



Designation: **F3099—22a** F3099 – 23

## Standard Practices for Parasailing<sup>1</sup>

This standard is issued under the fixed designation F3099; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This practice provides guidelines and procedures for the operation, maintenance, and inspection of parasail vessels, equipment, and associated activities including crew training and flying patrons aloft in a parasail.

1.2 *Units*—The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

### 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

[F770 Practice for Ownership, Operation, Maintenance, and Inspection of Amusement Rides and Devices](#)

2.2 *Federal Regulations:*<sup>3</sup> [29 CFR Part 1910.106 Amusement Devices](#)

[46 CFR Part 16 Chemical Testing](#)

[46 CFR Part 175.400 Definition of Terms](#)

### 3. Significance and Use

3.1 The purpose of this standard is to establish procedures for water based parasailing activities.

### 4. Weather Monitoring and Limits

4.1 Vessels used for parasailing operations shall be equipped with a weather monitoring device.

4.1.1 It is acceptable for the device to be fixed or portable, provided it is accessible by the vessel Master at the vessel's operating console.

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee F24 on Amusement Rides and Devices and is the direct responsibility of Subcommittee F24.65 on Parasailing. Current edition approved Dec. 1, 2022/July 1, 2023, Published February 2023/August 2023. Originally approved in 2014. Last previous edition approved in 2022 as F3099 – 22/F3099 – 22a. DOI: [10.1520/F3099-22A.10.1520/F3099-23](#).

<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](#), or contact ASTM Customer Service at [service@astm.org](#). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401, [http://www.access.gpo.gov](#).

4.1.2 The device shall be electronic with a visual display.

4.1.3 In restricted locations such as manmade lakes, it is acceptable for the weather monitoring device, under 4.1, to be located within the immediate proximity of the operating area provided it is continually monitored by a company employee available to provide updated weather information to the vessel Master via radio or cellular phone. The location of the wind measuring device shall be selected to best represent conditions for the parasailing operation.

4.1.3.1 A VHF radio, alone, is not acceptable for weather monitoring.

4.2 The vessel Master shall check and remain cognizant of current and forecasted weather conditions for the area of operation and account for the weather conditions for the duration of the parasail set (the “onboard” group of patrons on a parasail vessel).

4.2.1 The vessel master shall visually monitor the wind speed, wind direction, and sea conditions during parasailing operations.

4.3 *Weather Log*—The vessel Master shall maintain a weather log.

4.3.1 Log entries shall include: wind direction, wind speed, wave height, and sky conditions. A sample weather log is provided as enclosure (see [Appendix XI](#)).

NOTE 1—It is acceptable for a weather log to be in any format with the weather information recorded manually or electronically.

4.3.2 A legend shall be provided for any coded or abbreviated log entries.

4.3.3 Log entries shall be recorded directly by the vessel Master or may be relayed to another crewmember aboard or company employee ashore for permanent recording.

4.3.4 Weather conditions shall be recorded by the vessel Master at the start of the day and prior to each parasail set.

4.3.5 Weather logs and the recorded data shall be retained for a minimum of 1 year on board the vessel or on the premises of the place of business.

4.3.6 The weather log shall be made available for inspection by the Authority Having Jurisdiction (AHJ) when requested.

4.4 *Weather Limits:*

4.4.1 Parasail operations shall not be conducted when the current observed weather conditions in the area of operation include:

4.4.1.1 Sustained wind speed greater than 20 mph (9 m/s) measured from the vessel in the intended flight zone using a commercially available wind speed gauge (anemometer).

4.4.1.2 Ground visibility due to rain or heavy fog less than 0.5 miles (0.80 km).

4.4.1.3 Thunder Storm detected by weather device within 7 miles (11.3 km).

4.4.1.4 Wind gust with a differential greater than 15 mph (6.7 m/s) of the current sustained wind.

4.4.1.5 Wind gust exceeding 25 mph (11 m/s) from the vessel in the intended flight zone.

4.4.1.6 Operating less than 500 ft (152 m) from the base of any cloud.

4.4.1.7 Rain observed in the intended flight zone for more than 5 min.

4.4.2 Parasail operations, suspended as a result of weather conditions exceeding the parameters enumerated in [4.4.1](#) or [4.4.3](#), shall remain suspended for a minimum of 30 min and will not resume until weather conditions are checked and recorded in the weather log.

