

This is the Jordan Series Drogue Posts from the Passagemaking Under Power Forum, that I have found in my email log.

Mike Maurice
Beaverton, Oregon.
April 2007.

Subject:
[PUP] The Jordan Series Drogue, etc.
From:
Mike Maurice <mikem@yachtsdelivered.com>
Date:
Sun, 26 Dec 2004 20:50:41 -0800

The USCG report CG-D-20-87, is online in HTML format. I have a copy in PDF format that is about 1 1/2 megabytes in size.

This report covers the Series Drogue and tests of other drag devices, conducted by the USCG. Mr. Jordan acted as a consultant for these tests. The report is about 85 pages in length. If anyone is interested in a copy, let me know and I will send the PDF as an attachment.

If anyone has a site to make this generally available for downloading, let me know.

Mike

Capt. Mike Maurice
Tualatin(Portland), Oregon

Subject:
Re: [PUP] Trawler yachts across the Southern Ocean
From:
Mike Maurice <mikem@yachtsdelivered.com>
Date:
Thu, 30 Dec 2004 10:28:23 -0800

At 09:24 AM 12/30/04 -0500, you wrote:

> A nonstop circumnavigation would mean rounding via the capes, not the canals, thus, the need to venture into the Southern Ocean.

You had better get a Jordan Series Drogue.
You're going to need one.

Mike

Capt. Mike Maurice
Tualatin(Portland), Oregon

Subject:

[PUP] Around the world nonstop, was Trawler yachts across the Southern Ocean

From:

Georgs Kolesnikovs <georgs@trawlering.com>

Date:

Fri, 31 Dec 2004 07:12:32 -0500

- > A nonstop circumnavigation would mean rounding via the capes, not the
- > canals, thus, the need to venture into the Southern Ocean.
- > You had better get a Jordan Series Drogue.

All reports indicate the Jordan is a most effective device for serious heavy weather:

<http://www.jordanseriesdrogue.com/>

<http://www.cruisinghome.com/Pages/jordan.htm>

http://www.setsail.com/s_logs/bannerot/bannerot4.html

Sure would like to find someone who has actually deployed one on a powerboat.

--Georgs

Subject:

Re: [PUP] Around the world nonstop, was Trawler yachts across the Southern Ocean

From:

Mike Maurice <mikem@yachtsdelivered.com>

Date:

Fri, 31 Dec 2004 10:39:55 -0800

At 09:14 AM 12/31/04 -0700, you wrote:

- > If I understand the Drogue web site correctly the Drogue is intended to reduce your speed through the water and keep the boat from broaching. This may be useful in some power boats that have a severe tendency to broach in moderate trailing seas but I would not choose to be stern to any really heavy weather if I had a choice.

If you have these or similar notions about drogues and parachute anchors then you should read the CG report on this subject. A careful read of it may convince you as it has me that most of us are operating under some dangerous misconceptions. THE USCG report CG-D-20-87.

A few items for your consideration.

1. That being hit from the stern is more of a danger than being rolled or pitchpoled?
2. That being rolled or pitchpoled is more likely than is generally understood, under severe conditions!
3. That Traditional methods of preventing #2 suffer from 3 major weakness. That a single point drogue is not stable enough, that if sufficiently strong to prevent #2, that it may not be possible to attach such that it will not part from the boat in an ultimate strike. That in order to impart enough give to prevent the instantaneous loads from exceeding the breaking strength, the rode will not be stiff enough(fast enough) to prevent the broach or pitchpole, period.
4. That few modern vessels will lie near enough to the waves if bow on, coupled with the lack of buoyancy at the bow makes the bow a poor choice to lie in the ultimate storm. Given that many boats will require reinforcing to be safe in a stern to mode.

In other words, the stern should be considered for it's buoyancy, ease of keeping the stern to the waves. A necessity to keep one of the ends to the waves, especially at the instant of impact of the ultimate breaking wave. That the extra buoyance of the stern aids in getting the stern to ride up and over. That a weak stern area should be dealt with in any event and having done so the reason for avoiding a stern to situation will have been dealt with.

The Jordan Series drogue provides a faster response to the boat being accelerated in front of a breaking wave. The multiple cones start the braking process sooner, which brings the stern into square the quickest, reduces the effects of stretch in the rode since the cones are spaced evenly along the it.

I had not planned to write this material yet, since I have only had a chance to read the report over once. But since the subject has come up, here is my present take on it.

Mike

Capt. Mike Maurice
Tualatin(Portland), Oregon

Subject:
[PUP] Re: Drogues and Sea Anchors
From:
Truelove39@aol.com
Date:
Sat, 1 Jan 2005 09:12:37 EST

Wise words, John.

