



## Laser 28 International Class Association Rules

Amended April 2005

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### PART 1

#### 1. Authority

The International authority for the class racing rules shall be the Laser 28 Executive Council through its Chief Measurer. The English text of the Laser 28 rules shall govern.

#### 2. Class

##### a) Fundamental Class Rule

For the purpose of Laser 28 Class racing, except as specifically permitted in these rules, it is prohibited to remove or make any additions or alterations or make any changes in shape or profile to the hull, keel, rudder, saildrive, deck, spars, construction, equipment, type of equipment, fittings, type of fittings, placing of fittings, standing rigging, and running rigging as originally supplied with the boat.

Any attempts to make changes not specifically permitted is a breach of both the spirit and the substance of these rules.

##### b) Basic Principles and Intent of these Rules

To ensure fair class racing. It is the intent of these rules and specifications that the yachts have equal potential speed when they are well prepared and well maintained. These rules intend that no racing advantage be attainable from the absence or addition of features or equipment. Nor from modifications to the hull, keel, rudder, saildrive, deck, spars, construction, equipment, type of equipment, fittings, type of fittings, placing of fittings, standing rigging, and running rigging which makes the yacht deviate from the standard LASER 28 Sailboat. Furthermore, it is the intent of these rules to equalise the potential speed of the participating yachts so that the skill of the skipper and crew in tuning, maintaining, and racing the yacht are the major factors in the outcome of class racing.

#### 3. Builders

A Laser 28 shall be built only by builders licensed by the Copyright Holder and shall be constructed and finished according to the original design and building specification of the Copyright Holder.

#### 4. Measurement

a) The hull, keel, rudder, saildrive, deck, spars, standing rigging, running rigging, fittings and the placing of fittings and equipment shall conform to the original design. Tolerances are intended to allow for manufacturing discrepancies only and shall not be used to gain an advantage or alter the original design. In dispute, measurement of yachts can only be validated by a recognised measurer of the Laser 28 International Class Association. In the case of a measurement dispute on the hull, keel, rudder, saildrive, deck, spars, rigging, type of fittings and equipment and the placing of same not explicitly covered by these Rules, the following procedure shall be adopted:

b) A sample of 5 other boats shall be taken and measured using identical techniques. The dimensions of the disputed boat shall be equal to or between the maximum and minimum dimensions obtained from these 5 boats. If the boat in question is outside these dimensions the yacht shall be disqualified and the matter, together with any relevant information, shall be reported to The Council of the Laser 28 International Class Association at its Head Office.

c) Measurer Discretion

A Laser 28 Class Measurer shall report to the L28ICA Executive Council anything which might be considered to be a departure from the strict one design criteria or the intended nature of the class. Measurement of said yacht(s) may be revoked by the L28ICA Executive Council even if the specific requirements of the rules are satisfied.

## 5. Owners' Responsibilities

It is the responsibility of the owner to ensure that the yacht complies with current class rules before racing in all Laser 28 one design events.

## 6. Class Sails

a) Class Sails are: Mainsail, Genoa, Lapper, Working jib, Stormjib, and Spinnaker.

b) Sail specifications

**Main Sail** - Material: Woven Polyester

- - Weight: Min.(258g/sq Meter, 6.0 oz), except for a soft foot shelf not exceeding 330 mm in width.
- - Max. luff, 10.10 M.
- - Max. foot, 3.95 M.
- - Max. head width 0.14M.
- - Max. MGU, 1.52 M.
- - Max. MGM, 2.56 M.
- - Max. MGL, 3.38 M.
- - Reefs: Min. 2 working reefs required, First reef min. height above foot .90m, Second reef min. height above foot 2.1m.
- - Battens: 4 battens of any length, spaced approximately evenly along the leech.
- - Loose-footed
- - Flattening Reefs not permitted

**Genoa** - Material: Woven Polyester, Mylar Film, Polyester Fibre, Spectra Fibre, Aramid Fibre. All substrate/film laminates shall have a Min. film thickness of 1.5 mils.

- - Weight: Min.(137g/sq Meter, 3.2oz)for substrate/laminate sails, Min. (200g/sq Meter, 4.67oz)for Woven Polyester sails.
- - Max. LP: 4.5 M.
- - No battens allowed
- - The leech shall be straight or concave

**Lapper** - Material: Woven Polyester

- - Weight: Min.(266g/sq Meter, 6.2oz)
- - Max. LP: 3.12 M.
- - Max. MGU, 1.17 M.
- - Max. MGM, 1.99 M.
- - Max. MGL, 2.70 M.
- - Battens: 2 full length allowed, 2 additional allowed max. 40% of girth at point of batten. (Max. 4 battens)

**Working Jib** - Material: Woven Polyester



- - Weight: Min.(266g/sq Meter, 6.2 oz)
- - Max. Luff: 8.46 M.
- - Max. LP: 2.88 M.
- - The leech shall be straight or concave
- - Battens: 3 battens, Length unregulated.

