

The Penalty Turn – by John Ball

What should you do if (when) you screw up?

You are racing, sailing close hauled on port tack, and you misjudge crossing ahead of a starboard tack boat. At the last moment, he ducks your transom and hails Protest. Or you misjudge distance and hit the mark you are rounding. Either way, you have broken a rule. So what's next?

At the beginning of the Rule book, there is a section titled **Basic Principles**, and it says

SPORTSMANSHIP AND THE RULES

Competitors in the sport of sailing are governed by a body of *rules* that they are expected to follow and enforce. A fundamental principle of sportsmanship is that when a boat breaks a *rule* and is not exonerated she will promptly take an appropriate penalty or action, which may be to retire.

You have broken a rule, so you should promptly take a penalty. You may choose to retire from the race, but R44 provides an Alternative Penalty, so this does not have to be the end of your race! R44 and as modified by Appendix E4.3 allows you take a penalty out on the course, and then continue in the race.

You choose to take the alternative penalty. You want to take it according to the rules, and as efficiently as possible to minimize any loss of distance. That's what this article is about.

R44.1 and as modified by Appendix E4.3 describes the penalty and which rules are covered; and R44.2 describes how the penalty should be performed.

The What

44 PENALTIES AT THE TIME OF AN INCIDENT

E4.3 Taking a Penalty

Rule 44.1 is changed to:

A boat may take a One-Turn Penalty when she may have broken one or more rules of Part 2, or rule 31, in an incident while *racing*.

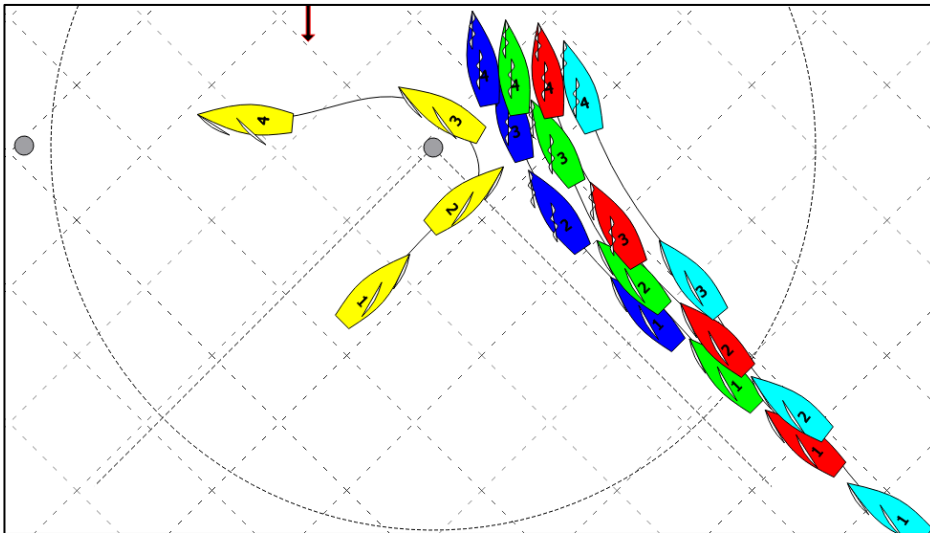
However,

- (a) when she may have broken a rule of Part 2 and rule 31 in the same incident she need not take the penalty for breaking rule 31;
- (b) if the boat gained an advantage in the heat or race by her breach despite taking a penalty, her penalty shall be additional One Turn Penalties until her advantage is lost;
- (c) if the boat caused serious damage, or as a result of breaking a rule of Part 2 she caused another boat to become *disabled* and retire, her penalty shall be to retire.

The important thing to note in R44.1/E4.3 is that the penalty option only exists while you are still racing. Further, it only applies for breaking the rules of **Part 2 When Boats Meet** (i.e. R10 through R23) plus **R31 Hitting the Mark**. So if you have broken another rule not in this list or have already finished and cleared the finish area when you interfere with a boat still racing, then you must retire from the race. You may not take a penalty and go back and refinish.

