

RRS 42 GUIDE – Optimist Dinghy

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INTRODUCTION

This document ranks as a guide for Optimist judges and sailors. World Sailing also publishes the official RRS 42 Interpretations, which this guide refers to as “SCULL 1” etc.

PRINCIPLES FOR JUDGING RRS 42

1. Judges will give boats the benefit of the doubt. However judges will protect boats that are complying with RRS 42 by penalising any boat they are sure is breaking the rule.
2. Judges will normally only penalize when both have seen the breach. However a breach at or before the start, or near a mark or the finish, may be penalized when seen by only one judge.

OPTIMIST CLASS RULES AFFECTING RRS 42: None

SOME CLASS SPECIFIC TECHNIQUES AND BREACHES

Optimist sailors range widely in weight, size and experience. The hull is short with a flat bow. Upwind, heavy sailors need to keep moving their bodies to adjust fore-aft trim to sail over waves. Whereas inexperienced sailors may keep moving as they have not developed the technique to hold the boat upright when overpowered. Offwind, light sailors may surf when heavy sailors cannot.

Upwind the mainsail shape and power is controlled by the mainsheet; good sailors continually adjust mainsheet tension to suit wind and waves. Body movement that does not cause the leach to flick in a gust, may cause it to flick and break RRS 42.2(a) in less wind.

The Optimist rudder is large; forceful movements will cause the boat to turn, and slow rhythmic movements will propel her. With good timing of body movements during a roll-tack, it is possible to sail fast through the first part of a tack and still comply with RRS 42.3(b) at the end of the tack.

On a run boats will initially spread out sufficiently to establish clear air, then sail a direct course to the leeward mark with, in light winds, a lot of windward heel. It is therefore practical to judge RRS 42 from the centre, with boats passing on either side. A boat with a fully-raised centreboard and fully-eased mainsail may suddenly roll, but the sailor can normally quickly re-balance the boat.

Breaches of RRS 42 in Optimist class are usually easy to spot. Scanning the fleet sailing upwind or downwind will normally confirm that most boats are complying with RRS 42. The biggest challenge is identifying whether sheet and body adjustments by the better or heavier sailors are just “good sailing”, or break RRS 42.

With wave-related body movements in particular, it is necessary to see the waves that the boat is sailing in to decide whether or not an action breaks RRS 42. Judges may have to observe a boat in the yellow light area for more than one race before being confident enough to penalize.

AT THE START

Sculling

Most RRS 42 breaches occur at the start, and most of these are for sculling by boats trying to hold a near-head-to-wind position, especially when close to the starboard-end Committee Vessel.

Likely breaches are forceful sculling in both directions (RRS 42.2(d), SCULL 2), forceful sculling to hold position or offset the effect of backing the mainsail (SCULL 3), forceful sculling to bear away below close-hauled, and slow repeated sculling that propels the boat (often into a gap ahead).

Permitted actions:

- Gentle repeated rudder movements through the centreline that neither propel the boat nor prevent it from moving astern.

- Sculling, even if forceful, by a boat above a close-hauled course to change direction towards a close-hauled course [RRS 42.3(d), SCULL 1].
- Repeated rudder movement to reduce the speed [RRS 42.3(f)].

Prohibited actions:

- Sculling below a close-hauled course, usually in order to pass astern of the boat to leeward
Note: there need to be two forceful rudder movements below a close-hauled course for this action to break RRS 42.2(d).
- Forceful sculling to turn in both directions [RRS 42.2(d), SCULL 2].
Note: the large rudder means an Optimist can be turned from close-hauled to near head-to-wind by a single forceful helm movement. If such a luff is followed by one or more forceful helm movements to bear away, the boat breaks RRS 42.2(d).
- Sculling while backing a sail, providing the rudder movements are forceful enough to offset the change of course caused by backing a sail [SCULL 3].
- Repeated side-to-side rudder movement that propels the boat (more likely in light winds).

Gathering evidence:

- Are the tiller movements forceful?
- Are they propelling the boat forward or preventing it from moving astern?
- Is the boat above close-hauled and changing direction towards a close-hauled course?
- Is the sculling in the opposite direction to previous sculling?
- When backing a sail, is the sculling preventing the boat from changing course?

Rocking and Pumping, and Breaches of Basic Rule RRS 42.1

Before the start, the most common rocking breach is by a boat, not in the front rank, trying to propel herself into a gap ahead. After the start a boat might rock or pump to try to pull ahead of boats immediately to windward or leeward, or cross ahead of a right-of-way boat. Rolls are initiated by the sailor moving in then out. Pumping is usually initiated with in-and-out jerks of the body.

A single roll or other body movement that clearly propels the boat breaks RRS 42.1. This breach is most likely just before the start when a boat is heeled to leeward, then promptly brought upright. It may also occur when a boat tries to clear the pin mark or cross ahead of a right-of-way boat.

A judge who sees a boat roll once shortly before the start should then watch for and penalize if the boat makes a second roll in the same area.

