

TRANSMISSION CONTAINER FOR HMMWV DESIGN AND DEVELOPMENT OF INTERNAL MOUNTING SYSTEM

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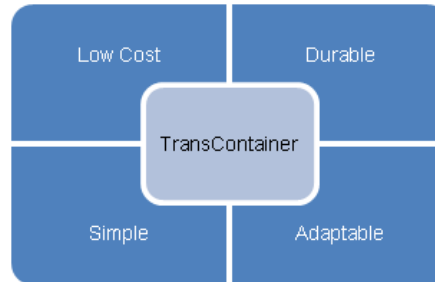
University of Delaware . Center for Composite Materials . Department of Military Projects

Project Summary

- ◆ Create an internal mounting system for HMMWV transmission containers that is:
 - ◆ Low Cost
 - ◆ Durable
 - ◆ Simple
 - ◆ Adaptable
- ◆ Previous Versions were created that met all needs but were too expensive
- ◆ 4 different variations of transmission exist that must all be compatible with a single design

Project Background

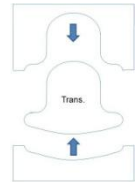
- ◆ What is TransContainer?
 - ◆ Composite container for **H**igh **M**obility **M**ulti-**W**heeled **V**ehicle **T**ransmissions



- ◆ Provides a dry, consistent, and shock-resistant environment for the parts to be shipped all over the world, and back to the USA for repairs and deployment

My Solution

- ◆ Contoured inserts that fit over the outside of the transmission and constrain it in all directions



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Implementation

- ◆ Molding clay was used to copy the outer contours of the transmission
- ◆ Plywood was used to test the contour's fitment, since foam is expensive and in short supply



- ◆ Finally the contour was cutout of foam material to be wrapped in fiberglass and infused

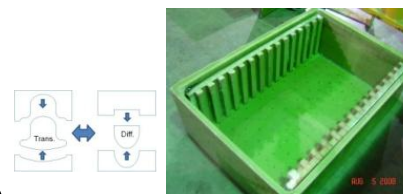
Testing

- ◆ Drop and impact testing will be performed, including side and corner impacts
- ◆ Testing will be the determining factor in which internal mounting system will be used in the final design



Above and Beyond

- ◆ Could be made into a universal container
- ◆ Constructing Inserts contoured to hold different parts allows anything to be securely shipped in one container



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