

**NEW**

# SPS TITAN™ Titanium Fasteners for High Performance Racing

- *Titanium Alloy Fasteners  
Offering an Unprecedented  
Combination of Strength  
and Light Weight*

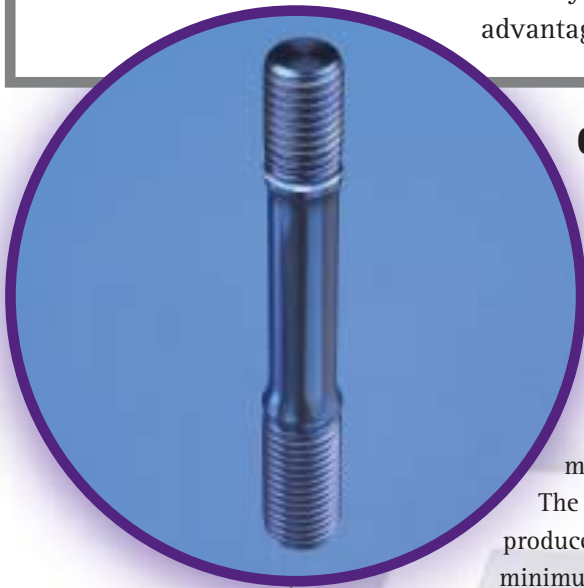
*Faster*  
**Stronger**  
*Lighter*

# SPS TITAN™

## Titanium Fasteners: Stronger

SPS Technologies, Inc., a long-time, well-respected manufacturer of aerospace fasteners, is also a recognized supplier of fastener products for motorsports around the world, including connecting rod bolts and engine, transmission and chassis fasteners for Formula One, NASCAR Winston Cup, IndyCar, Cart, NHRA, Busch Grand National Series, Craftsman Truck Series and ASA.

SPS now offers a line of fasteners manufactured from the new SPS TITAN™ 761 titanium alloy. This new alloy overcomes the strength limitations associated with other titanium alloys, allowing drivers to capitalize on the weight advantages of titanium where they never could before.



### Optimized Beta-Titanium Alloy

SPS TITAN 761 titanium alloy is an optimized beta-titanium alloy. Following an exhaustive study of candidate materials, SPS chose this alloy and prescribed special processing requirements for the raw material so that it meets target strength levels.

Most other titanium fastener alloys exhibit minimum tensile strengths of only 160,000 ksi. Also, many manufacturers offer alloy steel parts at 180,000 ksi.

The SPS TITAN 761 alloy gives SPS the capability to produce titanium fasteners featuring a 200,000 ksi (1400MPa) minimum tensile strength and excellent fatigue resistance. These fasteners are designated SPS TITAN 200.

# and Lighter Under the Hood

## **SPS TITAN™ 200 Fasteners - Less is More**

The SPS TITAN™ 200 fasteners help reduce car weight in two ways. Fewer of the high strength fasteners are required per assembly. And titanium is 40% lighter than comparable alloy steel parts. So you can run lighter and faster with SPS TITAN 200 fasteners!

SPS TITAN 200 studs, bolts and nuts in a variety of sizes and configurations are available for use in cylinder head, suspension and other applications.



