

## CASE STUDY:

**THIXOMAT**

### **BUELL MOTORCYCLE FIREBOLT XB9R**

#### **FRONT MODULE - FAIRING MOUNT**

**Licensee:** Phillips Magnesium Injection Molding  
Menomonie, Wisconsin

#### **Application Critical:**

- Structural Application
- Light weight yet strong
- High Ductility Alloy
- Multiple instrument mounts

#### **Thixomolding®**

##### **Advantages:**

- Tight Dimensional Stability
- Low Porosity in heavy sections
- AM-60 Magnesium alloy used for High Ductility
- High Strength to Weight Ratio
- Direct gated using Husky Hot Sprue System to significantly improve yield.
- Near net shape molding allowed for a significant reduction in secondary machining.



Part Weight: 2.25 Pounds

L= 10.5 in. W= 17.5 in. H= 8 in.

Thixomolded® on a JSW 850 ton machine equipped with a Husky Hot Sprue System

Buell and Phillips developed a Thixomoldable Magnesium Front Fairing design to replace the Firebolt's existing steel



fabrication. The new AM-60 Magnesium single piece as-molded design went into production as a direct replacement for the first generation 22 piece steel welded assembly (L) and the second generation 10 piece assembly (R). Substituting a Thixomolded® Magnesium component reduced the weight of this module by 40% and gave Buell a significant cost reduction.