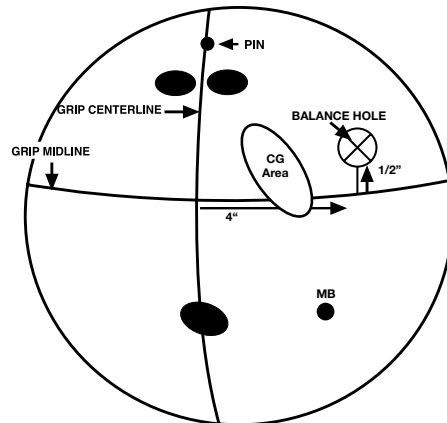




ASYMMETRIC DRILLING INSTRUCTIONS



This is the **recommended** layout for most players, with or without a positive axis point.
Use mirror image for left handed drilling.

Drilling #1

If you do not have a positive axis point, use this layout.

Ball Reaction: Long and Strong

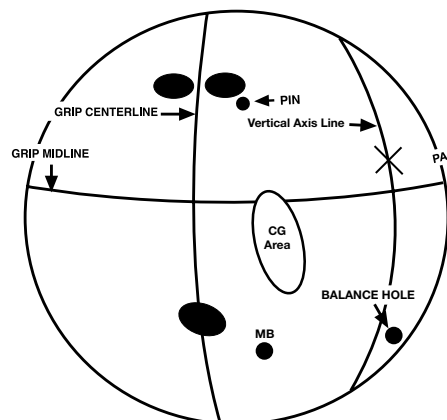
Suitable for: Most Styles and Lines

Flare potential: Medium

Center of Gravity: The center of gravity placement may or may not fall inside the CG Area. If it doesn't then the balance hole location may need to be adjusted.

Mass Bias Placement: Place Mass Bias 3 inches to the right of the thumb hole

If needed place balance hole 4 inches over and 1/2 inch up and drill back to statically legal.



Drilling #2

Ball Reaction: Long and Strong

Suitable for: Most Styles and Lines

Flare potential: Large

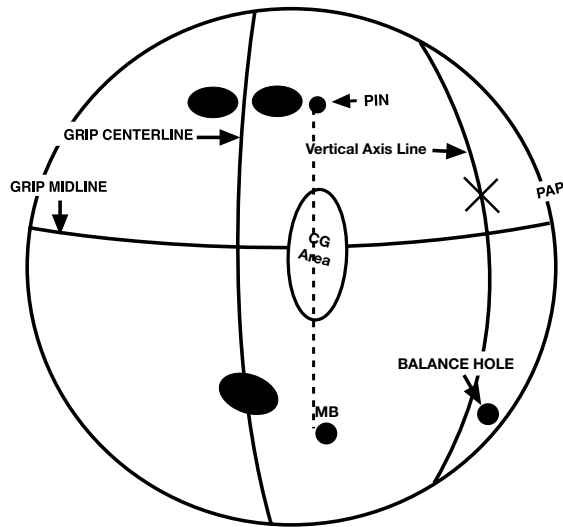
Pin Placement: Place Pin 4 1/2 inches from PAP

Center of Gravity: The center of gravity placement may or may not fall inside the CG Area. If it doesn't then the balance hole location may need to be adjusted.

Mass Bias Placement: Place Mass Bias at a 45 degree angle to the right of the thumb hole. If needed place balance hole over on the Vertical Axis Line and 2 inches down and drill back to negative side weight. The bigger and deeper the hole is the more increased ball reaction. Remember to keep the ball statically legal.



EBONITE



This layout produces the most even reaction with the highest TOTAL hook.

Drilling #3

Ball Reaction: Early and Strong

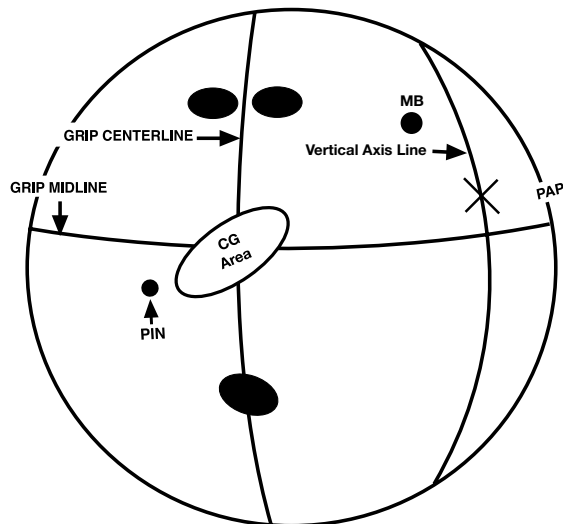
Suitable for: High Ball Speed, Low RPM's, Heavy oiled lanes

Flare potential: Very Large

Pin Placement: Place Pin 3 1/2 inches from PAP

Center of Gravity: The center of gravity placement may or may not fall inside the CG Area. If it doesn't then the balance hole location may need to be adjusted.

