Rule 42 Most Common Breaches - Merlin Rocket

This document is intended as a guide to judges and sailors and is authorised for use by the Merlin Rocket Owners Association. It has been developed with input from Judges following observation of both modern and vintage Merlin Rockets in sea, constricted estuaries and river environments. It is for guidance only. The World Sailing Interpretations of Rule 42 is the authoritative document.

PRINCIPLE:

Judges will give sailors the benefit of the doubt. However, when they are sure a sailor is breaking rule 42 they will act to protect the sailors that are complying with the rule.

Class Rules changing Rule 42: None

Class Specific Characteristics:

Modern Merlin Rocket

The modern Merlin Rocket is characterised by a very wide, powerful hull. It accelerates rapidly in gusts and planes easily in wind speeds above 8 knots. However, the bow is narrow relative to the beam which makes the boat prone to nose-diving in gusts or at the trough of a wave. Rapid crew weight adjustment aft is required to prevent capsize in heavy gusts or waves. Crew operating environment is cramped making weight adjustment difficult. The hoop, which supports a narrow traveller, presents an obstruction to making rapid fore and aft crew weight adjustments and necessitates an athwartships move which tends to cause the boat to roll. The vertical rudder is narrow and cavitates easily which makes roll assistance to steering essential once the boat is planing or surfing. Boat trim is very sensitive to crew movement particularly downwind when helm and crew are sitting on opposite sides. The boat has a raking rig which requires adjustment at the start and finish of each leg again necessitating a fore and aft crew movement. The carbon mast flexes during gusts which may cause mainsail leech flicks. The boat has a relatively small symmetrical spinnaker.

Vintage Merlin Rocket

Vintage Merlin Rockets (typically sail numbers up to about 1800) have a much narrower beam. They are still raced, mainly at river events, and are competitive in the light wind conditions often experienced at river clubs. The two most common Rule 42 breaches by Vintage Merlins are: 1) delaying the final roll to windward to bring the boat upright until after a tack is completed and 2) very gently rhythmical rolling caused by body movement unrelated to wind or wave patterns. These prohibited actions are described under the Upwind Roll Tacking and Downwind Rocking sections below.

STARTS

During the pre-start while manoeuvring slowly in light winds, the Merlin stalls easily and a vigorous roll tack is sometimes required to get the boat moving again. This is permitted as long as the manoeuvre does not clearly propel the boat. The cramped operating

environment may cause some background rolling during close pre-start manoeuvres on a congested start line as boats tack or alter course with limited way on.

1. One Roll
A roll at the start shall not clearly propel the boat.
Permitted actions:
- One roll that does not clearly propel the boat.

Prohibited actions:
- One roll clearly propelling the boat - BASIC 4.
- Repeated rolling the boat - 42.2(b)(1). A second roll before the starting signal which follows a first roll earlier in the starting sequence breaks this rule.

Gathering evidence:
- Is the competitor causing the boat to roll?
- Does a single roll clearly propel the boat?
- Is the rolling repeated (more than once)?

2. Sculling
The Merlin rudder is narrow and not very efficient for sculling. However, sculling may appear in light wind especially when the boat is trapped between other boats at the starting line.
Permitted actions:
- Sculling, even forceful, when a boat is above close-hauled course and clearly changes direction to a close-hauled course – 42.3(d), SCULL 1.
- Repeatedly moving the helm to reduce the speed – 42.3(f).

Prohibited actions:
- Sculling below a close-hauled course often in an effort to stop the boat immediately going back to head to wind or to duck in to leeward of another boat.
- Forceful sculling on both sides – SCULL 2.

Gathering evidence:
- Are the tiller movements forceful?
- Are they propelling the boat forward or preventing it from moving astern?
- Is the boat above a close-hauled course and clearly changing direction towards a close-hauled course?
- Is the sculling offsetting previous sculling?

UPWIND

1. Body pumping
The wide beam means that once the crew are settled on an upwind leg and both hiking, body pumping breaches are rare. However, in light conditions a flick on the leech is possible if the crew move rapidly across the boat to counteract a gust or shift and land heavily on the windward deck. During gusts a leech flick may also be caused by mast flexing. A single flick of the leech due to these reasons is permitted. Repeated flicks are not permitted.
Permitted actions:
- Moving the body fore and aft in order to change the trim of the boat in phase with the waves – OOCH 1.

Prohibited actions:
- Body pumping causing repeated flicks on the leech – PUMP 6.

Gathering evidence:
- Are there waves?