If you were over early at the start, you cannot take a penalty and continue to race. You have failed to start correctly – so you must return and restart. Or you sail the wrong side of a mark, or miss a mark altogether, again you cannot ‘just’ take a penalty – you must go and unwind yourself and round the marks correctly. Why can’t you just take a penalty? Answer - because these items are covered in R28 Sailing the Course, which is in **Part 3 Conduct of a Race**, and which is not included in R44.1/E4.3.

Appendix E4.3 changes the ‘Big Boat’ R44 in several ways. First is that the penalty is reduced from two turns to one. The second big change is in R44.1.b relating to ‘**significant advantage**’. In Big Boat racing, if you gained a significant advantage as a result of breaking a rule, then your penalty is to retire, but, E4.3.b softens this penalty to allow you to take multiple penalties until the advantage has been erased.



For example, Yellow comes into the weather mark on Port tack and as she tacks around the mark, she fouls several starboard tack boats into a big raft. In this case, Yellow breaks R10 P/S and R18.3 by causing Blue above close hauled.

As there was not room for Yellow at the mark, she should have born away and passed astern of the starboard tack boats. It may take quite a while for those boats to get free and resume racing, so

Yellow needs to get clear and take several, maybe many turns until they are all back in front of her. Only then may she continue in the race.

As an aside – while those four starboard tack boats are rafted together, they are NOT considered to be disabled, and therefore are not eligible for redress. Just rafted is not ‘entangled’, as they can get free by the action of the wind, sail trim and rudder. This is considered analogous to a dinghy that has flipped over – the crew can right it and continue in the race.

There is a similar example of this situation in the World Sailing Call Book for Radio Sailing (formerly the IRSA Case Book), Case B2. The WS Call Book for Radio Sailing may be downloaded free and saved on your computer for future reference. To find the link go to my Racing Rules Reference Documents Page.

<https://sites.google.com/site/johnsrcsailingrulesandtactics/racing-rules-reference-documentsfrom>

The final item to note is E4.3(c) which says that if you break a rule of **Part 2 When Boats Meet** and cause serious damage or cause another boat to become disabled and retire, then your penalty is to retire too!

The How

44.2 One-Turn and Two-Turns Penalties

After getting well clear of other boats as soon after the incident as possible, a boat takes a One-Turn or Two-Turns Penalty by promptly making the required number of turns in the same direction, each turn including one tack and one gybe. When a boat takes the penalty at or near the finishing line, she shall sail completely to the course side of the line before *finishing*.

R44.2 describes the procedure to follow to make your penalty turn. If you take the penalty as described, then you cannot be punished further for that incident i.e. a protest committee subsequently may not disqualify you - R 64.1.b, unless you are found to have broken R2 Fair Sailing, where the penalty will be upgraded to DNE (DSQ Non- Excludable) or R69 Gross Misconduct, where the penalty may be even more severe.

64.1 Penalties and Exoneration

(b) if a boat has taken an applicable penalty, she shall not be further penalized under this rule unless the penalty for a *rule* she broke is a disqualification that is not excludable from her series score.

However if you fail to follow ALL the conditions in R44.2 properly, then you have not taken the penalty at all and as a result, may be protested and disqualified.

Here are the conditions listed in the procedure in R44.2.

First - 'After getting well clear of other boats'

Don't panic and rush into starting the penalty – get clear first. For an incident at the start, it may be crowded, and the best way to get clear is to luff up and slow down. It can be very crowded and busy near the weather mark and its offset mark. Avoid trying to make the penalty turn on the rhumb line in the middle of the short leg to the offset mark – you may have to drop down or go high to clear the rhumb line. In a group of boats on a downwind leg, sheet in your sails to slow down to get clear – but be careful in gusty conditions as over trim could cause a broach.