**Storm Jib** - Material: Woven Polyester

- - Weight: Min.(300g/sq Meter, 7.0oz)
- - Shall conform to current ORC regulations

**Spinnaker** - Material: Woven Nylon

- - Weight: Min.(40g/sq Meter, .93oz) Commonly known as a .75oz Spinnaker.
- - The spinnaker shall be symmetrical in shape and construction about its centerline.
- - Max. Luff 10.06 M. *33.005'*
- - Max. Girth 5.97 M. *19.586'*

c) Windows:

Unwoven or X-Ply reinforced transparent materials are permitted. The total area of which shall not exceed one square meter per sail.

d) Minimum Cloth Weights:

Cloth weight shall be defined, in the case of woven materials, as the weight of the finished coated woven material used in the sail and, in the case of substrate/film laminate, as the weight of the finished fabric, including substrate, film and adhesive, used in the sail. Minimum cloth weight applies to all parts of the sail, not averaged over the total area. The actual cloth weight in grams per square meter of each sail shall be indelibly marked near the head by the sailmaker.

e) Genoa Fabrics:

Fabrics allowed specifically are: woven polyester, mylar film, polyester fibre, spectra fibre, & aramid fibre.

f) All headsails shall be made and measured in accordance with the current recognized ISAF "Guide to Sail Measurement", found in the rules>technical>measurement section of [www.sailing.org](http://www.sailing.org)

g) Before a new sail can be considered to meet all requirements for Class racing, a Royalty fee of \$25. per sail must be paid to the Laser 28 Class Association.

The Class measurer or a prior approved council member's signature and "Royalty Paid" needs to be written on the sail with indelible marker

h) The following modifications may be made to the sails:

- A third row of reefing points may be added to the mainsail.
- Draft indicator lines may be added to any sail.
- Anti-chafe patches may be placed on any sail.
- The mainsail may be equipped with a bolt rope or slides. Foresails may be equipped with hanks or luff tape.

**7. Registration and Sail Numbers**

a) The registration number of each boat shall be moulded into the transom above the

waterline.

b) The sail number shall be as required by the owner's National Authority. In the event that a National Authority has no sail number requirement the sail number shall be the international number displayed on a plaque inside the cockpit.

c) The Class emblem shall be visible from each side of the mainsail.

d) Identification on sails shall conform to the current Racing Rules of Sailing of the ISAF and the National Sailing Authority's Prescriptions to the said RRS.

### **8. Minimum Equipment and Requirements**

Laser 28's must conform to whatever Category or Safety regulations are stipulated in the Sailing Instructions and shall conform to the minimum equipment and requirements listed below. Any boat not complying with minimum equipment and requirements shall be disqualified. It is the responsibility of each competitor to comply with all our rules and requirements and any additional rules and requirements set forth in the notice of race and or sailing instructions.

#### **MINIMUM EQUIPMENT and REQUIREMENTS**

<b>ITEM</b>	<b>REQUIREMENT</b>
<b>Laser 28 Class Membership</b>	Proof of Membership for boat.
<b>Sail Inventory</b>	A maximum of one, and only the same one of each class sail, may be carried and used in a race or series of races. All sails shall be "Class Royalty Paid".
<b>Canadian Coast Guard Approved</b>	Anchor, 13 lbs minimum with 30m or (100 ft) Rode Stored in Anchor Well.
<b>Safety Equipment</b>	<p>Lifejackets: one per person plus one extra or floating cushion.</p> <p>Life buoy ring 24 in. minimum</p> <p>Buoyant line 15m or (49.2 ft)</p> <p>Hand Bailer: Bucket w/ Lanyard</p> <p>Manual Gusher pump with 1 1/2" Hosing, hose must be able to reach the galley doors.</p> <p>2 Fire Extinguishers</p> <p>Distress Flares: Minimum of 12</p> <p>Sound signaling device</p> <p>One set Tapered Wood plugs</p>
<b>Interior Furnishings and Other Equipment</b>	<p>Complete Dinette Table in original location.</p> <p>Chopping Board in Galley</p> <p>Ice box and Dry food storage covers</p> <p>Stove (installed and complete)</p> <p>Fresh water storage tank: Portable is OK</p> <p>Head basin installed as original equipment</p> <p>All sliding panels and doors in place</p>

All Soft Lockers Installed

All Cushions Installed in intended positions.

