

JAILBREAK: A GBB EPIC DRIVER WHITE PAPER

Jailbreak and its Origin

Callaway's Great Big Bertha Epic driver behaves in a profoundly different way at impact compared to all other drivers, past or present. Epic's innovative Jailbreak Technology changes how the crown, sole and face behave at impact to promote significantly faster ball speed for more distance.

Jailbreak's genesis lies in Callaway's Gravity Core technology. Used in the Big Bertha Alpha and Big Bertha 816 Double Black Diamond drivers, Gravity Core employed a cylindrical tube inside the head, anchored to the crown and sole.

Gravity Core technology created a surprising side effect: it changed the performance characteristics of the face in a way Callaway engineers didn't understand. Intrigued, they launched an advanced research project to understand the effect of connecting the crown and sole on the face of the driver.

They determined that the Gravity Core tube effectively stiffened the sole and crown, preventing them from bulging outward at impact. They explored ways to create a better "connector" that would more effectively restrict the deformation of the crown and sole and redirect that energy to the clubface. More than 100 hundred computer models were mapped and over 40 prototype variants tested. Multiple tube configurations were tested using carbon and titanium as well as multiple positions for the Jailbreak tubes.

The optimum combination and configuration was incorporated into the GBB Epic and GBB Epic Sub Zero drivers: two slender, 3-gram titanium bars, positioned 30.5 mm apart, center to center, near the inner side of the face but not touching it. Jailbreak bars effectively stiffen the crown and sole so that the face assumes more of the load of impact.



The Challenge of Building a Clubhead with Jailbreak

Incorporating Jailbreak bars into the head makes it extremely challenging to produce. Instead of inserting the bars into the interior after the fact, strength and integrity requirements demand that the bars be cast directly into the head's titanium exoskeleton, adding numerous challenging steps to the process. Whereas a normal driver takes 500 to 600 process steps, Epic takes more than 1,000, making it the most complicated driver to produce in Callaway history.

The weight Jailbreak Technology adds to the head had to be saved elsewhere, which is achieved with Callaway's innovative head construction that combines a titanium exoskeleton with a triaxial carbon crown and sole. The crown of the Epic driver weighs just 9.7g, which allows for both Jailbreak Technology as well as extremely high Moment of Inertia (MOI) for great forgiveness.



Energy Lensing: How Jailbreak Increases Distance

The manner in which Jailbreak Technology redirects energy from the sole and crown into the clubface is known as "energy lensing." It's what allows Epic to transfer more of the power of impact into the ball to promote more ball speed and distance. This increased power is spread across the face, making Epic exceptionally long on off-center hits as well as center hits.

The increased power made possible by Jailbreak Technology is accessible at all clubhead speeds, from slow to fast to Tour-level, meaning every player can benefit.

Conclusion

The remarkable achievement of Jailbreak Technology is the result of almost four years of research by Callaway's industry-leading R&D team. The performance-enhancing results can be witnessed everywhere from fitting bays to the highest level of tournament golf.