Comment by Gordon Davis (International Judge and IOM World Championship Umpire)

- Getting well clear. The boat must attempt to get clear as soon as possible after the incident and continue attempting to get clear. Attempting to get clear may mean slowing down or stopping, luffing well above the course to the next mark, or bearing away. Continuing to sail at the same speed and direction as the other boats is not attempting to get clear.

- Whilst the boat is getting clear, and until she starts to take her penalty, she is not subject to rule 21.2. Other boats, for instance those overlapped to windward or those clear astern, may be required to keep clear of a boat attempting to get well clear. However, a boat that interferes with another boat while sailing to get clear, when she has an alternative, does not sail to get

clear as soon as possible. A boat starts to take a penalty when she is clearly turning to carry out a tack or gybe. For further details see IRSA Case Book P5 and P6.

Second - 'as soon as possible after the incident'

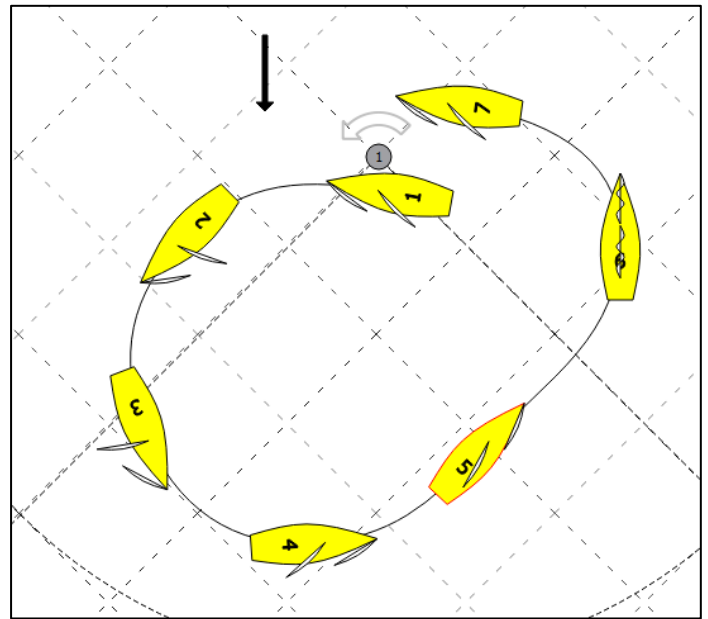
After the incident, don't debate with the other skipper. Don't sail halfway down the leg before finally deciding to take the penalty. A delayed penalty turn is NO penalty turn. If you fail the test of 'as soon as possible', then you must either retire and take a DNF, or go to a protest hearing and risk a DSQ. It is better to take a DNF than a DSQ, especially in a large multi-heat HMS regatta. But it is better yet to take the penalty turn on course and maybe lose only one or two places.

Third - 'by promptly making the turn(s)

After getting clear as soon as possible after the incident, the penalty turn(s) –the tack(s) and gybe(s) - must be taken promptly. The dictionary defines 'promptly' as 'without delay'. While the penalty does not have to be a perfect circle, and you are allowed to gain sufficient speed to turn the rudder to make the next part of the penalty maneuver – you cannot delay and stretch the process to gain an advantageous position on the course.

For example, Yellow misjudges the lay line and hits the windward mark on the wrong side. So not only does she need to take a penalty turn, she also needs to get above the lay line and round the mark correctly to sail the course.

She bears away and gybes to port and hardens up to close hauled. She could tack at P5, but that would leave her below the lay line, so she delays her tack and extends on port to P6 before tacking to starboard to clear the mark. The delay between P5 and P6 fails the test of 'promptly'. So while Yellow did a tack and a gybe and is now back sailing the course, she did not meet all the conditions of a penalty turn and so has not yet taken her penalty turn for hitting the mark.



