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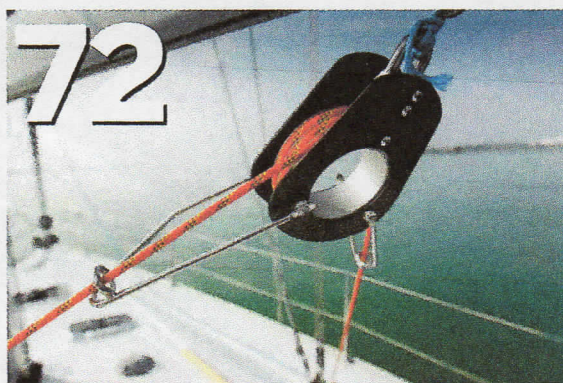
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boom brakes and preventers



Tested: boom brakes v preventers

Pip Hare tries out three different products
designed to prevent or ease a crash gybe
against a traditional rope preventer



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Tested

Boom brakes and preventers

Walder boom brake • Wichard Gyb'Easy • Sailfuse

Pip Hare tests three products designed to prevent or ease a crash gybe alongside a traditional rope preventer rigged to lead forward and then back to the cockpit

A shout, the mainsheet whips through the cockpit and the boom crashes onto the other side of the boat – everyone has had a bad gybing experience at some point. Most of us develop the automatic flinch reaction or dive for the helm as we feel the pressure come off the mainsail just before the boom heads in towards the cockpit.

In reality, when we head onto the water either for a daysail or extended cruise we are guarding against those situations, sailing 'safe' angles to avoid dead downwind situations and gybe controlling the mainsheet throughout, a planned and practised manoeuvre.

But sailing is a live and organic sport, the wind can suddenly change direction or force as a squall creeps up behind you in the night. A helmsman can get distracted or just get it wrong. Sea states can be difficult. It is under these circumstances that gybing presents a risk even to the most experienced sailor.

There are a number of solutions on the

market to help control a gybe and minimise the effects of a crash gybe, but how practical, effective and relevant are they to the average cruising sailor?

With this in mind I borrowed a Dufour 385 and set out to test the Walder boom brake, the Wichard Gyb'Easy and the Sailfuse and compare them against a conventional gybe preventer set up with a long piece of line.

The day we chose to test these products I had doubts as to how much I would learn as there was very little wind and no chance for them to strain against the force of a fully loaded gybe. However, the benign conditions actually gave me a chance to get to grips with how each of them worked and assess how useful they would be in the everyday routine of a cruising sailor.

Installation and fitting

The first thing I considered was how easy each product was to fit and whether they could be permanently rigged or would have

▲ Above: the Wichard Gyb'Easy set up on the boom of a Dufour 385 during Pip's test

to be fished out of a locker every time they were required. There is often a reality gap between what we know we should do and what we actually do where effort is involved.

The only two items that recommend permanent installation are the Walder boom brake and the Sailfuse, the latter literally being an install-and-forget item.

Straight from the box, the Walder seemed a monstrous piece of kit. However, once the kicker strut was off and the whole thing installed it started to blend in on our 38-footer and if, as on many cruising yachts, your coachroof is already home to a lashed-down dinghy, I think you would not notice the extra space this takes up.

I wouldn't want to leave the Gyb'Easy permanently installed, although it would be possible to unthread the control rope when not sailing downwind to allow the boom a free range of movement. This would leave the unit dangling unrestrained under the boom and a lazy rope lying on the deck, which I would not be happy about. I think the

NEW GEAR

with Pip Hare



Walder boom brake

The Walder boom brake is controlled using tension – leave the control rope slack and it will run friction-free around the boom brake allowing the boom to operate normally at any point of sail. Apply increased tension to slow down movement and wind on tight to lock the

boom in place. During the test we found the Walder to be responsive and easy to control.

Upwind or reaching the boom brake will also act as a kicker controlling mainsail leech tension. However, it may be worth remembering that, if wound on hard, the Walder is locking the boom out as well as down. Should the boom dip into the water when reaching it would be doubly important to release and depower the sail.



- Remove the existing kicker strut and hang the Walder boom brake from the kicker fitting.
- Fasten one end of the control rope to a point forward of the kicker position – we used the shroud base, but a solid toerail or deck padeye would do – on one side of the boat.
- Pass the rope through one of the guide arms, thread the brake in the correct direction, lead forward to a block, and then back to a winch in the cockpit.

conventional rope preventer and the Gyb'Easy would be gear that is only rigged when sailing downwind.