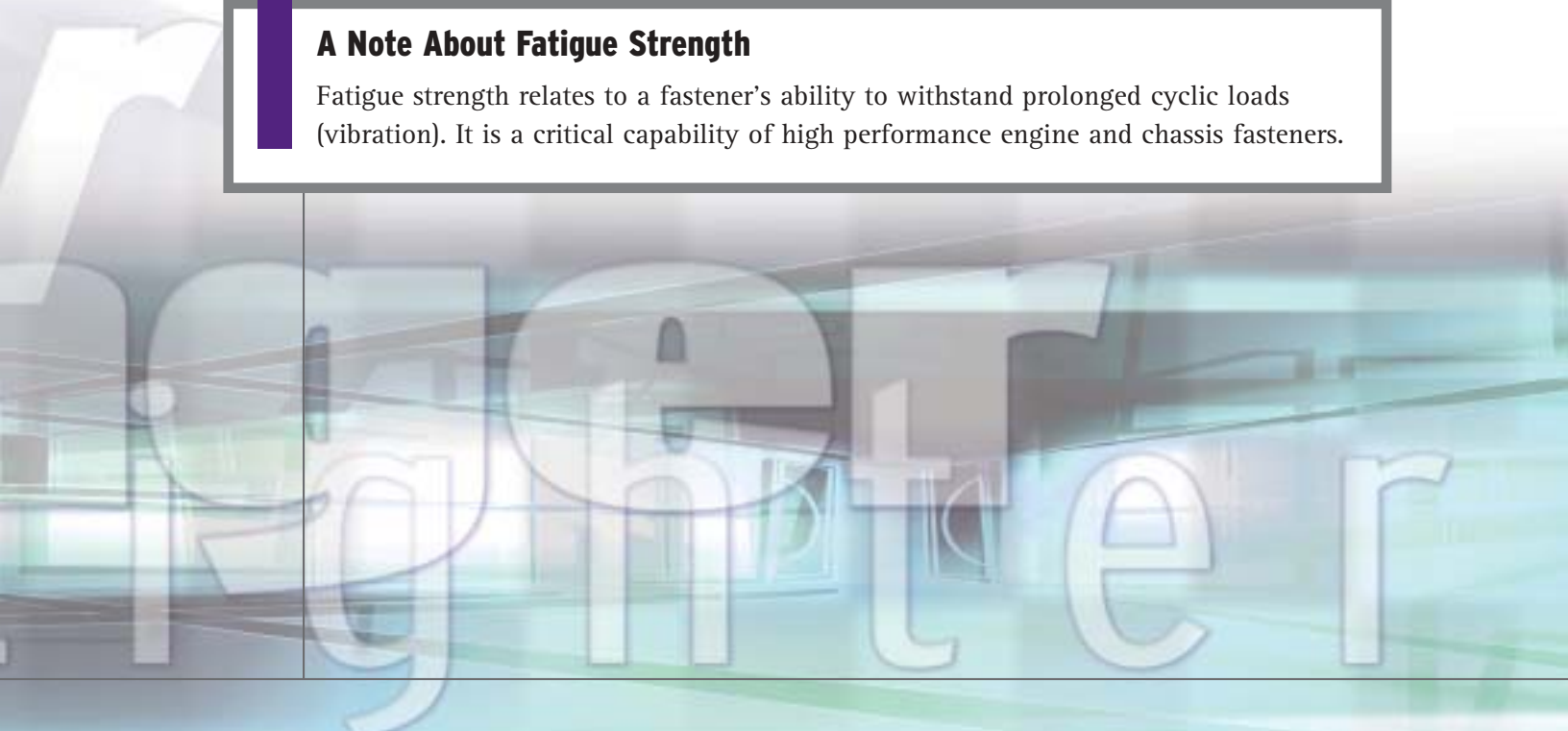
## **SPS TITAN 200 Fasteners**

### **High Performance Racing Advantages:**

- *High reliability*
- *Reduced weight*
- *Increased safety*
- *Winning edge!*

## **A Note About Fatigue Strength**

Fatigue strength relates to a fastener's ability to withstand prolonged cyclic loads (vibration). It is a critical capability of high performance engine and chassis fasteners.







- **Minimum Properties**

Tensile Strength

Shear Strength

Fatigue Strength:

## **SPS TITAN™ 200**

200 ksi

(1400 MPa)

108 ksi

(745 MPa)

Much better than

other types of

titanium and

comparable to steel

### **SPS High Performance Racing Product Family**

SPS Technologies also manufactures fastener products for use in high performance racing from these other materials and SPS-developed superalloys:

- *MULTIPHASE® MP35N® Superalloy*

- *MULTIPHASE® MP159® Superalloy*

- *Alloy Steel*

- *INCONEL® Alloys*



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