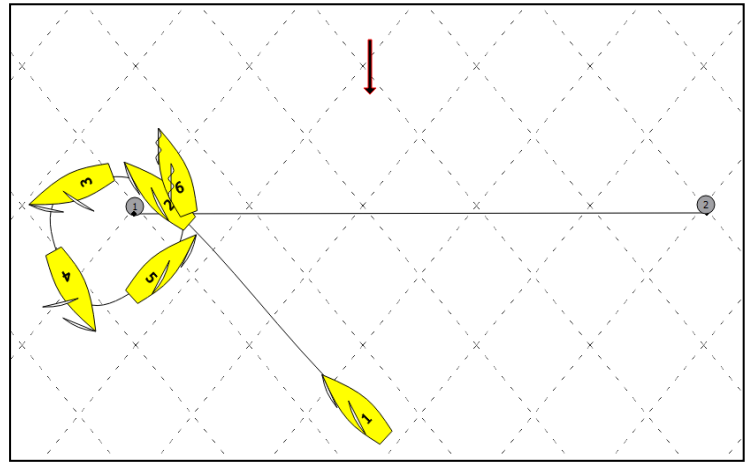
Fourth - in the same direction, including a tack and a gybe (in either order)

When making a single penalty, you may choose to either tack or gybe first – and there are some hints in the Techniques topic below on making this choice. If you have to make multiple turns, for example to eliminate an advantage, then you must keep turning in the same direction. To make sure you completed the penalty, you have to end up on the same tack as when you started the penalty.

Fifth - if you take a penalty near the finish line, you must get completely to the course side of the finish line after completing the penalty before finishing.

It does not matter where you take the penalty relative to the finish line, but after you complete your penalty, you must get completely to the course side of the finish line before finishing.

In this diagram, Yellow hits the finish mark and has to take a penalty. She bears away, gybes and then luffs up and passes head to wind – but she crosses the finish line before she completes her tack to a close hauled course – so her penalty was not completed when she crossed the line the second time, and so Yellow has still not finished. Once Yellow reaches a close hauled course, somewhere after P6, she has completed the penalty and now needs to get back completely on the course side of the line and finish correctly.



Taking the penalty

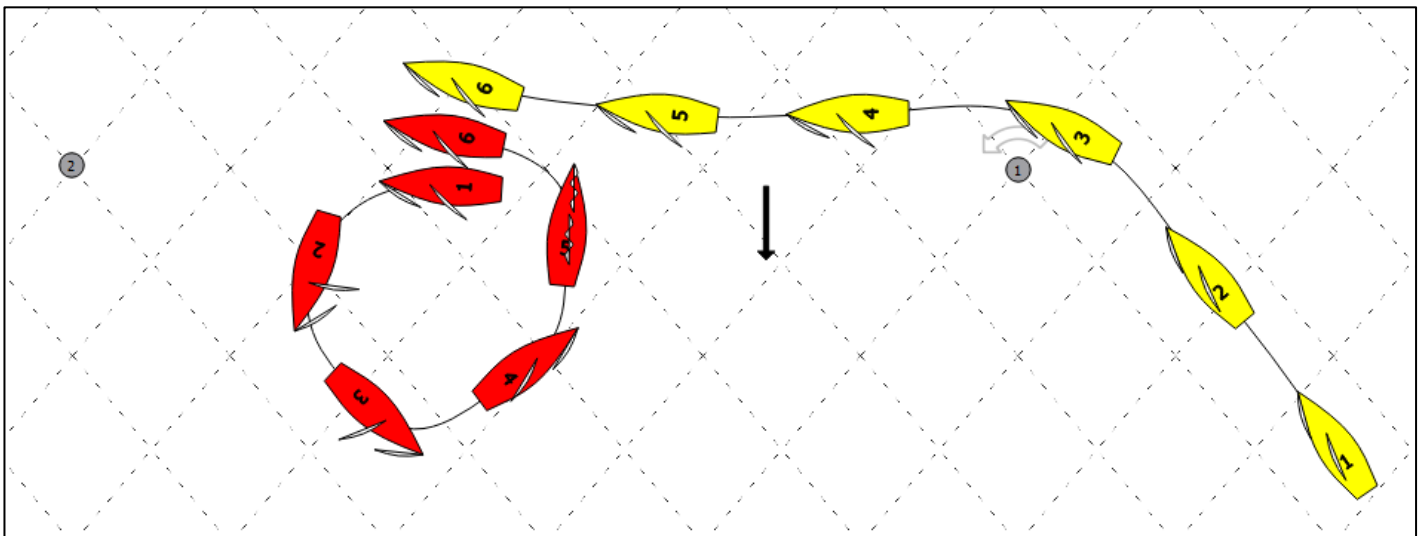
While you are still ‘sailing the course’ and clearly have not started to make the penalty turn, you have all the normal rights and obligations of a boat that is racing. Once you are clearly starting to take the penalty, you must stay clear of other boats that are racing, until the penalty is finished R21.2.

