

OMEGA

DRILLINGS FOR LEFT HAND

For accurate, easy drilling, following these markings:



Driller's Clock



Center of Gravity



Positive Axis Point (PAP)



Small Pin



Extra Hole

Ball Rating System: Defining Hook in two (2) components.

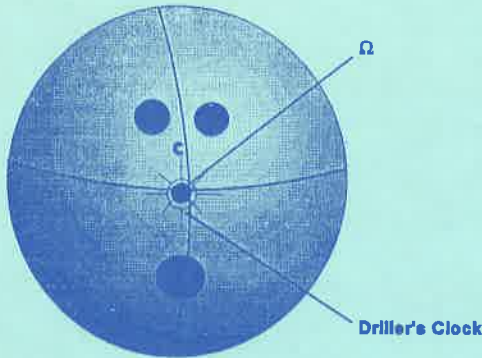
- (1) Length to Breakpoint
- (2) Degree of Backend Reaction

Ratings: (1) Length (L) --- 1 being earliest hook point to
5 being the latest hook point.

(2) Backend (B) --- 1 being least amount of hook to
5 being the most hook potential.

FYI: The numbers of length and backend are merely compared to each other. No quantifiable amount of length, breakpoint, nor backend hook are implied. Hook potential is a function of the oil pattern used, ball surface roughness, amount of revolutions, ball speed, axis tilt, and ball track. Label shifts will affect layout characteristics.

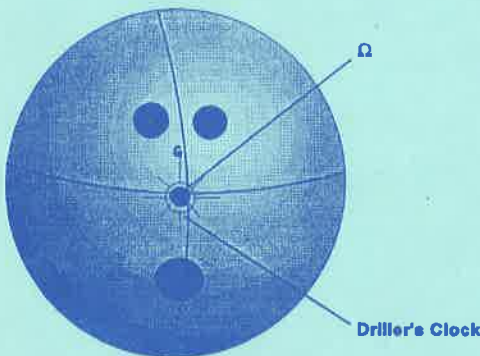
Drilling #1



RATING -- L = 4 B = 3

Select a ball that is "Pin In." Place C on Driller's Clock at 12:00 o'clock (See Diagram). The center of Driller's Clock is in the center of the grip. If the distance of the center of gravity (Ω) to the center of the Driller's Clock is greater than 1", an extra hole could be required to meet ABC specifications. Drill the extra hole on a line from center of grip through center of gravity at 5".

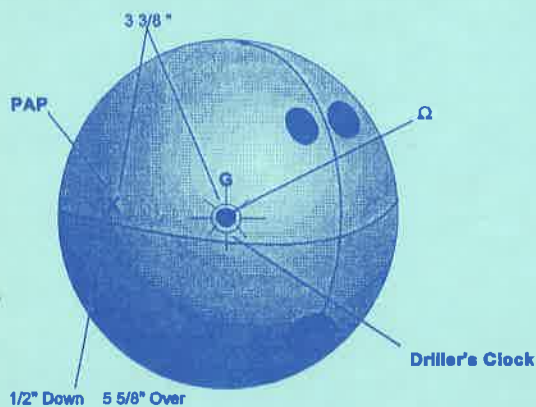
Drilling #2



RATING -- L = 2 B = 4

Select a ball that is "Pin In." Place G on Driller's Clock at 12:00 o'clock (See Diagram). The center of Driller's Clock is in the center of the grip. If the distance of the center of gravity (Ω) to the center of the Driller's Clock is greater than 1", an extra hole could be required to meet ABC specifications. Drill the extra hole on a line from center of grip through center of gravity at 5".

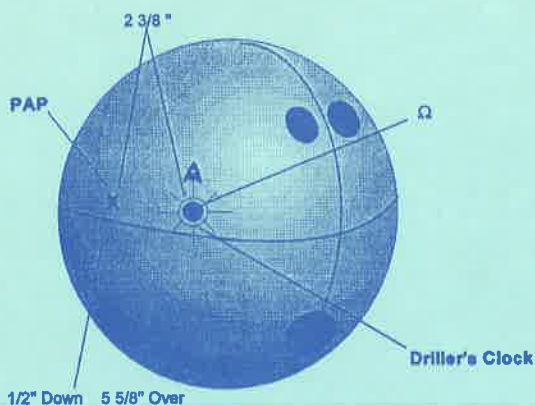
Drilling #3



RATING -- L = 3 B = 5

Select a ball that is "Pin In." Place G at 12:00 o'clock. Measure 3-3/8" to the left from the center of the Driller's Clock through E. Use this point as the bowler's positive axis point. Reverse the bowler's positive axis point coordinates to find the center of the grip. This is a drilling that could require an extra hole to meet ABC specifications. Drill the extra hole on a line from center of grip through center of gravity at 6".

