

Landing Craft, Air Cushion

An integral component of the U.S. Navy's amphibious fleet

Textron Marine & Land's Landing Craft, Air Cushion (LCAC) is the cornerstone of the U.S. amphibious modernization program and a revolutionary means for the U.S. Navy and Marine Corps to land at more than 80 percent of the world's shorelines. Developed, manufactured, and supported by Textron Marine & Land, LCAC is in worldwide use by the United States Navy. As evidenced by successful operations in Somalia, Bangladesh, Liberia, Haiti and Kuwait, LCAC is combat-proven. It has also proven invaluable in times of disaster, including tsunami and hurricane relief operations.

Unparalleled Versatility

The LCAC can traverse snow, marsh, ice, tundra and sand. Traveling at 50-knot speeds in Sea State 2, LCAC operates at a range of 350 miles while maintaining 20 percent fuel reserves. On land, it can traverse obstacles as high as four feet. Designed to function in extreme temperatures, LCAC withstands climates ranging from the Arctic cold to Sahara heat.



LCAC approaches the well deck of a dock landing ship.

Cargo is easily loaded onto the LCAC via the bow and stern ramps, allowing roll-on/roll-off capability. The LCAC transports up to 150,000 pounds (68,040 kg) of cargo while in overload mode. Use of deck tie-down rails ensures stability of heavy loads during transit.

Whether operating from the well deck of an amphibious transport ship, through the surf zone or beyond the beach inland, LCAC provides unparalleled over-the-horizon performance.

Multimission Capable

Beyond its basic mission of transporting personnel and equipment from ship to shore, LCAC has become a multimission craft.

For example, LCAC, outfitted with a modular sweep deck, is an effective

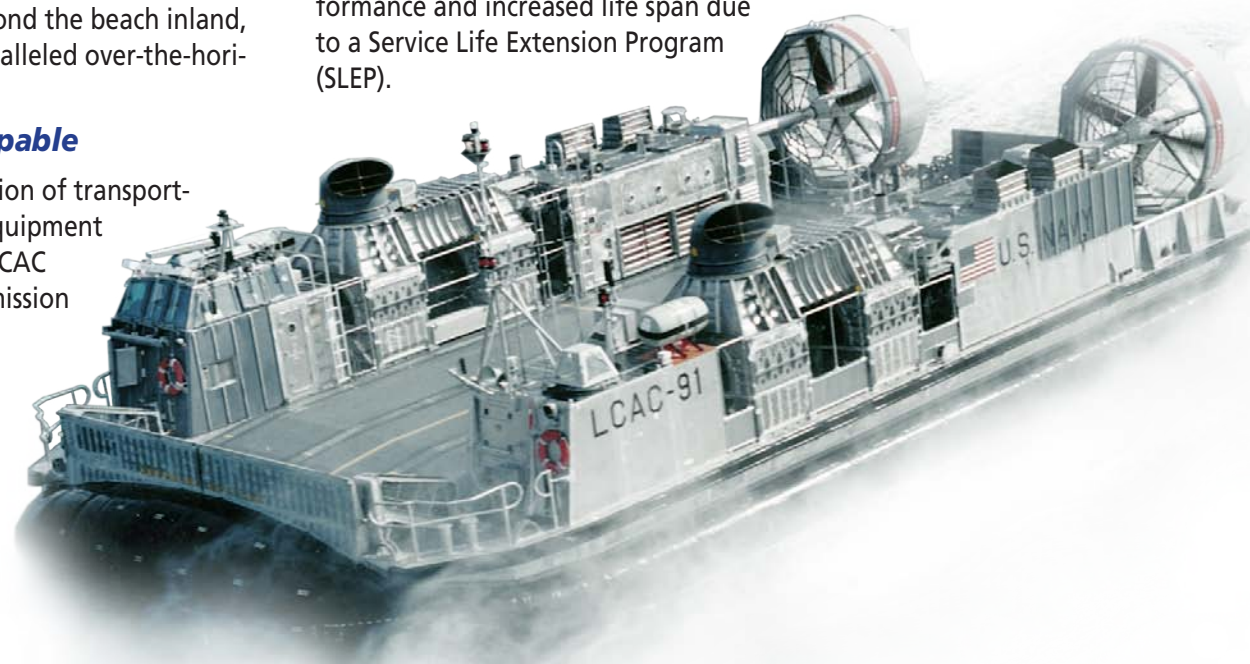
hunter/sweeper for mine countermeasures (MCM) operations. As a troop carrier, LCAC can be outfitted with a personnel transport module that carries up to 180 people or troops.

In civil emergencies, its extensive cargo capacity enables delivery of lifesaving supplies and equipment to otherwise inaccessible sites. As a Medevac, LCAC's speed ensures rapid response and timely extraction.

Defining State-of-the-Art

The first LCACs were delivered in 1984 with a service life design of 20 years.

After a decade of fleet service, the LCAC will operate well into the 21st century with markedly improved performance and increased life span due to a Service Life Extension Program (SLEP).



LCAC was deployed following Hurricane Katrina, bringing desperately needed supplies to survivors along the Gulf Coast.

With SLEP, LCAC will continue to define state-of-the-art, with improvements that include an expanded performance envelope; reduced operating and maintenance costs and crew workload; and an extended service life from 20 to 30 years.

Moreover, SLEP allows improvement in combat readiness by aligning systems capability with other U.S. Armed Forces during joint operations.

The SLEP program was launched following significant design and development. It entails installation and testing of modifications to the LCAC. These efforts include development and installation of main engine upgrades; design, development and testing of a new skirt system; and modifications to the buoyancy box of the craft.

Other work consists of upgrading the communications, navigation and electronics systems, as well as modifications to the fuel system to improve trim characteristics.

LANDING CRAFT, AIR CUSHION SPECIFICATIONS

HULL

Length

Off-cushion	81 feet
On-cushion	87 feet, 11 inches

Beam

Across fenders	46 feet, 8 inches
On-cushion	47 feet

Height above ground

Off-cushion	19 feet, 6 inches
On-cushion	23 feet, 10 inches
Cushion depth	5 feet

Deck area

1,809 square feet

WEIGHT

Design full load weight	152 tons
Design payload	120,000 pounds
Overload payload	150,000 pounds

POWER

Propulsion	Four ETF40B gas turbines, each rated at 3,955 SHP max continuous
Propellers	Two four-bladed, 11.75-foot-diameter reversible, variable pitch propellers
Lift System	Four 63-inch-diameter double-entry, double-discharge centrifugal lift fans
Control	Variable pitch propellers, rotatable bow thrusters, and aerodynamic rudders

PERFORMANCE AT DESIGN PAYLOAD

Speed, Sea State 2	50 knots
Speed, Sea State 3	30 knots

CREW/SEATING

Operating crew	5 members
Starboard cabin seating	Upper - operator, craft engineer, navigator, groupcommander and troop commander; Lower - 7 troops
Port cabin seating	Upper - deck hand, engineer; Lower - 16 troops and load master

COMMUNICATIONS/NAVIGATION

Navigation (SLEP config.)	Integrated NAV system with EGI (embedded global positioning system with inertial navigation system)
Radar	25 Kw surface search radar
Radios	VHF, UHF/VHF, HF and Man-on-the-Move



LANDING CRAFT, AIR CUSHION

Redefining state-of-the-art amphibious capabilities



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