21.2 A boat taking a penalty shall *keep clear* of one that is not.

A boat that is racing should try to avoid interfering with a boat that is taking a penalty R23.2. But note the last sentence ‘However after the Starting . . .sailing her proper course’. This is the big reason for getting well clear, and especially on short legs, where the other boats will be sailing the rhumb line and clearly, that would be their proper course.

23.2 If reasonably possible, a boat shall not interfere with a boat that is taking a penalty, sailing on another leg or subject to rule 21.1. However, after the starting signal this rule does not apply when the boat is sailing her *proper course*.

Final comment - once the penalty is completed (after that final tack or gybe), you are again racing, and all the ROW rules apply. So if you immediately gain ROW over another boat, e.g. they become overlapped to windward and must keep clear under R11W/L, then R15 (ROW Changes) applies briefly, and you must give them room to keep clear.



Red hit the weather mark and starts her penalty on the offset leg. After she reaches her close hauled course between P5 and P6, she completes her tack, and immediately becomes ROW and Yellow has to begin to keep clear R11. But Red must give room for Yellow to keep clear under R15. An additional complication may also kick in here – the issue of Mark Room at the Offset Mark – but that’s covered in other chapters!

Make a Hail

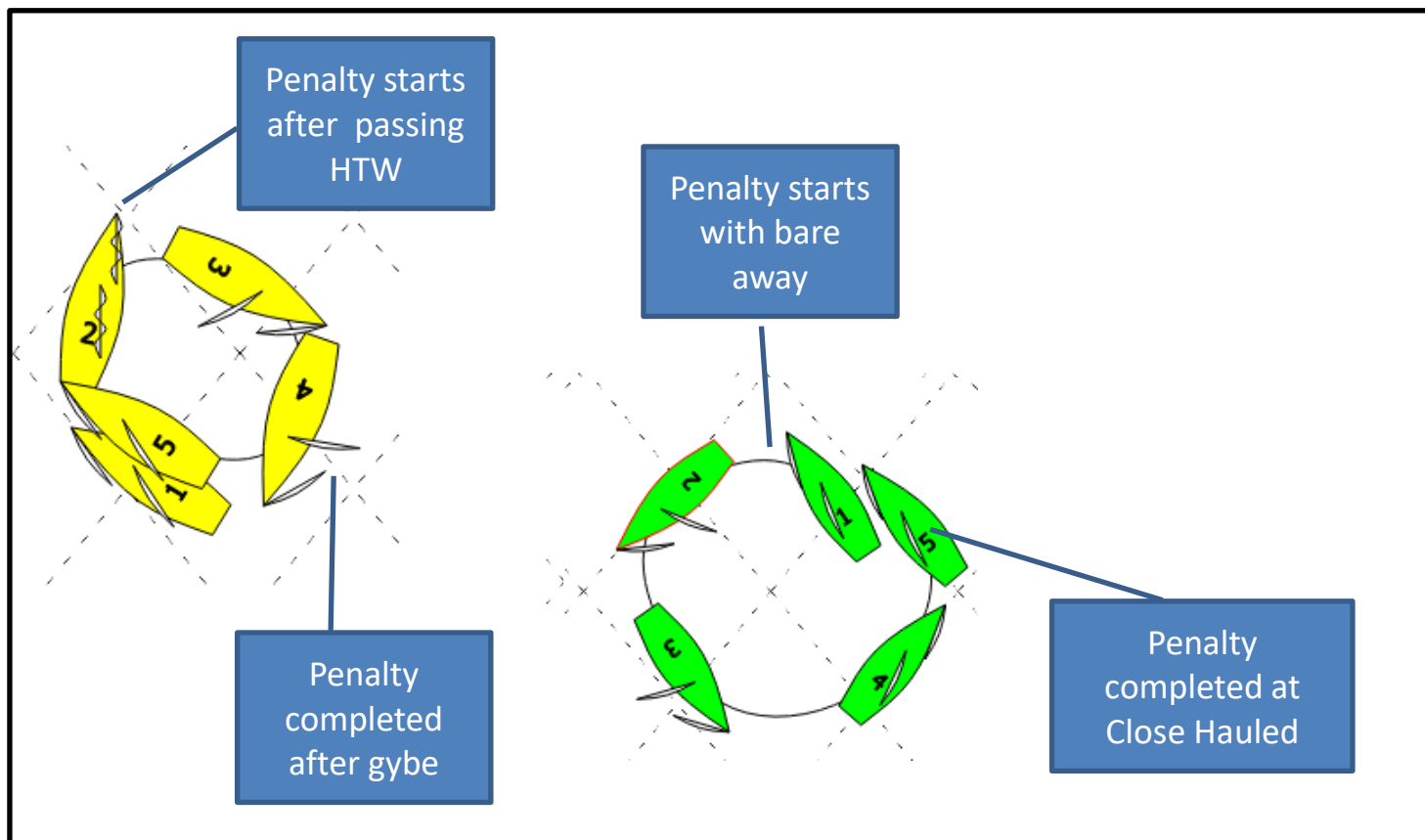
If you are in an incident, the other boat may hail “Protest”. If you are at fault, and even if the other boat has not yet hailed “Protest”, it is a good idea to hail some words such as “Sorry, My Fault – I will take a penalty”. Letting the other boat (or an Observer) know that you are acknowledging the incident and plan to take a penalty should stop any shoreline bickering. It also lets the other skippers know that you will be trying to get clear. Once you take your penalty, hail “Penalty Completed” or similar, to let the other skippers and any Observer know.

