



## PERFORMANCE TECHNICAL REPORT

**Subject:** Component Temperature Reduction with HPC H-series (HiPerCoat®) Coating  
**Date:** February 2003  
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### Scope

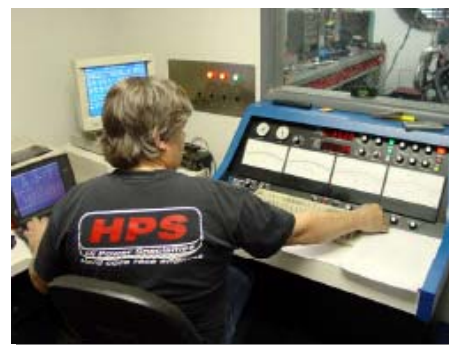
The scope of this test was to determine the temperature reductions of nearby components with HPC H-series (HiPerCoat®) coated exhaust headers versus plain steel exhaust headers.

### Test Description

Testing was performed with a 4.9L (301 CID) Chevrolet V6 built specifically for off-road racing. The engine was tested on a Superflow dynamometer at High Power Specialties in Chandler, AZ. The V6 produced peak 502 horsepower @ 7,300 RPM and 431 lb/ft of torque @ 5,200 RPM. To eliminate environmental factors that could give false results, the test was run with one header being coated both inside and out with HPC's H-series polished aluminum finish coating and the other header painted with high temperature header paint. EGT probes were placed on both banks of the engine to insure proper air/fuel distribution and stable exhaust gas temperatures in each cylinder. Steel plates were placed at a distance of 5 inches and 8 inches from the header on each side of the engine to measure the radiant heat.

### Results

During the test, the steel plates that were placed on the side of the engine of the painted header measured 365°F (185°C) at 5 inches and 140°F (60°C) at 8 inches from the header. The steel plates on the side of the engine with HPC's H-series (HiPerCoat®) coated header measured 162°F (72°C) at 5 inches and 105°F (40°C) at 8 inches from the header. The test revealed a drop of 56% temperature reduction at 5 inches and 25% at 8 inches when using HPC's H-series (HiPerCoat®) coating on tubular exhaust headers.



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