

U.S. Department of  
Homeland Security

United States  
Coast Guard



Commanding Officer  
United States Coast Guard  
Marine Safety Center

US Coast Guard Stop 7430  
2703 Martin Luther King Jr. Ave SE  
Washington, DC 20593-7430  
Staff Symbol: MSC-1  
Phone: (202) 795-6729  
Email: msc@uscg.mil

### STABILITY LETTER

16710/P021017  
Serial: H1-1802028  
May 29, 2018

Master, SPIRIT OF ALOHA, O.N. 1284381  
Gold Coast Yachts Hull No. 124  
64.7' x 29.5' x 7.0' Auxiliary Sailing Catamaran Small Passenger Vessel (T)

You are responsible for maintaining this vessel in a satisfactory stability condition at all times and for following the instructions and precautions listed below. You are reminded that 46 CFR 185.315 requires you to verify your compliance with these instructions and precautions after loading and prior to departure on each voyage.

A deadweight survey, witnessed by the U.S. Coast Guard, was conducted on the SPIRIT OF ALOHA, at Salt River, St. Croix, on March 20, 2018. On the basis of that survey, and a conservative estimate of the vessel's lightship vertical center of gravity, stability calculations have been performed. Results indicate that the stability of the SPIRIT OF ALOHA, as presently outfitted and equipped, is satisfactory for operation on Exposed Waters, provided that the following restrictions are observed.

### DAMAGE SURVIVAL

When operated as indicated below, calculations indicate this vessel will stay upright (no more than 7 degrees of list under ideal conditions) after side or bottom damage, when the damage is limited to any one major compartment in either hull and not more than 5 feet 11-3/4 inches inboard from the side of either hull or 2 feet 6 inches upward from the bottom of either hull. A major compartment is the total space between any two adjacent Main Transverse Watertight Bulkheads (MTWB's). For this vessel, the MTWB's are located at the following longitudinal locations aft of the forward perpendicular in each hull: 4 feet, 22 feet, 34 feet, 39 feet 6 inches, and 50 feet.

Calculations further indicate this vessel will remain afloat and upright when damage is limited to both hulls (concurrently) forward of the collision bulkheads, which are located 4 feet aft of the forward perpendicular. To maintain the vessel upright after flooding (damage), the heeling forces imposed by wind, wave, and passenger movements must be minimized.

### OPERATING RESTRICTIONS

1. ROUTE: Operation on Exposed Waters may be permitted. Since the vessel's route is based upon other considerations in addition to stability, you are cautioned that the route may be further limited to that specified on the Certificate of Inspection (COI).



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2. PERSONNEL: A maximum of 88 persons may be carried on this vessel, of which 80 may passengers. These numbers are based on an average weight of 185 pounds per person. In addition, 500 pounds of stores may be carried. Since the personnel capacity is based upon other considerations in addition to stability, you are cautioned that the number of persons carried and their distribution may be further limited to that specified on the COI.

3. FREEBOARD AND DRAFT: A minimum freeboard of 5 feet 10-1/8 inches to the main deck at amidships must be maintained. This corresponds to a maximum baseline (mean) draft of 2 feet 5-3/4 inches. This corresponds to submerging the design waterline line by 6-5/8 inches. Amidships is located 32 feet aft of the Forward Perpendicular. Trim and list should be minimized.

4. WATERTIGHT DOORS AND BULKHEADS: There are no doors located in any MTWB's. No watertight doors or bulkheads shall be added, removed, or altered without the authorization and supervision of the cognizant Officer in Charge, Marine Inspection (OCMI).

5. HULL OPENINGS: Any openings that could allow water to enter the hull should be kept closed when rough weather or sea conditions exist or are anticipated.

6. WEIGHT CHANGES: This stability letter has been issued based upon the following lightship parameters:

Displacement	14.96	Long Tons (LT)
VCG (Conservative Estimate)	7.50	Feet Above the Design Waterline
LCG	33.48	Feet Aft of the Bow
TCG	0.01	Feet to Starboard of Centerline

The FP is located 5 inches aft of the bow. The design waterline is located 1 foot 11-1/8 inches above the bottom of the hull at amidships. Any alteration resulting in a change in these parameters may invalidate this stability letter. The vessel is not fitted with fixed ballast. No fixed ballast or other such weights shall be added, removed, altered, and/or relocated without the authorization and supervision of the OCMI.

7. TANKS: Any cross-connections between port and starboard tank pairs shall be kept closed at all times when underway.

8. SAILS: The sails which may be set are limited to those shown on the sail plan, dated January 23, 2017, bearing the U. S. Coast Guard Marine Safety Center approval stamp dated May 29, 2018. That plan must be maintained onboard the vessel, in a suitable location, at all times.

9. BILGES: The vessel's bilges and voids shall be kept pumped to minimum content at all times consistent with pollution prevention requirements.



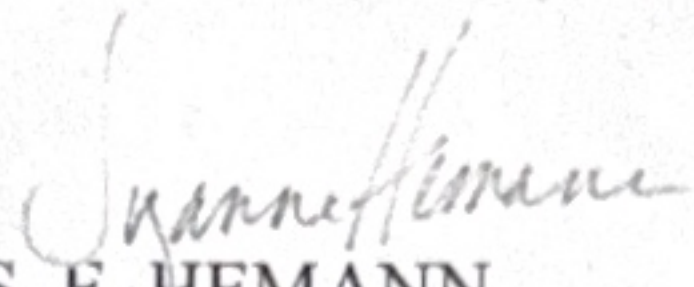
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10. LIST: You should make every effort to determine the cause of any list of the vessel before taking corrective action.

11. FREEING PORTS: Deck freeing ports and drains shall be maintained operable and completely unobstructed at all times.

This stability letter shall be posted under glass or other suitable transparent material at the operating station so that all pages are visible

  
S. E. JEMANN  
Commander, U. S. Coast Guard  
By direction

Attachment: Sail Plan for SPIRIT OF ALOHA bearing USCG Marine Safety Center  
"Approved" Stamp dated May 29, 2018