4.4.3 It is acceptable for regions affected by prevailing ~~Trade Wind~~trade winds to operate exempt from 4.4.1.1 and 4.4.1.5 provided ~~that~~that 4.4.3.1 and 4.4.3.2 are met:

4.4.3.1 The sustained wind direction is offshore for the Parasail operation, and

4.4.3.2 The parasail equipment in use is sufficiently rated by the manufacturer for the wind conditions-conditions measured from the vessel in the intended flight zone using a commercially available wind speed gauge (anemometer).

4.4.4 *Sea Conditions:*

4.4.4.1 Parasail operations in lakes, intercostal areas, and rivers shall not be conducted when the wave height exceeds 3 ft (0.9 m).

4.4.4.2 Parasail operations offshore and in open waters shall not be conducted when wave heights exceed 4 ft (1.2 m) unless the period and wave height are within the following formula: 3 s period for each 1 ft (0.3 m) of wave height (for example, 15 s period = 5 ft (1.5 m) wave height).

4.4.4.3 In no case shall parasail operations be conducted in weather conditions that exceed the manufacturer's specified limitations for the equipment in use.

4.4.5 The vessel Master shall be responsible for assessing local weather conditions and determining if the weather conditions are within acceptable limits.

## 5. Equipment

5.1 *Materials and Manufacture:*

5.1.1 All parasail equipment in use, including but not limited to parasail canopies, parasail harness, or passenger bars, shall be properly designed for parasail operation. The equipment shall be used in accordance with the manufacturer's recommendations and limits.

5.1.2 Vessels used for parasail operations shall be specifically built for parasail operation.

5.1.3 Parasail equipment shall be operated, stowed, inspected and maintained in accordance with the manufacturer's recommendations. Equipment found in substandard condition shall be removed from the vessel for repair or destruction.

5.1.4 Parasail towlines shall be braided with a minimum rated tensile strength of not less than 6000 lb (27 000 N).

5.1.5 Parasail towlines shall not exceed the maximum length recommended by the towline, winch, or parasail equipment manufacturers or 1200 ft (365 m), whichever is shorter.

5.1.6 Parasail towlines shall be replaced annually or when showing signs of excessive wear such as diameter changes, broken filaments, abrasion, sun exposure damage (fading), signs of overlooking (appears to be fuzzy), guide equipment etc. Do not use if evidence of excessive wear, deterioration or damage is observed.

5.2 *Equipment*—The following equipment shall be available onboard the vessel:

5.2.1 Weather monitoring equipment in accordance with 4.1,

5.2.2 Primary anchor,

5.2.3 Secondary anchor or equivalent device to augment the primary anchor,

5.2.4 Hydraulic parasail winch,

5.2.5 Hydraulic parasail winch brake,

- 5.2.6 Level-wind system or equivalent device to ensure even pay out and take up of towlines of greater than 300 ft (91 m) in length,
- 5.2.7 Parasail deflating/arresting device,
- 5.2.8 Boat hook with a minimum reach of 10 ft (3 m),
- 5.2.9 Knife capable of cutting towline,
- 5.2.10 Parasail including canopy, harness,
- 5.2.11 A United States Coast Guard approved Type III lifejacket, or equivalent approved life jacket by authority having jurisdiction (AHJ), sized for all patrons going aloft,
- 5.2.12 A first aid kit that complies with USCG or local authority requirements, and
- 5.2.13 A marine VHF radio as required by the AHJ.

### 5.3 *Maintenance and Inspection:*

#### 5.3.1 *Maintenance:*

5.3.1.1 The vessel owner shall implement written maintenance and inspection procedures for the vessel and the parasail equipment including but not limited to: vessel propulsion & auxiliary machinery, communications, navigation, firefighting equipment, lifesaving equipment, structural integrity of the hull and load path affected by parasail operations, and all associated equipment used for parasailing (that is, parasails, harnesses, towlines, etc.).

5.3.1.2 Maintenance of the winch system shall be done in accordance with the manufacturers guidelines.

5.3.1.3 Inspections and maintenance activities shall be recorded in a maintenance log (see 5.3.4).

5.3.2 *Pre-Flight Inspections*—The parasail harness webbing/stitching, passenger bar, canopy, shroud lines, yoke, and towline shall be visually, and to the extent possible, physically inspected by a qualified crewmember, as described in Section 8, prior to each day's parasail activities.

5.3.2.1 Inspect the harness per the manufacturer's requirements.

5.3.2.2 Inspect the passenger bar connections and structure, the webbing, and the padding and cover per the manufacturer's requirements.

5.3.2.3 Inspect the parasail canopy, line connections, shroud lines, and the yoke/riser connection to the tow lines per the manufacturer's requirements.