If you are not sure who should have stayed clear, or given room, immediately protest the other boat, and then do a penalty to protect yourself. When you hail “Protest”, the other boat may acknowledge and take a penalty, and the issue may end there. If they don’t take a penalty, be prepared to go through with the protest. That way both you and the other boat will learn more about the rules that apply. The good news is that you have the added benefit that as you already took a penalty, you cannot be disqualified. Taking a penalty turn is not an admission of guilt – it is an insurance policy against disqualification.

Boat Handling during the Penalty Turn

You want to execute your penalty turn with a minimum of lost time and distance. If you incur a penalty on a beat, it is better to tack first, and then gybe. There are several reasons for this. First is that your penalty only begins as you pass head to wind – as you begin the tack, and the penalty ends after you gybe. So as soon as the gybe happens, you are again racing and regain full rights. Remember that as you regain full rights, you have to comply with R15 ROW Changes, and/or R16.1 ROW alters course – and allow other nearby boats room to keep clear. The other advantage is that as you start the penalty, you are still heading up the course towards the next mark and are closer to the mark when the penalty is completed. However if you bear away to gybe first, then you have started to take the penalty immediately, so R21 and ‘keeping clear’ applies, and the penalty is not completed until you have hardened up, passed head to wind and reached a new close hauled course – so it take much longer to complete the penalty – and you are turning away from the next mark, and will complete the penalty downwind from where you started it.

Note in the diagram that Yellow’s penalty is completed much sooner than Green’s. Also note that while Yellow and Green are at level at the start of the penalty at P1, Yellow ends up ahead of Green when they are both close hauled again at P5.



