

# Single Piece Carbon Fiber Drive Line

## Objective

- To eliminate the disadvantages of all the articulating/moving parts that make up a stock Drive Line - these are susceptible to wear, noise, vibration and rob a car of horsepower.
- Move to a single piece Drive Shaft that improves all aspects of drive line performance, road holding characteristics and provides a simple to install device that is reliable and maintenance free.

## Benefits

**Lower weight** - A reduction of about third in weight, means less rotating mass to spin up. The carbon fiber is able to deflect/twist by up to 20% and accept the loads from torque flex that the rubber Flex Doughnut/Guibo traditionally provide (these are prone to perishing and tearing).

**Lower Harmonics** - reduced noise levels and vibration - makes for more civilized driving whether in a road car, or race car.

**No Driveline Slap** – very smooth, linear acceleration and pick up, with no jerkiness and snatching at rear wheels. Makes the car's driving characteristics very predictable. Much better able to utilize throttle control to balance the rear end, for smooth cornering, without side slip, especially when stepping on the gas at the exit of a corner.

**Improved horsepower** – less moving components, reduces tolerance losses and consequently gives back horsepower and torque at the back wheels.

**Installation & Maintenance** - all parts are fit and forget, with no scheduled maintenance required. All components are manufactured and machined to aerospace specification and tolerances

## Vehicle Support

Two types of replacement Carbon Fiber Drive Lines are currently available for 105 Series Cars

- GT/GTV
- Spider/ Jr.Z

## Additional Information

- **Weight:** 16 pounds (-v- original 22lbs)
- **Materials:** Made of Carbon Fiber, with Fiberglass outer protective layer. The Drive Shaft is 2 inches in diameter and rated up to 450HP
- **Balanced:** delivered ready to install, tested and fully balanced in the factory to 20,000 rpm
- **Components replaced:** Flex Doughnut/Guibo, two piece Drive Shafts, Center Bearing & Retainer, 2 x Universal Joints
- **Work required:** Direct replacement – remove old Drive Shaft per manual. New Drive shaft attaches to the existing Differential Flange and to a Gearbox Adaptor Hub (also supplied and which re-uses existing 19mm Nylock bolts to interface with Gearbox).

- **Modifications** : No modifications should be required to either stock Gearbox, or Differential/ Back Axle, except on pre-1972 cars, where Rear Diff to Drive Line Flange holes are 8mm and will simply need to be oversized and drilled out to 9mm.
- **Design & Manufacturers:** This single piece Carbon Fiber Drive Shaft, was developed as a collaboration between Vintage Customs, the renown Alfa Romeo restoration business and leading industry drive line specialists; The Driveshaft Shop®, who are suppliers of carbon fiber drives lines to NASCAR and high performance automobile OEMs and race teams