



RAUCH & SPIEGEL

TECHNICAL INFORMATION

0916.1

HIGH PERFORMANCE CARBON FIBER-BILLET STEEL SYNCHRONIZER RINGS FOR PORSCHE® CARS

APPLICATION AND INSTALLATION NOTES

DESCRIPTION: Rauch & Spiegel Billet Steel Synchronizer Rings with Carbon Fiber Friction Linings are a family of parts with unique properties which differentiate them from and improve upon the original equipment in several ways. This document is intended to aid the Technician in understanding these unique differences, how they affect the application and to explain the many performance benefits they provide:



Advantages of our Carbon Fiber Friction Linings:

- Improves the speed and feel of selecting gears especially at higher RPM and under hard track usage.
- High abuse tolerance - High durability throughout life - High energy capability - Faster shifting response.
- Stable and high coefficient of friction - Extremely low wear - Provides good cold shift performance.
- No molybdenum fines shed into gear oil - Helps to protect bearings, gear tooth flanks and other sensitive parts.
- No stress-risers from oil grooves - No oil grooves required resulting in more working area - Improved oiling.

Advantages of our Hardened Billet Steel Body:

- Much Stronger - Over twice as strong as highest tensile o.e. bronze. - Much stronger than o.e. cast steel or PM parts.
- High abuse tolerance - Much less chance of damage to stop cams and teeth from hard or missed shifts, etc.
- Higher accuracy - All hardening and cryogenics prior to CNC machining - Cast-in parts just can't compare.
- Same CTE (Coefficient of Thermal Expansion) as the steel gear cones - Maintains critical running clearances with temperature changes much better than the o.e. bronze which has roughly double the CTE of steel parts.

SHIFT FASTER - SHIFT HARDER - SHIFT BETTER - R&S BILLET STEEL and CARBON FIBER SYNCHROS