Mass Bias Placement: Place Mass Bias in line with the Pin. If needed place balance hole over on the PAP and drill back to statically legal.



This is the recommended layout for All Full Rollers

Drilling #4

Ball Reaction: Strong Arc

Suitable for: Most Styles and Lines

Flare potential: Large

Pin Placement: Place Pin 3 1/2 inches from bowlers center of span in an 8:00 direction.

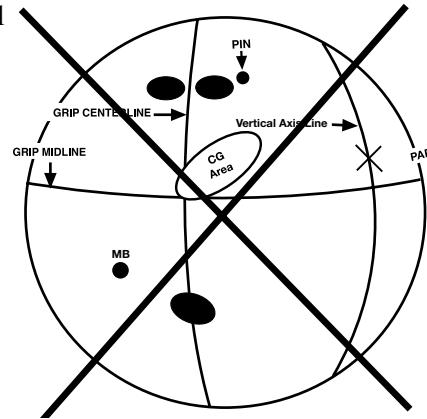
Center of Gravity: The center of gravity placement may or may not fall inside the CG Area. If it doesn't then the balance hole location may need to be adjusted.

Mass Bias Placement: Place Mass Bias at a 2:00 direction from the center of span. If needed place balance hole 8 inches from the center of span in a 2:00 direction to remove excess positive side weight. Place balance hole 6 inches from the center of span in a 8:00 direction to remove excess negative side weight.

This is a **NON RECOMMENDED LAYOUT**. This layout will produce a very mild ball reaction and is not recommended.

Drilling #5

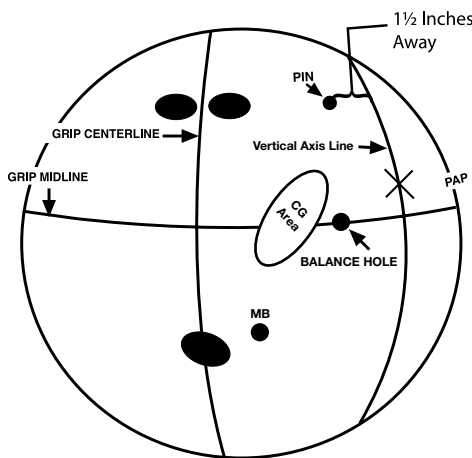
- Ball Reaction: Very mild
- Suitable for: Extremely high rev rates
- Flare potential: Very Small
- Pin Placement: Not recommended with this layout
- Mass Bias Placement: Mass Bias Placements to the left of the thumb hole are not recommended because of the severe reduction in flare potential.



Trick Tour Layouts

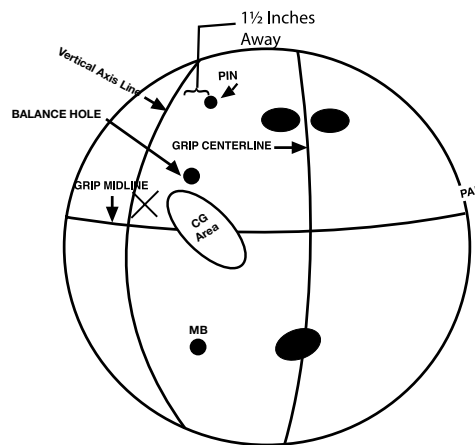
Tommy Jones Favorite Trick Layout

- Ball Reaction: Long and most aggressive at the breakpoint for Tommy Jones
- Suitable for: High Rev Rates only
- Flare potential: High
- Pin Placement: Place Pin 1½ inches away from the Vertical Axis Line and 4½ inches away from the PAP
- Center of Gravity: The center of gravity placement may or may not fall inside the CG area. If it doesn't then the balance hole location may need to be adjusted.
- Mass Bias Placement: Mass Bias Placement at 80 degree angle to the right of the thumb hole. If needed place balance hole approx 4 inches to the right and drill the ball back to statically legal



Jason Couch Favorite Trick Layout

- Ball Reaction: Long and most continuous for Jason Couch
- Suitable for: High Rev Rates only
- Pin out distance must be at least 3.5 inches out.
- Flare potential: High
- Pin Placement: Place Pin: 1½ inches away from the Vertical Axis Line and 5¼ inches away from the PAP
- Center of Gravity: The center of gravity placement may or may not fall inside the CG area. If it doesn't then the balance hole location may need to be adjusted.
- Mass Bias Placement: Mass Bias Placement at 60 degree angle to the left of the thumb hole. If needed place balance hole approx 4 inches to the right and 1 inch up and drill the ball back to statically legal



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