To create a gap to leeward before the start, a starboard-tack boat may tack onto port and then immediately tack back onto starboard. If both tacks include a roll, and the boat does NOT reach close-hauled on port tack, then RRS 42.3(b) does not apply, so the boat breaks RRS 42.2(b)(1).

Permitted actions:

- One roll that does not clearly propel the boat.

Prohibited actions:

- One roll of the boat or pump of the sail that clearly propels the boat [BASIC 4].
- Repeated rolling of the boat caused by body movement [RRS 42.2(b)(1)].
- Repeated flicks of the mainsail caused by body movement [RRS 42.2(a), PUMP 6].
- Two roll-tacks without reaching a close-hauled course between the two [RRS 42.2(b)(1)].

Gathering evidence:

- Is the competitor causing the boat to roll?
- Does a single roll or pump clearly propel the boat?
- Is the rolling or pumping repeated (more than once)?
- After an incomplete roll-tack, does the tack back also include a roll or not?

ON A BEAT

Pumping, Rocking and Torquing (repeated fore and aft or rotating movement of the body)

When an Optimist is sailing to windward in waves, the size and shape of the hull means that heavier sailors in particular will continuously steer the boat, and move their bodies fore and aft, to sail the boat over or round waves. In gusts sailors will lean out and tighten the mainsheet, and do the opposite in lulls. The waves, and these body movements, will affect hull trim and sail shape.

A judge needs to differentiate between body movement that may be causing the leach to flick (RRS 42.2(a)), and body movement that may be causing the boat to roll (RRS 42.2(b)(1)). Then before penalising, the judge needs to be sure the observed flicks or rolls are caused by the helm's body movement, not the wave pattern. Before penalising torquing, it is necessary to see the actual waves the boat is sailing in. Boats may need to be seen from more than one angle, and from a relatively close distance, before these judgements can be made with confidence.

Permitted actions:

- Torquing to change the fore and aft trim of the boat in phase with the waves [OOCH 1].

Prohibited actions:

- Torquing or other body movement that causes repeated flicks of the leach [OOCH 1, PUMP 6].
- Torquing on flat water [OOCH 2].
- Body movement (even when bailing) that repeatedly flicks the leach [RRS 42.2(a)] or rolls the boat [RRS 42.2(b)(1)], or one large body movement that clearly propels the boat [BASIC 4].

Gathering evidence:

- Are there waves?
- Are the sailor's body movements in phase with, and in response to, the waves?
- If the leach flicks, is this caused by the sailor's movements, or could it be by the waves?
- Are the flicks repeated?
- Does one body movement clearly propel the boat? Is bailing body movement excessive?

Sculling, and the Windward Mark

The most likely sculling breach on a windward leg is in light wind when rhythmic rudder movement propels the boat. A boat having difficulty fetching a windward mark might scull, pump, rock or make a single body movement that breaks RRS 42. A boat is permitted to scull when in contact with a mark, but only in order to get clear of it [RRS 42.3(h)].

ON A REACH

Judges should observe the boats and agree whether surfing or planing conditions exist. The angle of the waves is critical, and on a tight reach it is unlikely Optimists can surf or plane.

When surfing conditions do not exist, the most common breach is sheet pumping. In stronger wind and waves, good helms will continually trim the sail, adjust hull trim, and steer the boat to maintain good speed over the waves, and the most likely breach is body pumping or illegal sheet pumping.

Boats are best observed from to leeward or astern where it is easiest to connect flicks on the leach with helm's body or sheeting movement.

Pumping (also applies ON A RUN)

Permitted actions:

- Trimming a sail in or out in response to wind and waves [PUMP 2].
- Pulling in the sail once per wave or gust of wind to initiate surfing or planing. To qualify as surfing, the boat must rapidly accelerate down the front of the wave [RRS 42.3(c)].
- Pulling in the sail once and failing to plane or surf in marginal conditions [PUMP 7].
- Sudden stopping of an eased sheet causing a flick of the leach [PUMP 4].

Prohibited actions:

- Trimming a sail in and out (even a small amount) not in response to wind or waves [PUMP 1].
- Pulling in the sail a second time on a wave or gust.
- Pumping a sail when already surfing or planing [PUMP 12].
- Making three consecutive unsuccessful attempts to initiate planing or surfing [PUMP 8].
- Body pumping causing repeated flicks of the leach [PUMP 6].

Gathering evidence:

- Are the boats, in the conditions at this point on the leg, now able to surf or plane?
- Is the trim and release of a sail in response to wind shifts, gusts or waves? Or is the trim and release unrelated to such factors, and is just fanning the sail?
- Does one sail pull per wave or gust of wind initiate surfing or planing? Is there a second pull?
- When a boat that is surfing or planing pulls in her sheet, is she pumping, or is she adjusting the trim of her sail to reflect a speed, course or wind change?
- How many times does a boat pull in her sail once per wave and fail to surf or plane?
- Is a leach flick linked to and caused by body movements?