The opposite applies if you are on a run when you incur the penalty – now it is better to gybe first and then luff up and tack – the penalty is completed as soon as you reach the close-hauled course after tacking and you will be more downwind after the penalty is over than if you choose to tack first, and then gybe.

From an Expert

I asked Craig Smith, well known IOM builder and former IOM World Champion, to give us some advice on boat handling skills. Here is Craig's advice.

Penalty Turn Techniques – By Craig Smith.

I guess my first bit of advice regarding penalty turns would be to sail around trouble if possible and don't get involved in the first place. However, it's not always possible and it does happen sometimes in this class without too much effort by oneself. I have certainly got involved in way too many that could have been avoided.

So, how do I think about practice for the turns? I used to sail two-man dinghies like the 470, 505 and Fireballs and we would practice all sorts of maneuvers trying to work out the most efficient way to perform them and yes we used to practice penalty turns. One of the main things to establish was; is it better to do the tack first or gybe first, and is it the same for upwind as down-wind?

In the dinghies, when sailing upwind, we would tack first and downwind we gybed first. In the IOM however, when sailing upwind I gybe first if possible. The reason for this is that you can use the speed that

the boat already has to bear away from the wind into a gybe and then use the momentum of the boat as it luffs up into the wind to continue into a very quick tack.

In the dinghies we could use our body weight to throw the boat around and that together with some other reasons made it best to tack first. In the IOM however, it has been my experience, that gybing first, if done correctly by trimming the sails to match the wind strength and speed of turn, will give you the best chance to lose very little distance in the race.

Down-wind it is not so definite and I usually decide at the time based on the situation and proximity of other boats and how close my boat is to the lay line etc. The main thing though is the trim of the sails to match the turn of the boat.

If the wind is lighter and the boat is looking for power the sails must follow the turn of the boat so that you don't lose any of the power at your disposal. However, if the wind is quite strong and the boat is almost overpowered then the sails must fractionally precede the turn of the boat.

This to me is one of the most obvious differences that separates the people at the top of the fleet from the rest of the fleet and it is not just with penalty turns. For instance, at the top mark when bearing away onto a reach or run, in lighter air the sails should match the turn of the boat so as not to lose any power, but if you are too late with the sails, then the sails will stall.

When there is a lot of wind we must remember that the biggest rudder on the boat is the mainsail, so if you don't release the power of the sails just prior to the boat bearing away, then the actual rudder will have a hard time fighting against the force of the wind and once again, it will stall and the boat will not turn as well as it could.

At the leeward mark, I see many sailors pull their sails on too early and stall the boat. If you watch the top skippers the sails will generally match the turn of the boat adjusting for the difference in the power of the wind and water surface.

The penalty turn is no different, and to practice it I simply make the boat do circle after circle after circle trying to keep the boat right on the same spot and adjusting the sails as I mentioned above. It takes great concentration and very good sail control. Also very boring, as is starting practice, but if you don't practice these things, then you don't win.

The only other piece of advice I can give is in regard to having an incident at the leeward mark. The biggest mistake I see people make is that they panic and try to do the penalty immediately amongst other boats and inevitably lose distance and get involved in yet another incident.

I have found it more successful to take a breath, and then try and tack off onto starboard so the boat is still advancing up course on the right of way tack. However you must be very careful here as the rules tell us we must take our penalty turn after getting well clear of other boats as soon after the incident as possible, so sailing on with the intent of finding the most advantageous position is outside the intent of the rule.

Normally if I have tacked onto starboard early, there shouldn't be too many other boats paralleling me to leeward preventing me from gybing. Perhaps a couple of downwind boats to get past, then when satisfied

my boat is well clear, I will spin the boat into a fast gybe and once again use the momentum of luffing up into the wind to do a fast tack. Doesn't always go to plan, but always better to at least have a plan.

Hope this helps a little.

Regards, Craig