I might suggest that the folks discussing sea anchors should read the Pardeys book (sorry, I forget which). Lyn and Larry were the ones who pioneered the use of sea anchors, and especially the springing method so that the boat lies off a bit. I can recall Lyn's description of how she watched, fascinated, as huge, and sometimes breaking, seas simply disintegrated in the area of the sea anchor as they passed over it, before reaching the boat.

Re: drogues, I have not used one in a trawler, but I cannot envision running off before a storm in a boat with a fat, trawler-type transom and bluff bow (compared to a sailboat). Drogue or no. Can anyone cite any info on drogues used with trawler hulls? My troller is very much like Passagemaker, with a sailboat hull. But she has a lot more freeboard, and more windage, especially aft, than my traditional canoe-stern Westsail, which is very much like the Pardeys boat. Also, no one has mentioned streaming warps, which I have done; I believe this is more common than drogue use, and it's surprising how stabilizing warps can be.

Regarding the Jordan drogue, guess who wrote USCG report CG-D-20-87? Dan Jordan. So forget that. I don't understand why some are already praising Jordan drogues. Anyone care to comment? I know many sailors who have used Jordan drogues, and have heard nothing critical. But inasmuch as Jordan's own recommendations stop at 30 tons displacement it would seem to eliminate any serious trawler use. Also, the gear is getting pretty heavy.

With the exception of Bob Austin, I haven't seen anyone speak up and say they've used any of these devices, so there is much speculation -- dangerous, IMO. In short, I think there's a lot of stuff being bandied about without any backup, and I'd like to hear from real experience. Anyone?

John
"Seahorse"

John Harris wrote:

1) The report speaks primarily to sailboats and specifically those of Fastnet type and under 45'. These are boats of low hull profile designed for racing, not for heavy weather in any direction. They have been built as light as possible for the maximum wind conditions that they expect to encounter.

Even typical cruising sailboats seldom have a high bow of the range of a similar sized trawler.

2) The report sights their primary real world experience as the use of Drogues by the Royal Life Boat Institute in England - where they use the Drogue in heavy seas when wanting to make way and entering channels.

3) The comments on the use of bow deployed sea anchors make two mistakes: A) failing to deploy the anchor two wave lengths from the vessel, and B) not using an attachment that will stabilize off the direct bow with a harness.

4) It properly identifies a very large breaking wave as a potential disaster, but states that this is generally not the conditions of severe weather in open ocean.

Subject:

Re: [PUP] Drogues and Sea Anchors

From:

Mike Maurice <mikem@yachtsdelivered.com>

Date:

Sun, 02 Jan 2005 19:38:23 -0800

> I have read parts of it - I hope the most relevant.

> 1) The report speaks primarily to sailboats and specifically those of Fastnet type and under 45'. These are boats of low hull profile designed for racing, not for heavy weather in any direction.

> 3) The comments on the use of bow deployed sea anchors make two mistakes: A) failing to deploy the anchor two wave lengths from the vessel, and B) not using an attachment that will stabilize off the direct bow with a harness.

> 4) It properly identifies a very large breaking wave as a potential disaster, but states that this is generally not the conditions of severe weather in open ocean.

Reading part of the report is a bad idea.

1. The conclusions of the report and the testing done is not targeted at Fastnet type racing boats.

2. The conclusions do not recommend the use of the single point drogue or single point parachute anchor, for reasons discussed in the report. Single point systems suffer from 2 major problems. Collapsing and occasional occurrences of being thrown out of the water.

3. 2 wave lengths requires a rode of 400 to 600 feet minimum. A careful reading of the drag device data book shows that really long rodes are necessary.

4. VERY large breaking waves are not common. Large breaking waves are more so and such waves are capable of rolling or pitchpoling the size of vessels that are of interest to us.

You will not be able to deploy the drogue of choice, whatever that may be, if you have waited until conditions are apparent, except maybe the Jordan Series Drogue. Mr. Jordan makes absolutely no monetary gain from his invention as he has placed it in the public domain. The collapsing and being thrown out of the water, if they occur will most likely happen without your knowledge and may do so at such time as to leave you no options and mortally exposed.

I have been in storm force conditions, 5 or 6 times times, not gale force. And I have never considered putting out a sea anchor/drogue, even where I had one.

I have read Lin/Larry Parde's parachute anchoring book and studied their system. What they have written about with their 2 point triangle style system makes excellent sense. And I have mentioned their work on T&T. However, the Jordan series deserves serious consideration due to the fact that I suspect it will save a vessel in conditions that the Pardee system will not.

This CG report is only one facet of a larger series of tests which deserve our attention. The tests of subjecting small vessels to breaking waves, done in tank tests. Where it has been demonstrated that there is NO configuration of draft, width, length or weight of boats under 65' (66' is only being arbitrarily excluded here), which will protect such vessels from being pitchpoled or rolled over, if the wave is large enough in relation to the boat. It appears from my research that only the Jordan Series drogue has the best chance of preventing these undesirable events from occurring from the ultimate breaking wave.

