

STRANGE PRO RACE VS ALLOY AXLES

The best tool for the job is the right tool for the job. Strange Engineering prides itself on supplying the best possible product for your particular application. Many years of experience have created different axle designs based on their intended use. After considering the loads and forces that the axle will endure, the right material is chosen along with the proper heat treatment to optimize its characteristics. Since this can not be accomplished by only one type of axle, it has led to the development of both Pro Race Axles and Alloy Axles. Quality is ensured as all Strange axles are proudly made in the USA by Strange Engineering.

PRO RACE - THRU-HARDENED

MATERIAL

Hy-Tuf ultra strength forged alloy steel

HEAT TREATMENT

Thru-hardened @ Rc 45-46

Full depth of shaft

APPLICATION

Competitive Drag Racing

ORIGIN

Hy-Tuf was originated in the class of Ultra-Strength alloys, which was developed for highly stressed landing gear in military aircrafts. The material is a low carbon, high manganese, high-nickel and high molybdenum steel.

PROPERTIES

Each Pro Race Axle is heat treated in a vertical furnace to a hardness of Rc 45-46. The axle is the same hardness from the center of the shaft to the surface (thru-hardened).

The combination of Hy-Tuf and thru-hardened heat treatment provides an axle that achieves superior torsional strength and ductility. In addition, thru-hardened Hy-Tuf is ideal for weight saving gun-drilled and ultra light axles. More drag racers depend on Strange Hy-Tuf Pro Race Axles than all other brands combined.

Pro Race (thru-hardened) and Alloy (induction hardened) axles are all NHRA & IHRA accepted; however, Strange Engineering maintains the highest standards in the industry for safety and performance. Therefore, we strongly recommend our thru-hardened Pro Race shafts for all competitive drag racing applications.



ALLOY - INDUCTION HARDENED

MATERIAL

Modified 1550 premium forged alloy steel

HEAT TREATMENT

Induction Hardened @ Rc 58-62

Hardness decreases from surface to the axle core

APPLICATION

High performance Street and Track

ORIGIN

1550 proved to be an excellent material for street applications, but required different properties to be suitable for track use as well. Various modifications were tested until the proper combination resulted in the material use today.

PROPERTIES

Induction hardening is a process in which an axle is pulled through an electrical coil. The electric coil heats and quenches the shaft. This type of heat treatment is ideal for hardening the case of the shaft while the axle shaft core and flange remain soft, allowing for an extremely ductile axle.

The combination of a premium alloy steel and induction hardening creates an axle which is able to survive the bending loads that are inherent with street use.

Strange Alloy Axles are offered in 28, 30, 31, 33 and 35 spline applications. Shafts up to 31 spline are ideal for street applications with the use of posi-units, Detroit Lockers, and helical gear differentials. The 33 and 35-spline axles are able to withstand even higher torque and bending loads. 35-spline alloy axles are well suited for street and track applications. They can be used with Detroit Lockers, Helical gear differentials, and spools. Spools are for racing applications only and should never be used on the street.

While Strange Alloy Axles are NHRA and IHRA accepted, the Pro Race Axles offer superior torsional and axle flange strength for the ultimate in Drag Race Only applications.



View other [quality performance driveline and axles](#) made by Strange on our [website](#).