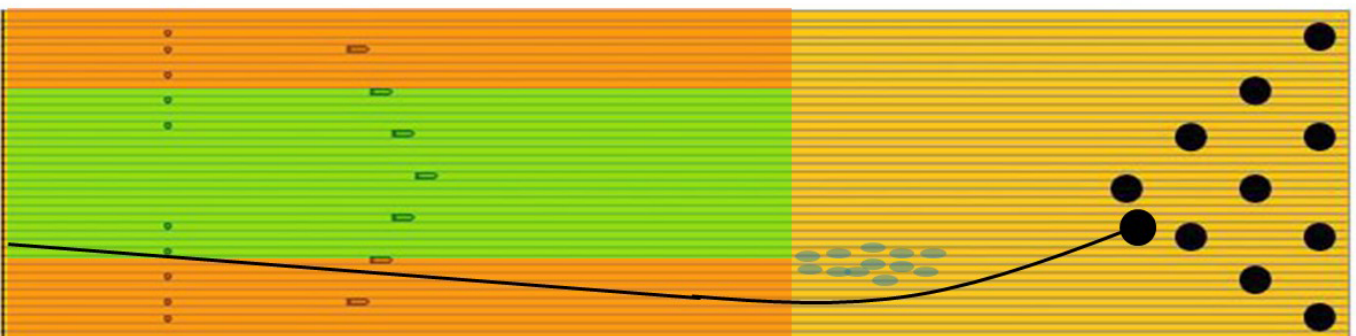
Oil Depletion can look like carry down



#5 Oil Depletion...can look like carry down



#6 Carry down...bad ball reaction



#7 Move & play around the Carry down