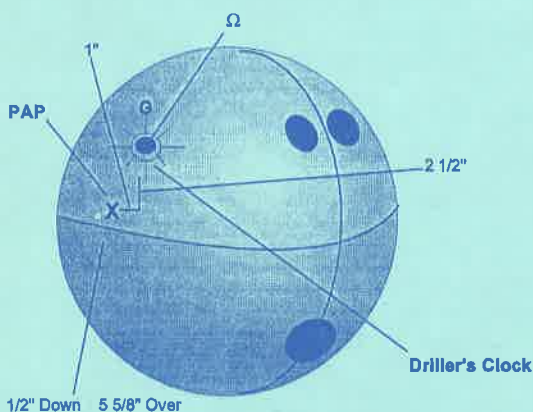
Drilling #4



RATING -- L = 5 B = 3

Select a ball that is "Pin In" with 2.70 oz. or less of top weight. Place C at 12:00 o'clock. Measure 2-3/8" to the left from the center of the Driller's Clock through "A". Use this point as the bowler's positive axis point. Reverse the bowler's positive axis point coordinates to find the center of the grip. This drilling could require an extra hole to meet ABC specifications. Drill the extra hole on a line from center of grip through center of gravity at 6".

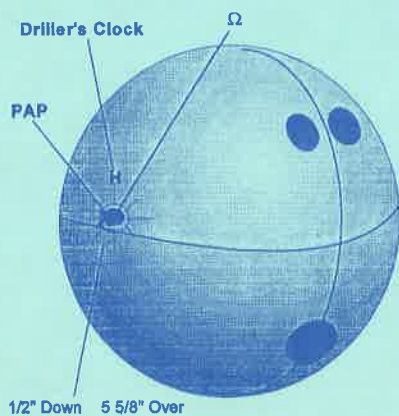
Drilling #5



RATING -- L = 4 B = 5

Select a ball that is "Pin In" with 2.50 oz. or less of top weight. Place G at 12:00 o'clock. Measure 2-1/2" down from the center of the Driller's Clock through "C". From this point, make a perpendicular line to the left 1" long. Use this point as the bowler's positive axis point. Reverse the bowler's positive axis point coordinates to find the center of the grip. This drilling could require an extra hole to meet ABC specifications. Drill the extra hole on a line from center of grip through center of gravity at 8".

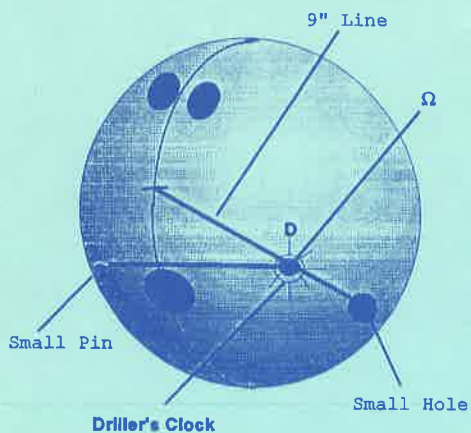
Drilling #6



RATING -- L = 1 B = 3

Select a ball that is "Pin In" with 2.50 oz. or less of top weight. Place H at 12:00 o'clock. From the center of the Driller's Clock, reverse the bowler's positive axis point coordinates to find the center of the grip. This drilling could require an extra hole to meet ABC specifications. Drill the extra hole to the left on a line from center of grip through the center of gravity at 8".

Drilling #7



This drilling is recommended for Full Roller bowlers. Select a ball that is "Pin In". Draw a line through B connecting the large pin to the small pin. Locate the center of this line, keeping the large pin to the right of the center of the grip. This point becomes the top of the bowlers thumb hole. From this point, draw a 90° line up to establish the bowler's center line of grip. This drilling could require an extra hole to meet ABC specifications. To find the extra hole location, draw a line 9" long from the center of the grip through the pin.

Extra Holes:

When determining the location of the extra hole remember that a hole 5" away from the center of grip will remove some top weight. A hole 7" away from the center of the grip will maintain the top weight. A hole 9" away from the center of the grip will add some top weight.

Axis Point:

The axis point is easily attainable from the customer's old ball. Trace the track with your marking pencil. Place the ball, track side down, in your ball spinner. Adjust the ball so that the track is parallel to the ball dish. Turn on the spinner. The pencil line should be constant. If it is wobbling, turn off the spinner and readjust. When a stable line is seen, place the pencil at the top of the ball. The center of this pencil mark is your axis. This point should be equidistant to the ball track in all directions.

To get the horizontal and vertical coordinates of the axis point, draw a line down the center of the finger holes through the center of the thumb hole. Measure half the distance from the thumb to the fingers and make a mark. This is the center of the grip. Take the quarter scale and draw a horizontal line perpendicular to the grip line. Now draw a vertical line from this line through the axis point. Measure the distance from the center of the grip to the intersection of the vertical line. This is the horizontal coordinate. Now measure the length of the vertical line to the axis point. This is the vertical coordinate.