

## AMPHIBIOUS COMBAT VEHICLE



### BACKGROUND INFORMATION

The Amphibious Combat Vehicle (ACV) is a United States Marine Corps program to develop a fully armored 8×8 personnel transport vehicle accommodating 10-13 troops that could be launched from a ship up to three miles offshore, but also possess full ground mobility on land. The customer originally asked KEEL to manufacture the armor Survivability Hull (personnel compartment) for this vehicle.

After working directly with our team for more than a year, our customer understood the importance of KEEL's vertically integrated capabilities in defense production and how our expertise in resilient armor complimented their visionary technology.

As the project progressed, KEEL broadened the scope of our involvement, emerging as a crucial partner in the overall development of the ACV, and was awarded the opportunity to manufacture the entire vehicle structure.

### BUSINESS CHALLENGES

1

The customer needed a partner that has extensive expertise with tactical armored vehicles. The Amphibious Combat Vehicle required versatility to seamlessly transition from waterborne operations to rugged land mobility.

2

As the scope of the project progressed, KEEL needed to quickly utilize its vertically integrated capabilities to complete the subframe/chassis, assemble the driveline systems (hydraulics, pneumatics, electrical, controls), integrate all of the instrumentation (drivers control panel, power distribution, weapon station, seating), apply final CARC painting, and perform final drive test and check-out.

3

With the vision to present the groundbreaking "Production Pathfinder Vehicle" (PPV) at the Modern Day Marine Symposium on September 24, 2015, the KEEL team implemented detailed scheduling to meet the customer's **tight deadline**.

## APPROACH AND SOLUTION

KEEL worked hand-in-hand with the customer's project team throughout the production phase to review and certify all manufacturing processes, including environmental conditions, welding, machining, and coatings (CARC paint). The critical mating interfaces between the hull and the chassis were precision machined by KEEL utilizing the Mazak V-140N 5-axis machining center in the Midwest to ensure precise dimensions of all surfaces.

From the initial drawings to the final touches, the KEEL team operated like a finely tuned machine, illuminating the true essence of collaboration and urgency. Every design element was meticulously inspected, every component rigorously tested, and every challenge skillfully maneuvered—all with a single goal in mind. The culmination of these efforts was not just fulfilling a promise to the customer but exceeding the customer's expectations.

## VALUE DELIVERED

When the symposium date arrived, KEEL's Amphibious Combat Vehicle stood as a testament to our collective dedication and resilience. KEEL proudly showcased not only a product of challenging engineering, but also a narrative of determination that came to define the KEEL/ Customer partnership. KEEL's presence at the symposium was more than an unveiling; it was a declaration that innovation knows no bounds when fueled by passion and commitment. This accomplishment, combined with the technical expertise and the collaborative working relationship KEEL maintained with the customer throughout this program, resulted in KEEL being named one of the customer's **2015 Top Five (5) Suppliers**.