Vessels without tall masts are more susceptible of rolling due to the lack of roll moment inertia. Motorboats generally have this characteristic. This means Passagemaking Under Power.

More later.

Mike

Capt. Mike Maurice
Tualatin(Portland), Oregon

Subject:

Re: [PUP] Sea Anchors deployment

From:

Mike Maurice <mikem@yachtsdelivered.com>

Date:

Mon, 03 Jan 2005 12:17:13 -0800

At 11:35 AM 1/3/05 -0700, you wrote:

> Items 2 and 6 are adjusted to produce a two wave length separation between boat and chute

I think it is generally understood that a single wavelength of rode is not enough. But there may be some who have not understood even that. However, my reading of the relevant literature does not conclude that 2 wavelengths are necessarily "magical". Part of the problem is that it is hard to simulate by computer or models what would constitute the best length. Thence comes the really hard part. Go to sea and test this.

First there is the little item of having enough rode to fully test various lengths of say 1, 2, 3 or more wavelengths. It may not be practical to do more than one test in any one storm.

This severely limits the number of tests that one can do in ONE lifetime. After all, one mistake could result in the proverbial "truncated life". It is difficult to test 1, 2, 3, etc. wavelength rode even in one storm as it may be impossible to arbitrarily put out 1 then 2 then 3 wavelengths at various intervals.

As if this was not enough, wavelengths are not static and may very well change during the duration of the storm. Shorter wavelengths are typical during the initial stages and longer wavelengths may predominate later, but the wave that will get you, may very well be completely out of character and from another direction.

I have no quarrel with the notion that planning and preparing for the typical storm is useful. What I disagree with is allowing the assumption that conditions will be typical and therefor that it is not necessary to take into account the "what if" scenario.

Getting down to some hard facts. Nylon can stretch up to about about 50% before breaking. 400-900 feet of rode will stretch 200 to 450 feet before breaking. Let's not argue that it is 40% ,the difference is not worth the debate. A boat accelerated by a breaking wave will come near to the speed of the wave, say 40 feet per second. Meanwhile the rode is stretching. If the breaker is large enough in comparison to the boat a rollover can occur before the rode can halt the acceleration and force the boat to ride up and over the wave. Jordan suggests that the boat should be decelerated such that there is about 15 feet per second difference in the speed of the wave and that of the boat.

A single point drogue/parachute using a nylon rode will stretch such that the boat will not be restrained before the rollover/pitchpole will occur. A rode with drogues spaced all along the length will start the restraining process almost immediately and has the best chance of preventing the rollover/pitchpole. This is not to imply that other dangers do not exist, even as this is happening.

More later.

Capt. Mike Maurice
Tualatin(Portland), Oregon

Subject:

Re: [PUP] Re: Drogues and Sea Anchors (use of)

From:

Mike Maurice <mikem@yachtsdelivered.com>

Date:

Mon, 03 Jan 2005 18:00:32 -0800

To:

Passagemaking Under Power List <passagemaking-under-power@lists.samurai.com>

PRINTMORE1@aol.com

At 04:49 PM 1/3/05 -0500, you wrote:

> Mike: Thanks for your comments. I do get concerned though that others who are in the planning stage to go offshore might get influenced negatively and drop their dream of cruising the seas. We do not hear too much of all the successful cruises but only those that make the

I am inclined to think that dreams tend to evaporate more from unspoken fears than from explicit ones. I think that in general we agree. I am inclined to think that a factual clear debate about even the worst possible accidents will tend to encourage even novices to proceed with their plans as long as they have reason to believe that they are not being suckered into taking on more danger than they are prepared to cope with.

If anyone has some notion that I have no fear, then get this. I have no interest in being the object of attention of some very large powerful storm. And if it came to pass, for that to happen, I intend to have a clear idea about what to do about it. Having done this kind of work over so many years, I am convinced that there is some slight chance of getting ones ears pinned back in spite of the best planning and intentions. Any method that I would employ is likely to be followed by some others. For my own peace of mind, for myself and for anyone who might follow my methods, I would prefer that my methods be as well thought out and based on the best information available.

The best method for surviving the ultimate storm is not clear. There are competing methods and variations. The Jordan Series Drogue is a part of any serious debate about this subject. Unfortunately, some of the worst mistakes have been made by them that did not survive to tell the tale. And we have no information to know what those mistakes consisted of.

Mike

Capt. Mike Maurice
Tualatin(Portland), Oregon

Subject:

[PUP] Jordan Series Drogue Issues

From:

Mike Maurice <mikem@yachtsdelivered.com>

Date:

Fri, 28 Jan 2005 15:52:26 -0800

Don Jordan the designer of the Series Drogue and I have been in contact by email and phone. It is apparent from these exchanges that his grasp of the intricacies of yaw, pitch, straight line stability and other factors are extensive. He is now 89 and I cannot emphasize

enough the importance of the cruising community coming to as much understanding of his views as possible. He is a gold mine of information and insight. We have to be realistic and take note of the fact that his health might deteriorate and he might be unable to engage in the extent of communication that would be of so much benefit to those who cruise, in stormy seas.