Principles and ease of use

Apart from the Sailfuse, all the products I tested were capable of two things depending on conditions: either stopping the boom from moving at all or controlling the speed through the gybe.

From an engineering point of view, the option of a controlled gybe is preferable, particularly on a fractional rig with swept back spreaders, where if the wind loaded the mainsail from behind with the boom pinned out, there would be nothing to support the middle of the mast to hold it forwards and so the mast would be at risk of inversion.

This very much highlights why a conventional rope preventer should never be tied off forward or amidships, but always be led back to the cockpit where it could be released quickly and under control should the boat gybe unexpectedly.

All photos: P Wyeth

TESTED: BOOM BRAKES

Sailfuse

The Sailfuse has a different purpose from the other products; as the name suggests it is a 'fuse', the last resort should it all go horribly wrong and could be used in addition to the other products or as a standalone. It will not stop your boom from gybing.

Each SailFuse is made to be boat-specific; the manufacturer uses the boat's size, type and sail area to calculate the size of load that would potentially damage the rig and the fuse is created to break just before this load is experienced, absorbing the initial shock and avoiding damage to the rig.

I was not able to test out this theory in anger, but instead had a couple of 'lightly rigged' Sailfuses that would break under an easy load so I could see the system in action.

When put under a shock load the pin connecting the two ends of the fuse broke, allowing the body to extend out to the length of a Dyneema strop contained inside. I understood the theory and it seemed that this product could prevent damage to the traveller system if nothing else.

One consideration anyone using Sailfuse should have is the trim of the mainsheet. The Sailfuse will only work if it does come under load during the gybe. If the mainsheet is so far out most of the mainsail is resting against the shrouds, particularly on a boat with swept-back spreaders, it seems the force of the mainsail refilling may well be taken by the mast before the mainsheet has reached its full extent and the fuse bursts.

- Fit the Sailfuse between the bottom mainsheet block and the traveller car.
- This may take a bit of thought, together with the right shackles. This did not prove simple on our test boat so we had to lash the Sailfuse in place.



Rope preventer

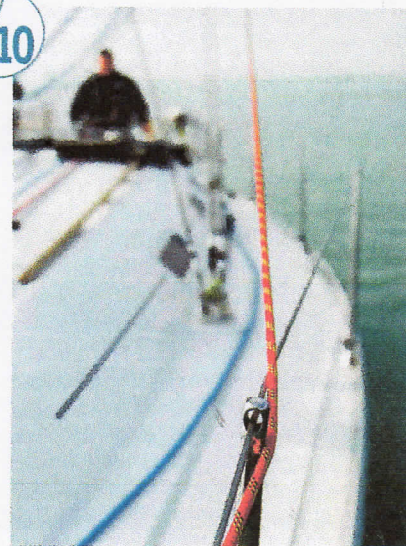
A traditional rope preventer will only serve to lock the boom into position. Once rigged it can be trimmed from the cockpit, allowing for any movement of the mainsheet, but in the event of an unexpected gybe a crewmember must immediately be ready to release the preventer to stop the mast loading up.

The closer to the centreline the boom moves, the less effective the preventer will be and if not removed before a gybe the rope will pass overhead through the cockpit catching things and people on the way.

The recommended way to set up a rope preventer is as follows:



6/10



- Attach to the end of the boom; mid-boom or to the kicker is definitely not recommended and could lead to damage.
- Lead forward to a turning point on the foredeck (a cleat is ideal) and then back down the centre of the boat to be controlled on a winch.
- Consider which side of the stations to lead the line forward (inboard or outboard) to minimise damage if the line comes under load.

Wichard Gyb'Easy

There are two elements to setting up the Wichard Gyb'Easy. The friction that controls the speed at which the boom will swing during a gybe is created by passing the control rope through the unit. There are three possible settings: more turns create more friction. The boom is then held in place outboard by applying tension to the control rope on the lee side.

With just the right amount of friction and the leeward rope tensioned, the Gyb'Easy produces a slow and gentle gybe. However, this is entirely governed by how many turns the control rope takes through the device. With too many turns the boom is pinned out, which can only be corrected by letting the control rope go. Too few turns and the boom will still fly across the cockpit at speed.

When we set the Gyb'Easy up properly it did work well, but over the length of a passage in changing conditions you would need to leave the cockpit to thread or unthread friction to balance changes to sail size or conditions.

The Gyb'Easy comes with a Gyb'Flex control rope and the warning that performance is not guaranteed if a different rope is used. I presume this is down to optimum results requiring a rope of specific diameter/softness, but the rope supplied was not long enough to reach the cockpit winches on both sides of our Dufour 385.



