RAPID PROTOTYPE CASTINGS

Using the Lost Foam Process
to make Prototypes

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LOST FOAM PROTOTYPE CASTING

Example Aluminum Part

Air Intake Manifold CADD Data
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Example Aluminum Part

Air Intake Manifold Pattern Pieces Cut

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Example Aluminum Part

Air Intake Manifold Partial Pattern Assembly
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Air Intake Manifold Casting

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Example Aluminum Part

Engine Block Prototype Casting Project
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Example Aluminum Part

Engine Block Segment D Bottom View
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Example Aluminum Part

Engine Block Made from Pattern Segments
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Example Aluminum Part

Engine Block Pattern Assembled
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Example Aluminum Part

Water Cooled Manifold Exterior Surfaces

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*Example Aluminum Part*

Water Cooled Manifold Interior Surfaces
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Example Aluminum Part

Water Cooled Manifold Casting Engine Face
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Example Aluminum Part

Water Cooled Manifold Show Face
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Prototyping Die Castings Using Lost Foam Prototyping
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Example Aluminum Part

Thin Wall Sections
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Example Iron Part

Agricultural Combine Part – Blade Section
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Example Iron Part

Agricultural Combine Part – Net Shape Blades

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STATUS

• Virtually any form is possible.
• Patterns reflect molded foam parting and glue lines.
STATUS WITH ALUMINUM CASTINGS

• Success in range of parts.
• 90% cast on first article.
• Detail & surface finish similar to molded foam.
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Summary

STATUS WITH IRON CASTINGS

- 75% cast on first article.
- Detail & surface finish is lower quality than molded foam.
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