5.3.2.4 Inspect the towline for characteristics outlined in 5.1.6.

5.3.2.5 Any equipment that doesn't meet the manufacturer's requirements after inspection shall be removed from service immediately.

#### 5.3.3 *Periodic Inspection:*

5.3.3.1 Parasail harness, passenger bars, and canopies shall be sent to the manufacturer every year to be overhauled and inspected. The manufacturer shall provide a letter or certification of the equipments' inspection and endorsement for subsequent use. This maintenance shall be recorded in a maintenance log (see 5.3.4).

5.3.3.2 It is acceptable for a qualified vessel crewmember, as trained in accordance with 7.2, to conduct periodic inspections as specified in 5.3.3.1, in lieu of the manufacturer inspection. The periodic inspection shall be documented and recorded as specified in 5.3.4.

5.3.3.3 Annual (or as required by the manufacturer, whichever is more frequent) inspection and documentation for subsequent use of winch, winch cooling system, winch brake, level-wind system, parasail deflating/arresting device, shall be recorded in a maintenance log (see 5.3.4).

#### 5.3.4 *Record Keeping:*

5.3.4.1 The vessel owner shall maintain a log or otherwise record all maintenance and inspections performed on the vessel and its equipment.

5.3.4.2 Record keeping shall include the date the maintenance/inspection was performed and the name of the qualified individual or company who performed maintenance/inspection.

5.3.4.3 Recorded data shall be retained for a minimum of 3 years on board the vessel or on the premises of the place of business. It is recommended that records be maintained for the life of the equipment which would exceed 3 years (for example, parasail vessel, winches, and larger equipment).

5.3.4.4 The maintenance records shall be made available for inspection by the Authority Having Jurisdiction (AHJ) when requested.

## **6. Operations**

### 6.1 *Pre-Flight Operations:*

6.1.1 Crewmembers shall ensure passengers are properly fitted with a lifejacket prior to flight.

6.1.2 Crewmembers shall ensure passengers are within the manufacturer's minimum and maximum load capacity for the parasail equipment in use.

6.1.3 Crewmembers shall ensure passengers are properly fitted into the parasail harness. Harness waist strap shall be placed around the passenger's waist, not the lifejacket.

6.1.4 Vessel Master shall confirm that weather conditions are within the limits specified in 4.4.

### 6.2 *Flight Operations:*

6.2.1 Parasail operations shall be limited to flight not exceeding 500 ft above ground level.

6.2.2 For offshore wind conditions, maintain a minimum 1000 ft distance from shore.

6.2.3 For onshore wind conditions, maintain:

6.2.3.1 1000 ft distance from shore for wind speed of 0 to 5 mph.

6.2.3.2 1000 ft + 1 times the towline length from shore for wind speed of 6 to 10 mph.

6.2.3.3 1000 ft + 2 times the towline length from shore for wind speed of 11 to 15 mph.

6.2.3.4 1000 ft + 3 times the towline length from shore for wind speed 16 to 20 mph.

6.2.4 For enclosed waters (lakes, bays, sounds, etc.), the vessel Master shall operate so as to maximize the distance of the parasail to the surrounding shoreline given the prevailing weather conditions such that the riders will experience a water landing should they experience a towline separation.

6.2.5 *Dipping*—If part of the flight involves dipping the passengers in the water, the following shall apply:

6.2.5.1 The vessel owner shall establish written procedures for dipping passengers. These procedures shall address vessel speed, controlling rate of descent, controlling level of passenger immersion in the water, and maximum duration of immersion.

6.2.5.2 Passengers shall not be more than 150 ft from the vessel when being dipped.

6.2.5.3 The vessel owner shall establish training requirements for dipping passengers and ensure this training has been conducted and recorded for the crewmembers conducting this activity.

6.2.6 *Towline Care:*

6.2.6.1 Should the towline come in contact with saltwater, it shall be rinsed with freshwater as soon as practicable but no later than at the conclusion of the day's parasail operations.

6.2.6.2 When not in use, towlines shall be stored in a dry, covered environment away from direct sun exposure.

6.2.6.3 The bitter end of a towline shall be trimmed to whatever following criteria is most frequent: the manufacturer's specification, a minimum of 12 in. every 100 flight rotations or a minimum of 12 in. every 30 days during operations. The trimmed piece shall be labeled with the date trimmed and vessel name and retained aboard the vessel or on the premises of the place of business until the existing towline is permanently removed from service. Trimming of the bitter end shall be recorded as part of the maintenance log in accordance with 5.3.4.

