

*Industry: Manufacturing
Location: New Hampshire*

Problem:

A small-sized manufacturing customer had recognized a steady increase in sales in the Recreational Vehicle industry. Growth amongst larger RVs, with their increased weight and size, had created a demand for a larger, more powerful vehicle to pull them. This demand led to an increasing trend of utilizing commercially retired tractor units to pull the large RVs. There are two critical items needed to make this combination of tractor and RV possible: an air hitch and an electrical conversion module. However, the two industries practice different standards which can mean poor quality and compatibility issues. This factor, paired with poor wiring from unqualified technicians, created a need in the marketplace for a better solution.

Solution:

The customer knew he would need an electrical housing as the base of his product. He was looking for something rugged and waterproof since the application would be hosted on the outside of the vehicle. After considering several options he selected a Polycase DC-58F Series enclosure. The DC-58F Series was chosen because of the ample interior space for the customer's circuit board. Additionally, the enclosure offered an optional silicone gasket and an alternative clear cover to the original solid black ABS cover.

Results:

The DC-58F was transformed into an externally mounted electrical converter capable of connecting to a truck's existing 7 pin outlet to provide power. The printed circuit board, which is mounted inside the case, was designed and marked so any person with minimal electrical wiring skills could wire the unit. The clear cover allows the LED's from the circuit board to be easily read from the outside. Without this clear cover option, the customer would have had to redesign the enclosure with holes in the cover to host the LED's, which would have compromised the waterproofed chassis.

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Highlights:

With the emerging trend of using tractor trucks to tow RV's, there was need for a simplified power connection for the two vehicles. Polycase was able to provide an electrical housing that eliminated the extensive and complicated electrical wiring required to operate the module.

Benefits:

- *Heavy-duty ABS plastic enclosure securely houses the circuit board*
- *Silicone gasket provides the module protection from rain, snow and sleet*
- *Clear cover provides transparency to identify internal labeling and LED's*