

## Bowl1820's Lane Graph & Oil Pattern Information Cheat Sheet

Some of the main things to look at on the oil pattern sheet are the Pattern Length, Total Volume of Oil, the 2 to 2 loads and the Ratios.

### Pattern Length:

Generally a pattern less than 36 feet is considered short, 37-42 feet is considered medium, more than 43 feet is a long pattern.

The length of the pattern tells you where your ball should exit the pattern to give you the best reaction to consistently hit the pocket.

Typically the longer the pattern the closer to the headpin you have to play. A rule of thumb is as the oil goes longer, the exit and break points move inside.

### Volume of Oil:

The volume of oil will give you a idea of the strength of ball and what surface you will want to use. Basically the higher volume of oil the more aggressive ball and/or a rougher surface.

A general guideline from Kegel is:

Less than 18 ml use a weaker cover ball

18 - 21 ml use a weak to medium cover

21 - 25 ml use a medium to strong cover

More than 25 ml use an aggressive coverstock

Also the lane type and where the oil is applied will affect how the ball reacts. A ball will hook more on wood lanes than synthetics using the same volume of oil.

### The 2 to 2 loads:

A load is the amount of oil applied by the machine a given distance down the lane. The more loads you have, the harder the pattern will be.

You want to check the total number of 2-2 loads (forward and reverse). The 2 to 2 loads refer to the oil being applied from the 2nd board on the left to the 2nd board on the right.

What your looking for is how much oil is near the gutter. Because the more oil near the gutter, the less friction or "free hook" there will be.

### The Ratio:

The "Latitude Ratio" is how much oil is towards the center of the lane versus the amount of oil towards the outside of the lane. Generally the lower the ratio of oil from the inside to the outside, the harder the oil pattern will be.

The "Longitude Ratio" is the front to back taper. Lower front to back ratios usually are more difficult, higher front to back ratios help the ball slow down.

### Forward Oil:

The forward oil creates the shape of the pattern and controls the breakpoint location.

### Reverse Oil:

Reverse oil controls the amount of oil in the front part of the lane. The more reverse oil in relation to the forward oil, the longer the pattern will last and the smaller the transitions.

Some starting place references:

Note: These "formula" are just guides and not an absolutes

Mo's Breakpoint Formula:

Look at the composite graph, Find the corner of the first highest red bar (the Forward Oil) and see what board it is on. Then Subtract 3 from that board number and that's where your breakpoint should be to start.

Example: Kegel East Street pattern 38'

The first highest red bar is on board 13, then the breakpoint will be around the 10 board.

Guru's Breakpoint Formula:

$((\text{Pattern Length}-24)/2)+3=$  The Breakpoint (+/-1Board) at the Pattern length plus 5 feet.

Example: Kegel East Street pattern 38'

38' minus 24 = 14, 14 divided by 2 = 7, 7 plus 3 = 10.

This gives you a breakpoint on the 10 board (+/-1Board) at 43 feet.

Slowinski's Exit Point formula:

The Exit point for oil = length of pattern minus 31, this can be used as a guide to where the ball should exit the pattern. Warning the "Exit point" breaks down on the extremes, short patterns and extreme long patterns.

What is a Unit of Oil?

A "unit" of oil was defined by the American Bowling Congress (ABC) and Women's International Bowling Congress (WIBC) as 0.0167 cubic centimeters of oil evenly spread over a 1 sq. ft. surface, which equates to a film of oil about 7 millionths of an inch thick."

Example: a piece of typing paper is about 400 units thick.

(.000007\*400 units=.0028", A 16# bond paper is .0032" thick so that's pretty close.)

The Typical House Shot aka: THS

There are many types of house shots, The main thing that makes them easier is the high volume of oil towards the center of the lane and less oil towards the outside (Oil Ratio). This gives you more friction to the outside (free hook) and more hold toward the center, which helps funnel the ball to the pocket.

Now the numbers can vary with different patterns, but here are some comparisons:

The volume of oil for the average house shot has about 18-20 milliliters of oil, a average sport shot can be about 25-26 milliliters. (But not limited to this)

A typical house shot has a ratio of say 10:1, A sport shot has a ratio of 3:1 or less.

The typical house shot has maybe 2-3 loads on the outside, where as a shot like the USBC Open Championships have around 6 loads.