- Fit the Gyb'Easy on a fixed boom bale forward of the kicker. This was not possible on our test so we used Dyneema strops.
- Fix two blocks at deck level in line with the shroud base.
- Run the supplied Gyb'Flex rope from the cockpit, forward through one block, over the coachroof to the other and then back to the cockpit.
- Thread a bight of the control rope through the holes in the Gyb'Easy and over the stump at the top. Increase turns through the unit to increase friction.

What's the risk to the rig?

Of course, the risk of injury to crew in a crash or Chinese gybe is obvious, as callouts to the Search and Rescue authorities will confirm. But more complex is the risk to the rig.

In my own experience I have damaged a gooseneck and traveller during a badly controlled gybe, but never the rig itself so I spoke to mast engineer Steve Lee to help understand what sort of damage an accidental gybe could inflict.

The answer, of course, is not simple. The most common cause of mast failure is actually down to

a failure of the standing rigging caused by damage, overload or fatigue. And of these three fatigue is the greatest factor – hence the fixed lifespan of standing rigging. Overload could be caused by a crash gybe in extreme conditions; however the more likely scenario would be repeated uncontrolled gybes over time leading to fatigue of the standing rigging or components.

Not to be overlooked is the failure of other components such as travellers, goosenecks, kicker attachments and, of course, sails, which can all break when put under enough shock load.

Obviously this is a massive over-simplification

of a complex science. There are many design factors that will affect the loads on the rig when performing a gybe: inline or swept-back spreaders, cutter stays, size and type of boat as well as the speed at which you are travelling.

In the kind of boats I am used to racing we gybe at speed to keep the apparent wind as low as possible and so keep the load off the sails, but for those more relaxed times when we do not wish to gybe down the face of a wave surfing at 14 knots the message seems to be plain: a controlled gybe is better for the boat, the rig, the sails and the crew.

TESTED: BOOM BRAKES

A comparison of the types of boom brake/preventer tested

	Wichard Gyb'Easy	Walder boom brake	Sailfuse	Rope preventer
Cost	£215	£250	£159	Upwards of £20
Extra parts to buy	Two blocks	One block and control line	Shackles/fittings to attach	Optional snap shackle
Time to fit	Afternoon if you do not have a spare boom bale	One hour if convenient points to attach blocks	One hour with correct shackles	Less than five minutes
Permanently rigged	No	Yes	Yes	No
Adjusted from cockpit	Tension from cockpit, Friction forward	Yes	N/A	Yes
Overall rating as a preventer	6/10	8/10	N/A – clever product, but not really a preventer	6/10



How to avoid a Chinese gybe

This type of accidental gybe is caused by the boat heeling excessively to windward. The centre of effort of the spinnaker also moves to windward, accentuating the angle of heel. As this happens, the boat starts to turn on her longer windward waterline edge and bear away on her own.

As the boat heels, the surface area of the rudder receives less water so steering is less efficient and you lose control, with the boat usually ending up flat on her windward side with the spinnaker pole in the water and the boom in the air.

Inevitably, the point arrives when the force of the wind on the mainsail is no longer able to support the weight of the boom – now up in the air – and it comes crashing down.

Tips to avoid an accidental gybe like this: when you feel the boat starting to heel, ease the pole forward, sheet on, steer high and trim the main.

For further information on how to avoid a Chinese gybe, together with a video, search on our website: www.yachtingworld.com or scan this code (right)



CONCLUSION

For the most part, when we are totally in control, the risks of gybing are mitigated by our own skill as helmsmen and sailors. Many autopilots also have 'gybe stop' features. With the mainsheet positioned forward of the companionway and a high boom, the risk of injury in an accidental gybe can be smaller still, but I believe there is value in rigging a gybe preventer in the right circumstances.

I do it myself when on a delivery, particularly when I have novice crew, and on occasion I have used one to great effect when short-handed racing offshore to work my way dead downwind with a lumpy sea and a dying breeze.

The one benefit the Wichard Gyb' Easy and Walder boom brake have over a regular rope preventer is that they can be set to allow a gentle gybe and not just to pin the boom out, which in itself can present a risk.

In particular, I was impressed by the versatility of the Walder boom brake. It was easy to adjust and could lock the boom in position at the turn of a winch.

I can see this would be useful even at anchor when the boom could be stowed locked down off the centreline of the boat, freeing up cockpit space.