- Is the sailor's body movement in phase with the waves?
- Is the sailor's body movement causing the leech to flick?
- Can you connect sailor body movements with the flicks?
- Are the flicks repeated?
- May the flicks on the leech be caused by gusts or waves?
- How does it appear compared to the other boats?

2. Sheet pumping

In wind speeds above 10 knots frequent mainsheet trimming is required to maintain trim and prevent rudder cavitation.

Permitted actions:

- Moving a sail in and out in phase with wind shifts, gusts or waves – PUMP 2

Prohibited actions:

- Pulling in and releasing the main not in response to wind shifts, gusts or waves – PUMP 1

Gathering evidence:

- Could the trim and release be a response to wind shifts, gusts or waves?
- Is the repeated trim and release fanning the sail?

3. Roll tacking

Exaggerated roll tacking can appear especially in light air. Sailors move their bodies forcefully through a tack. Excessive movement can produce a second roll after the tack if the crew needs to move back into the centre of the boat. Rolling a Merlin in very light and shifting conditions is easily promoted by the crew moving from one side of the boat to the other in a rhythmical fashion.

Permitted actions:

- Body movements to exaggerate rolling that facilitates steering the boat through a tack and causes the boat to sail out of a tack at the same speed as she had just before the manoeuvre - ROCK 8.

Prohibited actions:

- Body movements exaggerating rolling the boat though a tack that increase the boat's speed just after the tack is completed – BASIC 6.
- Repeated delay of the final roll to windward until after the tack is completed – 42.2(b)

Gathering evidence:

- Do the individual tacks increase the speed of the boat?
- Does sailor's body movement cause the increased speed?
- Is the increase in speed after the tack followed by a sudden and significant decrease in speed?

DOWNWIND

1. Pumping

In wind speeds above 10 knots the helm may need to release the mainsheet to depower the boat. This may be used to justify pulling and then releasing the sheet. It is important to observe whether the sheet is initially pulled or released when there is a gust, wave or shift. Both mainsail and spinnaker pumping downwind can produce a significant increase in boat speed and multiple pumps on a single gust or wave can be tempting but these are not permitted.

Permitted actions:

- Trimming a sail in order to trim the boat in the prevailing conditions – PUMP 2

• Pumping a sail, or both sails at the same time, once per wave or gust of wind to initiate surfing or planing but to qualify as surfing the boat must rapidly accelerate down the front of the wave – 42.3(c).
• If a batten is inverted, the boat's crew may pump the sail until the batten is no longer inverted, provided this action will not clearly propel the boat - 42.3(e).

Prohibited Actions:

• Trimming a sail in order to fan it – PUMP 1.
• Pumping the mainsail justified as a trim by pulling and then releasing the sheet - PUMP 1.
• In very light airs repeatedly floating the spinnaker away from the boat and pulling it back forcefully with no initiation of surfing or planning - PUMP 1.
• Pumping a sail when already surfing or planing – PUMP 12.
• Making one pump of the mainsail by the helm to initiate surfing or planing followed by the pump on the spinnaker when already planing or surfing.

Gathering evidence:

• Are there surfing or planing conditions?
• Does one pump per wave or gust of wind initiate surfing or planing?
• Is the boat pumping while surfing or planing?
• Could the trim and release be a response to wind shifts, gusts or waves?
• Is the repeated trim and release fanning the sail?

2. Rocking

Downwind the helm and crew tend to sit on opposite sides. Small weight movement by one crew member produces a large rolling moment which may then be counteracted by the other crew member. Close observation is required to determine whether the purpose of these movements is to reduce background rolling or to deliberately promote rocking.

Permitted actions:

• Adopting static crew position when the boat's stability is reduced – ROCK 4.

Prohibited actions:

• Rolling caused by helm and crew sitting on opposite sides of the boat and either inducing rolling or accentuating the background rolling - 42.2(b)(1).

Gathering evidence:

• Is the competitor restoring proper trim of the boat when stability is reduced?
• Is the competitor causing the boat to roll?
• Is the rolling repeated?

3. Roll Gybing

In light winds roll gybing is common and may produce an increase in boat speed if the roll is excessive.

Permitted actions:

• One roll gybe that does not clearly propel the boat and is linked to the wind or tactical considerations

Prohibited actions:

• One roll gybe clearly propelling the boat - BASIC 4.
• Repeated gybes unrelated to changes in wind or to tactical considerations – 42.2(e).

Gathering evidence:

• Does a single roll gybe clearly propel the boat?
• Are repeated gybes consistent with wind changes or tactical considerations?