

Hamilton Jet Model HM651  
Application Review

## Jet Cat Express Tops 37 Knots with Quad Hamilton HM651 Jets



**Jet Cat Express, one of the most recent Hamilton Jet powered passenger ferries built in the US, has begun service in California with the eight-boat fleet of Catalina Express Lines. The 44-metre catamaran represents the modern face of high-speed passenger ferry services with a range of advanced features.**

Waterjet propulsion has become standard for fast ferries, particularly catamarans. Now vessel designers are developing new methods of ride control to provide smoother passage and maximise the benefits of high-speed propulsion systems.

Incat Designs of Australia incorporated a number of these features in Jet Cat Express. The vessel has a Maritime Dynamics forward T-foil and aft interceptor ride control system and a central 'third bow' to help combat the coastal sea conditions encountered on its 24-mile route between Long Beach, CA, and Santa

Catalina Island. The Hamilton Jet MECS steering & reverse control system also interfaces with the Maritime Dynamics autopilot system.

Built by Nichols Brothers Boatbuilders on Whidbey Island, Washington State, Jet Cat Express is powered by quadruple 1,875hp Cummins KTA-50 engines driving Hamilton Model HM651 waterjets through ZF gears. Designed to provide 37-knot service speed, the 380-seat ferry topped 42 knots during sea trials in Puget Sound, WA.

Santa Catalina Island is popular for diving, hiking and bicycle touring. This creates scheduling

### ▶ Brief Specifications

<b>NAME:</b> Jet Cat Express	<b>ENGINES:</b> Quad Cummins diesels Model KTA-50, each 1,399kW (1,875hp) @ 1950rpm
<b>SERVICE:</b> Passenger Ferry	<b>GEARBOXES:</b> ZF BU 460 DHWL non-reversing
<b>LENGTH:</b> 44.27 metres [LOA]	<b>DESIGNER:</b> International Catamaran Designs, Sydney, Australia
<b>BEAM:</b> 10.45 metres	<b>BUILDER:</b> Nichols Brothers Boatbuilders, Whidbey Island, WA, USA
<b>CONSTRUCTION:</b> Aluminium	<b>OWNER/OPERATOR:</b> Catalina Express Lines, San Pedro, CA, USA
<b>PAYLOAD:</b> 380 passengers	<b>Hamilton Jet DISTRIBUTOR:</b> Hamilton Jet Inc, Seattle, WA, USA
<b>SPEED:</b> 37 knots [service] 42 knots [max light]	
<b>WATERJETS:</b> Quad Hamilton Model HM651	
<b>WATERJET CONTROLS:</b> Hamilton MECS Electronic	

challenges, with major changes in passenger loads during morning and afternoon runs. The four engines and jets provide redundancy so that schedules can be maintained even with one drive down – over 32 knots was attained on three engines during trials.