Whether you want to invest in a bespoke engineered product or repurpose an old spinnaker sheet, a well-rigged gybe preventer definitely has a place in the cruising inventory if only to allow peace of mind and a well-earned rest during those night-time off-watch hours.

With thanks to Universal Yachting for the loan of its Dufour 385 for this test.
www.universalyachting.com

PIPHARE



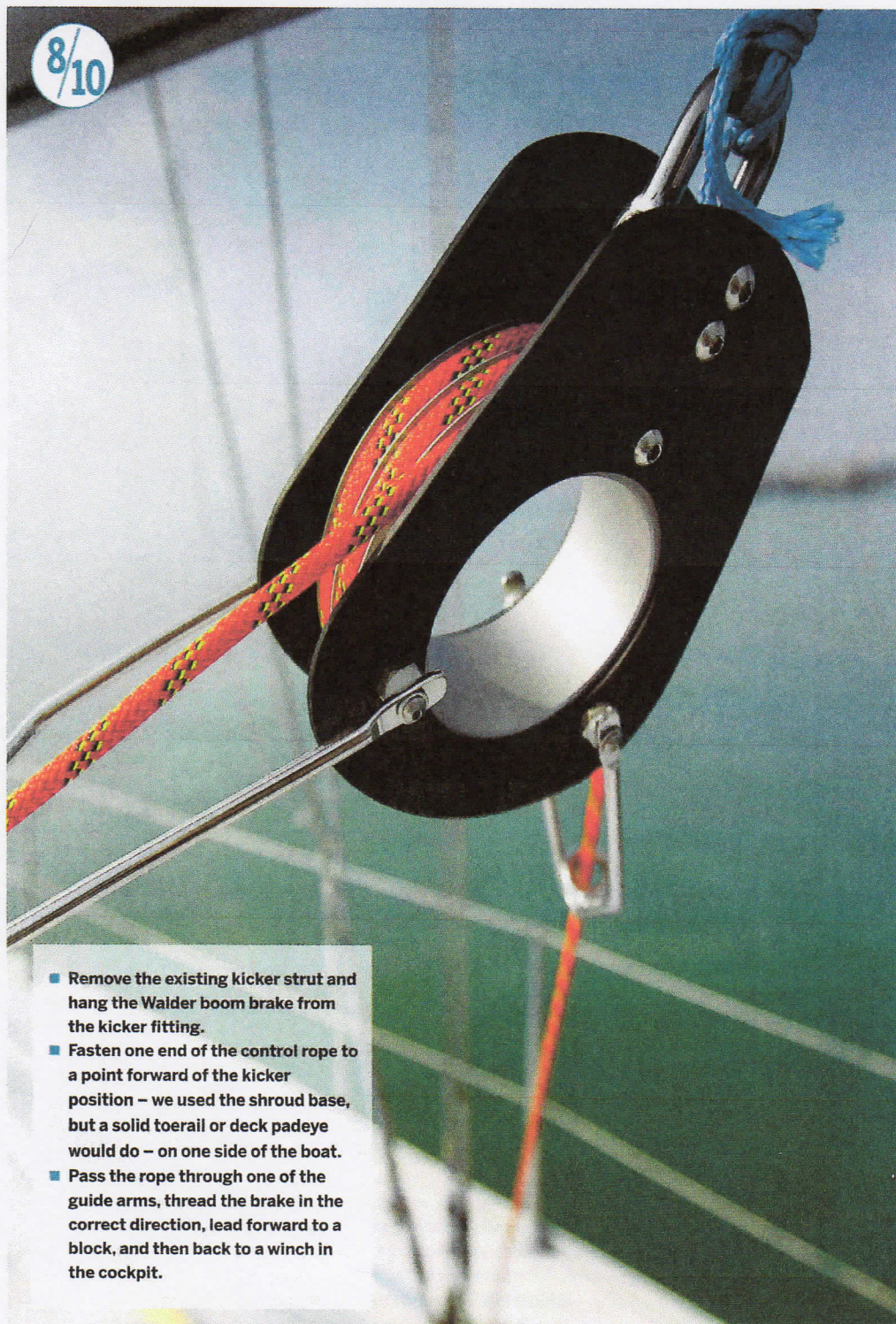
Pip Hare has a background firmly rooted in offshore and ocean sailing. She has lived aboard a boat while cruising the Atlantic and has competed in the Mini Transat single-handed race twice. Pip now works for the RNLI and is also a Yachtmaster Instructor and Examiner. This year she is campaigning an entry in the double-handed class of the Rolex Fastnet Race.

Walder boom brake

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