ON A RUN

Pumping and Ooching

Optimists are much more likely to be able to surf on a run than on a reach, and may be able to ride a wave for many lengths. All the pumping actions and evidence from ON A REACH apply.

The most likely breaches are: pumping and failing to surf; pumping when already surfing; a second pump on a wave to initiate surfing; and body rocking in conjunction with permitted sheet pumping. Also abruptly stopping a sudden forward body movement is ooching and breaks RRS 42.2(c).

After spreading out at the start of a run, Optimists will normally sail parallel courses to the leeward mark, permitting judges to view the fleet from the centre, and not just from one side or the other.

Rocking

Optimists normally maintain a steady course and a fixed angle of heel to windward. Their stability depends on how eased the mainsheet is and how much (if any) centreboard is in the water. Background rolling is normally sudden, and can be quickly stopped by the sailor. If the angle of the waves is across the course there may be some steering linked to the wave pattern.

Permitted actions:

- Restoring proper trim of the boat and adopting static crew position when the boat's stability is reduced [ROCK 1, ROCK 4].
- Heeling to leeward to facilitate heading up or heeling to windward to facilitate bearing away, provided the heeling is consistent with the boat's turn [ROCK 6].

Prohibited actions:

- Inducing rolling by rhythmic movements of the body [RRS 42.2(b)(1)] or by steering [RRS 42.2(b)(3)]. This is most likely in light winds and flat water.
- Repeated rolling of the boat that is not linked to wave patterns, or is to change course without waves or other reason to do so [ROCK 7].
- Repeatedly making a single roll at the same time as pulling the sheet once to initiate surfing.
- Repeated rolling caused by body movement, even when it is to bail out water.

Gathering evidence:

- Is the competitor causing the boat to roll? Is this linked to the wave patterns?
- Is the rolling to help steer the boat? Is the heeling consistent with the change of course?
- Are there wave conditions or other reasons for rolling the boat to facilitate steering?

TEAM RACING

Optimist regattas often include umpired team racing. The big difference with RRS 42 is that the most common breach in team racing is a breach of RRS 42.1, when a boat makes a single propelling movement that helps her catch up or overtake an opponent.

For the fairness of the event, it is important that umpires establish good RRS 42 compliance by watching for and penalising these single action breaches. Breaches should be penalized even if seen by only one umpire.

A team race may start in wind that is too light to start a fleet race. Racing in very light wind is usually fair providing that, from the preparatory signal, umpires apply RRS 42 and in particular penalize rocking breaches, and roll-tacks and gybes that do not comply with RRS 42.3(b).

It is important to enforce RRS 42 strictly from the moment the boats are racing. A penalty more than one minute before the start gives the boat time to take a penalty and get a good start, and serves to remind all boats that umpires will be penalising RRS 42 breaches.

Permitted Actions Likely in Team Racing:

- Heaving a boat to steer round a mark, then bringing the boat upright in a seamanlike way, even if this propels the boat [*ROCK 6*].

Prohibited Actions Likely in Team Racing:

- A single roll that propels the boat, especially before or at the start [*BASIC 4*].
- Sculling or body movement by boats trying to clear the pin-end start mark [*BASIC 4*].
- A roll-tack or gybe that propels the boat and does not comply with RRS 42.3.
Note: this judgement is best made by watching perpendicular to the boat's course at the end of the tack or gybe, and judging whether the boat's speed is maintained or decreases in the two seconds after the tack or gybe is completed [*BASIC 7*]. It is often possible for both umpires to be watching the next tack or gybe of a boat in "the yellow light area".
- Two roll-tacks in quick succession when the boat does not reach close-hauled after the first tack. This manoeuvre does not comply with RRS 42.3(b), so the boat breaks RRS 42.2(b).
- When overlapped on a beat to windward, body pumping or rocking by the leeward boat to try to close the gap and slow the windward boat [*RRS 42.2(a) or (b)*]. The leeward boat may also break rule 42.1 by making a single body movement that propels the boat.
- Repeated tacks or gybes unrelated to wind or tactics [*RRS 42.2(e)*].
Note: when two opponents are both repeatedly tacking or gybing, and making faster progress as a result, they should both be penalized.
- After a slowing manoeuvre, sculling to bear away (most likely at Mark 2) [*RRS 42.2(d)*].
- Sculling while taking a penalty in light wind [*RRS 42.2(d)*].

TIPS FOR SAILORS

1. Download and study World Sailing's RRS 42 Interpretations.
2. If you are given an RRS 42 penalty, ask the judges for an explanation of why you were penalized. If you can't find them at the end of the race, ask them when next ashore.
3. If you are not sure about a technique, ask the Jury in writing for a clarification so that the whole fleet can benefit from the answer.
4. Normally the more important the event, the higher the ratio of judges to competitors and the more experienced the judges, so your sailing technique is likely to be under greatest scrutiny when it really matters.