All Plumbing, Seacocks, Thru-hulls, Hoses, Toilet and Holding Tank and fittings installed as originally supplied.

One Battery: Group 24, Minimum

Companionway Wash boards with Minimum Thickness of 3/8 in.

All Cabin soles installed with Minimum Thickness of 3/8 in.

Anchor and Steaming Lights installed, Mast Wiring and Conduit installed.

Fuel: Minimum Quantity 3/8th Tank.

## **9. Other Racing Requirements and Prohibitions**

a) The crew shall consist of a minimum of 3 persons unless specifically overridden in the race instructions.

b) The total combined weight of the crew shall not exceed 455 kg when weighed in normal dry clothing.

c) For Class racing, a maximum of one, and only the same one, of each Class sail, may be carried and used in a race or series of races unless permission is granted by the race committee in the event of damaged sails. A series of races is two or more races which count towards an overall points total up to a 10-day period.

d) Attachment or use of a cunningham on any headsail is prohibited.

e) Attachment or use of a spinnaker or headsail retrieval line (dousing cord) is prohibited.

f) One mainsail and one working jib or storm jib must be carried on board at all times.

g) A Laser 28 shall race with the design specified equipment and furnishings on board and stowed in its normal intended place.

h) The use of a foresail halyard or mechanically adjustable device to vary the length of the forestay / turnbuckle assembly while sailing is prohibited.

i) It is prohibited to have bushed or unbushed holes or slots to feed halyards or control lines through the deck, hull or transom. Any equipment or device to feed halyards or control lines below deck is prohibited.

j) It is prohibited to remove any original equipment or fittings except where specifically permitted within these rules.

## **10. Class Association Membership**

a) When racing in Laser 28 One Design races, Class racing or Class Sanctioned Regattas each Laser 28 shall have at least 1 current member of the International Class Association on board.

b) Intent

The Intent of this rule is such that the boat and at least one crew onboard shall have paid their respective dues to the Class Association for that year.

c) Laser 28 one design races include all events and/or races in which Laser 28's are scored separately.



### 11. Sanctioned Class Regattas

Sanctioned Class Regattas are designated Laser 28 one design events that have been selected by the individual fleets to best represent the spirit and camaraderie of Laser 28 one design racing. These Regattas include the following events and any event(s) proposed by the individual fleets that are approved by the Council.

- 1.) Laser 28 North American Championships
- 2.) Laser 28 Quebec Open
- 3.) Nepean One Design Regatta

## PART II - Options and Exceptions to PART I

### 12. Standing Rigging

The standing rigging and method of attachment and adjustment is unrestricted except that:

- a) All standing rigging shall be of stainless or galvanized steel multi-strand wire of the following minimum diameters:

Forestay: 4.76 mm (3/16 in.)

Backstay: 4.76 mm (3/16 in.)

Upper and Lower Shrouds: 5.56 mm (7/32 in.)

Adjustment shall only be with a threaded bottle screw (turnbuckle) or similar. Hydraulic or stored power adjusters are prohibited.

- b) A Luff Groove device may be fitted to the forestay.
- c) A topping lift may be fitted to either the mast head crane or the backstay.
- d) Lifelines shall be made from white PVC coated stainless multi-strand wire. Wire diameter shall not be less than 1/8" diameter.

### 13. Running Rigging

- a) Any sheets or lines may be substituted for those originally supplied, but no additional sheets or lines, unless specifically authorised may be added.
- b) The main halyard shall be of synthetic rope not less than 8mm diameter or synthetic rope and wire combination. A spare main halyard may be fitted.
- c) The genoa halyards shall be of synthetic rope not less than 8mm diameter or synthetic rope and wire combination. Both halyards shall be installed and functional.
- d) The spinnaker halyard shall be of synthetic rope not less than 8mm diameter.
- e) One boom vang, or non-hydraulic boom strut may be fitted of synthetic rope, tubing, and/or wire and any combinations of blocks are allowed with the control line terminating on the upper deck area. A self-cleating block may be substituted for the becket blocks supplied. Extra turning blocks, fairleads and cleats may be fitted for the purposes of this rule.
- f) One spinnaker pole downhaul and topping lift may be fitted and the control lines may be led to any area. Extra turning blocks, fairleads and cleats may be fitted for the purposes of this rule.
- g) One mainsail outhaul of synthetic rope and wire with not more than 2:1 power ratio is allowed with the Control line terminating on the upper deck area. The purchase system

shall remain inside the boom. Extra turning blocks, fairleads and cleats may be fitted for the purposes of this rule.

