

CASE STUDY

Military Ground Radar Manufacturer Required Custom EMI Shielding Vent for Cabinet

THE CHALLENGE

A manufacturer of mobile military ground radar systems required an air vent that would provide both high air flow and EMI shielding for an electronics enclosure cabinet on a ground vehicle.

DESIGN REQUIREMENTS

- Paint must be camouflaged per MIL-DTL-64159
- Airflow, EMI shielding, and tempest weather sealing
- Highly custom gasket configurations

KEY CUSTOMER REQUIREMENTS

- High air flow
- Excellent EMI shielding
- Color matching to customer chassis
- High temp., humidity, and salt/corrosion
- Environmental and weather sealing

CONCLUSION

Parker Chomerics designed a custom vent with additional EMI shielding and weather sealing gaskets for a mobile ground radar unit. Our in-house test services engineers put this design through a variety of performance tests including, temperature, humidity, salt fog/corrosion, and shielding.

The vent assembly passed both shielding tests, as well as the customer's visual inspections of what occurred during tests such as humidity and salt fog/corrosion. Overall, this was a successful qualification procedure.

THE SOLUTION

Parker Chomerics designed a custom air vent featuring a tin/e. nickel plated, single layer 1/8in cell aluminum honeycomb. The single layer allowed for maximum airflow, with the plating providing high EMI shielding performance.

A CHO-SEAL[®] co-extruded EMI gasket was fitted into a groove in the vent frame. This gasket features a single, homogenous strip with one half being conductive and the other half providing weather sealing. Testing was performed and the assembly exceeded customer's shielding and sealing requirements.

