



X-Craft

The Titan Corporation is on contract to build and deliver a new breed of high-speed, wave piercing catamaran craft for the United States Navy. X-Craft will be an initial evaluation platform to exercise the concepts of mission modules, unique hull, mechanical, and electrical innovations, tactics, techniques, and procedures for the Navy's newest class of ship program, the Littoral Combat Ship (LCS). Titan is leading a team of Nichols Brothers Boat Builders of Freeland, Washington, and Nigel Gee and Associates of South Hampton, United Kingdom for the United States Navy's Office of Naval Research.

The keel for the X-Craft was laid on June 5, 2003, and the craft is expected to begin sea trials in the summer of 2004.

Constructed of aluminum, the X-Craft will be powered by a Combined Diesel or Gas (CODOG) power configuration that will give it both high-speed capabilities, in excess of 50 knots, while maintaining good endurance and range. The primary power is two LM-2500 gas turbine engines rated at 33,600 horsepower each.

In addition to the gas turbines, the X-Craft will be equipped with two MTU 595 series V-16 marine diesel engines. The craft will use the gas turbine engines for high-speed operations, and the diesels for sustained range and endurance regimes. On diesel power, the X-Craft will be able to travel 4000 nautical miles at 20 knots.

The X-Craft will be propelled through the water by four Rolls Royce water jet units (two per hull of the catamaran), which will provide exceptional maneuver control and facilitate operations in relatively shallow waters. The gearbox will allow automatic clutching between the LM-2500 and the MTU diesel.



SPEED: 50 KNOTS
LENGTH: 265 FEET
BEAM: 73 FEET
RANGE: 4000 NM



LM-2500 GAS TURBINE (33,600 HP)

PROPULSION CONFIGURATION:
 CODOG (COMBINED DIESEL OR GAS) 4 WATER JETS
POWER PLANTS:
 2 LM 2500 GAS TURBINES AND
 2 MTU 595 SERIES DIESELS



Electrical power is provided by four ship-service diesel generators, Detroit Diesel Series 60's that generate 250 kilowatts each. The X-Craft is also equipped with a MTU power management system with automatic start up and load shifting. A sophisticated ride control system will provide the X-Craft with stability in all weather operations.

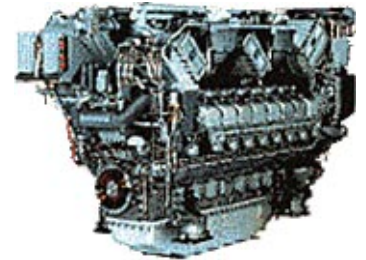
X-Craft will be capable of operating all helicopter types up to and including all models of the H-60 series from two helicopter spots.

The X-Craft will be truly the precursor and technology demonstrator for the Littoral Combat Ship. It will have a fully functioning mission module deck with an integrated X-Y crane, allowing rapid re-configuration of the mission modules. In addition, X-Craft will be fitted with a unique articulating ramp to allow underway launch and recovery of Ridged Inflatable Boats (RIB).

The X-Craft will provide a realistic platform for development of new technologies, tactics, and procedures for the United States Navy far into the future.

X Craft Features:

- Two LM-2500@ 33,600 HP Each
 - Pneumatic Starting
 - Reserve Flasks
- Two MTU (German) 16V5.95 TE 90 85790 HP Diesels
 - Pneumatic Starting
- CODOG
- 4 Rolls Royce Water Jets (Two Per Hull)
 - No Cross Connect Between Hulls
- One RENK (German) Gear Box per hull with integrated control LM-2500 into Reduction Gear Box...6.05 to 1 MTU into Reduction Gear Box...4.6 to 1 Automatic Clutching between MTU and Gas Turbine Two Shafts out of Gear Box...one to each Water Jet i Service Diesel Generators... Detroit Diesel Series 60 250 KW 3 needed for Max Electrical Load, 1 Set as Emergency, but can be rotated into normal Operation MTU Power Management System...Automatic Start up and load shifting and shedding...450 V 60 Hz 3 Phase...Battery back up with UPS...Step down transformers. No MGs at this time.
- Compressors for engine start and mission support air Ride Control (Island Engineering Pax River)
 - T-Foil on each hull forward
 - Sensors
 - Fins Aft
- Small Ballast Tanks Fuel Tanks sufficient for 4000 mile range on Diesel at 20 knots, 50 Knots Upper end of Sea State 4



MTU SERIES 595 MARINE DIESEL



ROLLS ROYCE WATER JET



DETROIT DIESEL SERIES 60
SHIP SERVICE GENERATORS (4)

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