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16710/P008259/jrk Serial: H1-2203201 October 3, 2022

Walworth Yacht Designs PC Attn: Mr. David Walworth P. O. Box 3792 Kingshill, VI 00851 david@walworthdesigns.com

Subj: ISLAND FLYER, O.N. 1131233

Gold Coast Yachts, Inc. Hull No. GCY65WPCH202 65.0' x 24.0' x 7.0' Catamaran Small Passenger Vessel (T) Stability and Lightship Characteristics – Weight Changes

Ref: (a) Walworth Yacht Designs (WYD) Doc., Rev. 0, "Engine Change Weight Calculations," 1 page, cated September 01, 2022

- (b) WYD Doc., "If\_wght\_change total.xlsx," 1 sheet, received September 5, 2022
- (c) WYD Doc., "Island\_Flyer\_eng\_change.xlsx," 1 sheet, received September 5, 2022
- (d) Lugger Doc., "Lugger L6125A," 1 page, received September 5, 2022
- (e) Cummins Doc., "Cummins QSM11," 1 page, received September 5, 2022
- (f) Marine Safety Center Technical Note 04-95, CH-2 "Lightship Change Determination; Weight-Moment Calculation vs. Deadweight Survey vs. Full Stability Test," dated January 1!, 2016
- (g) Our letter Serial No. H1-1700466 dated February 14, 2017

## Dear Mr. Walworth:

We reviewed references (a) through (e) submitted by your electronic correspondence dated September 5, 2022 (MSC Document No. 2215871), for compliance with 46 CFR Subchapters T and S. References (a) through (e) are **Examined**. Supporting calculations and plans such as these are not normally approved; however, we used the information to verify the vessel's compliance with applicable stability requirements. The installation, workmanship and testing of the modifications shall be accomplished to the satisfaction of the cognizant Officer in Charge, Marine Inspection (OCMI) in accordance with 46 CFR 176.700. The following comments apply:

1. In accordance with the guidance of reference (f), deadweight surveys are generally required when the total aggregate weight change (sum of weights added, weights relocated, and weights removed) exceeds 2% of the lightship displacement last determined by test or when the longitudinal center of gravity (LCG) shifts by more than 1% of the vessel's length between perpendiculars (LBP). As the weights and centers of gravity of some items replaced on the

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subject vessel are known, they are not included in the aggregate weight calculations, and the changes fall below the limits outlined in reference (f). Therefore, a new stability test is not required at this time.

2. Any future weight changes evaluated must include the total aggregate weight changes from the lightship values of the last stability test, not from the revised lightship characteristics determined by our independent calculations. The following table identifies the lightship values of the last stability test, all weight changes since the date of the last stability test, and the revised lightship values incorporating the weight changes.

Known/ Unknown	Date	Description	Displacement/ Weight	LCG (aft of FWD Perpendicular)	TCG (from the centerline)	VCG tabove the design waterline)
Known	05/22/03	Lightship Values - Last Stability Test	17.14 LT	37.38 ft	0.0 ft	5.26 ft*
Unknown	10/03/13	Add Roof Ra ling	110 lbs	36.00 ft	0.0 ft	13.33 ft
Unknown	10/03/13	Add Roof Beam	208 lbs	36.00 ft	0.0 ft	11.00 ft
Known	10/03/22	Remove Eng nes (2) Lugge- L6125A	-4,900 lbs	35.75 ft	0.0 ft	0.50 ft
Known	10/03/22	Add New Engines (2) Cummins QSM11	5,240 lbs	35.75 ft	0.0 ft	0.50 ft
Unknown 0.83% of 5/22/03 Lightship Values	10/03/22	Revised Lightship Values - Weight Moment Calcs	17.43 LT	37.35 ft	0.0 ft	5.27 ft*

<sup>\*</sup>Conservative Estimate

3. We have reviewed reference (g), the vessel's current stability letter, using the revised lightship values and find the guidance in that letter sufficient to ensure continued safe operation of the vessel in light of the documented lightship changes made to date. Accordingly, no additional calculations will be required and the vessel's current stability letter will remain valid and applicable to the vessel.

As an agreed-upon condition for your participation in the Marine Safety Center's electronic commerce program, you must provide the OCMI with a copy of this letter and references (a) through (e).

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Our Project Number for this vessel is P008256. Please ensure that all future correspondence includes the Project Number and the Official Number that appears in the subject line.

Please contact LCDR Justin Kimrey at (202) 795-6740 with questions concerning our review.

Sincerely,

G. S. GERTISER

Lieutenant Commander, U. S. Coast Guard Chief, Small Vessel Branch By direction

Copy: Commander, Coast Guard Sector San Juan, Prevention Department Supervisor, Coast Guard Resident Inspection Office St. Croix