h) Mainsail cunningham controls of synthetic rope may be fitted which may include a single wire strop for attachment to the mainsail. The power ratio is unlimited with control lines terminating on the upper deck area. Extra turning blocks, fairleads and cleats may be fitted for the purposes of this rule.

i) One backstay adjuster of synthetic rope and wire, and blocks is permitted with a maximum power ratio of 12:1. The control lines shall be terminated at the transom or led forward into the cockpit.

j) The mainsheet traveller controls may be fitted with unlimited power ratio. Control lines shall be terminated in the cockpit. Extra turning blocks, fairleads and cleats may be fitted for the purposes of this rule.

k) The mainsheet system shall be of synthetic rope with a maximum power ratio of 8:1. Control lines shall be terminated in the cockpit. Ratchet blocks are permitted on the mainsheet system.

l) Headsail sheets shall be of synthetic rope not less than 8mm diameter. Spinnaker sheets shall be of synthetic rope of any size. The number of spinnaker and headsail sheets is unrestricted. Ratchet blocks are permitted on the spinnaker sheet system.

m) Reefing lines of synthetic rope for a maximum of 3 mainsail reefing points may be led to the gooseneck area, the mast base area or the cockpit area. Extra turning blocks, fairleads and cleats may be fitted for the purposes of this rule.

#### **14. Winches, Cleats, Blocks, Fittings and Shackles**

a) Winches, cleats, blocks, fittings and shackles may be replaced by those of a similar size and power provided that the replacements are positioned as closely as possible to the original and that the function remains the same as the original.

b) Additional cleats may be mounted in the vicinity of the winches.

c) Additional jib turning blocks may be added and the number of jib fairlead blocks is unlimited. One additional genoa track may be fitted on each side deck at any position between the cabin side and the toe rail. The track(s) may not be recessed into the deck.

d) Barber hauler systems for the jib and twing lines for the spinnaker sheets are permitted. Additional cars along the side rail for either system are permitted and holes may be drilled in the rails to position cars. Turning blocks may be fitted with snap shackles and may also be attached to stanchion bases. The attachment of twing or barber hauler lines to spinnaker sheets or jib sheets is unrestricted including the use of a fitting that allows the lines to be taken back to the rail or some other attachment point to increase the purchase to a maximum of 2.1. Twing or barber hauler lines may be used as sheets for any headsail. The type and position of the cleats for the barber hauler and twing lines is unrestricted except that the control lines shall be terminated outboard of the companionway and shall not be led across the companionway.

#### **15. Skin Friction and Hull Coatings**

A boat shall not eject or release a substance, such as a polymer, or have specially textured surfaces that could improve the character of the flow of water inside the boundary layer. The use of anti-fouling for retarding underwater organic growth is permitted.

#### **16. Spinnaker Pole**

Only one spinnaker pole shall be carried on board. The method of storing the spinnaker pole is unrestricted.

#### **17. Electronic and Navigational Equipment**

The use of any electronic navigation equipment is unrestricted.

#### **18. Wind Indicators**

Any number and type of masthead wind indicators may be used and any number and type of ribbons, wool or similar wind indicators may be attached to the sails or rigging.

#### **19. Additional Furnishings**

a) Additional lockers, bookshelves, stowage or other personalised accommodation equipment is permitted provided that it is constructed in such a way that it does not alter the design characteristics of the trim or hull strength.

b) A support brace may be fitted to the the V-berth bulkheads. This support brace shall be installed no higher than the highest horizontal edge of the existing bulkheads. No modifications to the hull or liner are permitted. Attachment of brace shall be with stainless or brass fasteners. Fasteners shall be attached only to the brace, V-berth bulkheads and mast support tube.

#### **20. Additional Safety Equipment**

There is no limit to the amount of personal safety equipment that may be carried.

#### **21. Repairs and Maintenance**

Repairs and preventative maintenance to the sails, hull, keel, rudder, saildrive, deck, spars, standing rigging, running rigging, fittings and equipment may be carried out without violation of these Rules provided such repairs are made in such a way that the essential shape and profile or characteristics are not materially affected. In the event of the failure of any fitting, or the replacement of fittings as authorized by these Rules, the same or a replacement thereof of the same size (where required) and function shall be replaced in as near as possible the same position.

#### **22. Amendments**

a) The Class Rules may be amended by The Council provided that at least two thirds of the votes received within 30 days from the delivery of a ballot to each voting member are in favour. The two thirds majority must represent at least 40% of the total number of voting members.

b) Amendments to the Class Rules may be proposed by:

i) The Council

ii) By direction of a Voting Member where a proposal has been signed by at least 6 Voting Members.

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