



APPLICATION CASE STUDY

FREE FLOATING DUNNAGE: TRANSMISSION PACK

PolyFlex® engineered free-floating dunnage inside commercially available collapsible plastic bins for housing and shipping a wide range of finished transmissions to assembly plants all over the globe saving the automotive manufacturer over \$17 million during the life of the program.

APPLICATION:

ocations using steel racks with attached molded dunnage or some cases expendable corrugated containers.

PROBLEM:

Both the metal racks and corrugated boxes presented several problems and drawbacks resulting in non value-added waste and high costs. The steel racks added considerable weight during shipment then returned at a 1:1 ratio. Corrugated boxes did not always provide adequate part protection and their single use created a disposal problem.

The OEM was looking for ways to reduce the program's overall costs.

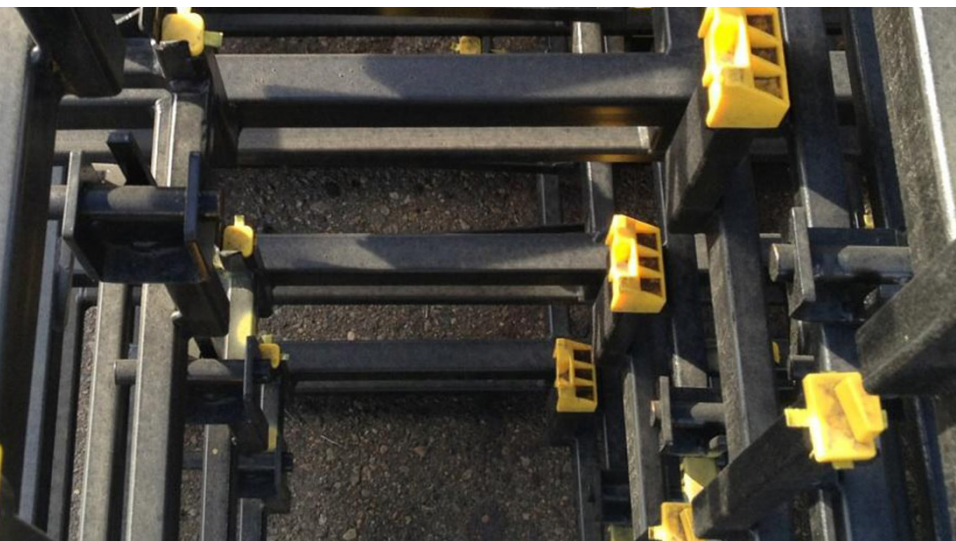
SOLUTION:

PolyFlex engineers developed a unique transmission pack that utilizes free-floating injection-molded polymer dunnage placed inside large, commercially available collapsible plastic bins. The dunnage securely holds a wide range of front, rear wheel drive and hybrid transmission types inside the bins.

The packs tested 28% higher than previous systems using the OEM's five-axis shipment testing. Shipping cost was significant. The high labor and material cost of welded steel racks was eliminated. Shipping costs were reduced through the substantial weight savings of the plastic bins with more transmissions being shipped in the same space. To further enhance the value, the collapsible bins fold down for return shipping providing up to a 9:1 return ratio.

Durability of the new system was a concern, but after three years, all issues were quieted. There has been no damage or replacements and line operators have expressed no problems. When necessary, the pack can be easily washed and cleaned.

If the program changes, the bins are reusable and dunnage recycled. The manufacturer estimated its savings over the project life to be over \$17,000,000.



PolyFlex Products' expendable packaging solutions are:

- **Cost effective**
- **More environmentally-friendly than expanded polystyrene blocks**
- **Recyclable**
- **Better protection for your products**