6.2.6.4 A parasail vessel using a soft shackle shall trim the towline every 500 flight rotations and a new splice and soft shackle are introduced. The trimmed towline splice and soft shackle shall be labeled with the date trimmed and vessel name and retained aboard the vessel or on the premises of the place of business until the existing towline is permanently removed from service. Trimming of the towline splice and replacement of the soft shackle shall be recorded as part of the maintenance log in accordance with 5.3.4.

6.3 *Emergency Procedures:*

6.3.1 The vessel owner shall establish emergency procedures to include but not limited to:

6.3.1.1 Fire,

6.3.1.2 Sudden or heavy weather,

6.3.1.3 Man overboard,

6.3.1.4 Water landings,

6.3.1.5 Towline separation to include arresting of the parasail canopy and retrieval of riders in the water with the canopy attached.

6.3.2 The Emergency Procedures shall be posted or readily available onboard the vessel.

6.3.3 The vessel owner shall ensure that drills and training for crewmembers in the emergency procedures listed in 6.3 are conducted at regular intervals.

6.3.3.1 The vessel owner shall document the date and time of all emergency drills are conducted along with the names of crewmembers participating in accordance with 7.2.2.

## 7. Crew Requirements

7.1 *General:*

7.1.1 A parasail vessel shall be manned with a minimum of two crewmembers (Master + 1 Deckhand) while conducting Parasail operations.

7.1.2 A minimum of one crewmember onboard shall be certified and current in an accepted course of standard First Aid including Adult-Child-Infant cardiopulmonary resuscitation (CPR). Accepted courses shall include nationally recognized and accredited training courses that issue course completion documents.

7.1.3 All crewmembers as referenced in 7.1.1 shall be enrolled and participating in an approved drug testing program in accordance with 46 CFR Part 16 or equivalent program.

#### 7.2 *Crewmember Training:*

7.2.1 The vessel owner shall establish a crewmember training program that includes, but is not limited to:

7.2.1.1 Vessel familiarization, inspection, and maintenance,

7.2.1.2 Emergency procedures listed under 6.3,

7.2.1.3 Parasail equipment familiarization, inspection, maintenance, and stowage,

7.2.1.4 Parasail equipment failure and malfunction,

7.2.1.5 Patron pre-flight instructions, preparations, and checks,

7.2.1.6 Patron injury response, including first aid, and appropriate distress call,

7.2.1.7 Parasail launch, flight, and recovery operations,

7.2.1.8 Flight monitoring.

7.2.2 The vessel owner shall maintain a record of drills and training conducted for all crewmembers to document and verify crewmember proficiency with the requirements listed in 7.2, 7.3.3, and 7.4.2. Training entries shall include the date, description, crewmember, and signature verification of the qualified individual supervising or conducting, or both, the training or drill, or both. It is acceptable for the vessel owners to review and use crewmember held training logs, as specified in 7.3.4 and 7.4.3, to verify crewmember proficiency with the requirements of 7.2, and the required number of flight rotations as specified in 7.3.3 and 7.4.2.

#### 7.3 *Master:*

7.3.1 The Master shall be familiar with all applicable State and local rules and regulations governing parasailing.

7.3.2 A Master shall read and become familiar with all aspects of this ASTM standard and review it on an annual basis.

7.3.3 A Master shall qualify for conducting parasail operations by demonstrating proficiency in the items listed within 7.2 and completing a minimum of 500 flight rotations, under the direct supervision of a qualified Master, prior to serving as a qualified Master aboard a parasail vessel.

7.3.4 To prove proficiency in conducting parasailing activities, a Master should maintain a log of their training, to include review of this ASTM standard, and all other parasailing specific training activities. This log shall include a record of flight rotations, as part of a qualification process, and associated training which shall be verified by the name and signature of the qualified vessel Master or vessel Owner who supervised or conducted the training, or both, and the date of the training.

7.3.5 The vessel Master may refuse flying for anyone at any time and for any reason if in their judgement it is not safe to do so (for example, inclement weather conditions, patron is intoxicated, patrons unable/unwilling to follow directions, etc.). Owner/operator has the right to deny entry in accordance with Practice F770 section on Denying Entry.

#### 7.4 *Deckhand:*

7.4.1 The deckhand's duties and responsibilities shall be to support the Master in the overall operation of the parasail vessel and associated activities.

7.4.2 A Deckhand shall qualify for conducting parasail operations by demonstrating proficiency in the items listed within 7.2 and completing a minimum of 50 flight rotations, under the direct supervision of a qualified Deckhand or Master, prior to serving as a qualified Deckhand aboard a parasail vessel.