In that regard, I intend and I suggest that others do the same. To wit, to study the materials at the Drogue web site. To read all the reports that I can find and to query him for clarification on issues that I don't fully understand.

<http://www.jordanseriesdrogue.com/>

I posted some material about his drogue a while back and I will now attempt to lay out some of what I gleaned from my recent communications with him. He makes a strong argument that the drogue, and this may or may not apply to similar systems, that a bridle is necessary in order that there be "turning moment" to cause the vessel to come perpendicular to a breaking wave. That a bridle that will cause this is nearly impossible to rig from the bow, where there is not the necessary width to do the job. That single point drags work well on catamarans because the bridle can be rigged to both hulls at the bow and there will be enough separation to create the turning moment.

Another point he made is that typical power boat hulls have generally more directional stability due to a longer continuous keel than the typical sailboat. This is a significant thing to note if you consider that in the Fastnet 79' race and the Hobart/Sydney race of 98' (?) where there were so many boats damaged and lost, that these boats were typically targeted at racing. They most likely had short keels and small rudders. The logical conclusion of shorter and shorter keels is a sailboat with NO keel at all. Which in SOME ways but only very slightly similar is the case with power boats intended for passagemaking. What these design issues implies is that underwater hull form is more than just the curves. After all we could make a sailboat with no keel as well as a power boat, carried to some irrational extreme.

I think a lot of us have some tiny intuition in the backs of our heads that the old timer's boats with long straight keels were generally pretty stable when running off. Big keels add friction and sail boaters have been quick minimize keel surface area in the quest for speed. The same is most likely true for power boat designs making allowance for the fact that a modest difference in surface friction may be less important than straight line stability, where the motive power is coming from a diesel engine instead of wind.

I will post more on this later.

Capt. Mike Maurice
Tualatin(Portland), Oregon

Subject:

[PUP] Bungee Cord Jumping with your Boat

From:

Mike Maurice <mikem@yachtsdelivered.com>

Date:

Tue, 15 Feb 2005 20:00:24 -0800

I have been reading Dashew's Storm Tactics book and a letter from Don Jordan the developer of the Series Drogue.

The Dashew book has the relevant material scattered around the book in several places and it is hard to get ones arms around the subject of Series Drogues. But I conclude that a Parachute Anchor is a good choice for moderate to severe but not survival storms. That the Series Drogue is the weapon of choice in the Ultimate Survival Situation.

It helps to think of all this as a rubber band. If you have trouble with this then imagine this as bungee cord jumping off of bridges, where you bring your boat with you. It should be obvious that if you don't use the right bungee cord engineered just right, you and the boat will end up at the bottom of the river instead of bouncing back just before eternity overcomes your hold on life. I hope this use of words is sufficient to carry across the dramatic flavor of this kind of activity.

So, now the task is to engineer the bungee cord. First we know that a nylon rope will stretch around 40% before it will break. Our bungee cord must at a minimum be strong enough to not break, but not so stretchy that we and our boat will hit bottom, although even a few inches of space will do, if necessary. Since we can't be sure of exactly how far the cord will stretch even in repetition, it is necessary to have some safety margin. Unless you like being squashed like a bug between your boat and the river below the bridge. Of course all this about bridges and bungee jumping is only remotely related to drogues and boats, but the image is useful in order to come to an understanding of the issues involved.

Nylon rope increases in strength as the diameter goes up and at the same time the amount of strain that it takes to stretch the rope goes up, although not in lock step. In other words, the smaller rope stretches easier and has a lower breaking limit than a larger rope. On the other hand if the rope is large enough, it will not stretch enough to be of any use as a rubber band and it's strength will be so high that it could if large enough tear the boat apart, or tear the attachments out of the boat. Don Jordan points out that in the Loss of the Winston Churchill the load on a parachute anchor rode would have been over 700,000 lbs. that's right, 7 hundred thousand pounds. Think about the amount of stretch versus breaking strength that would be needed to unload(stretch) that without breaking the rode or it's attachment points.

This is very hard to explain all the subtle details, but I hope this clarifies one, of the issues.

Mike

Capt. Mike Maurice
Tualatin(Portland), Oregon

Subject:
RE: [PUP] Bungee Cord Jumping with your Boat
From:
"Tom Leonard" <hmsbluechip@yahoo.com>
Date:
Thu, 17 Feb 2005 01:18:56 -0500

I think this will reinforce your opinion that a bunch of little
parachutes is better than on large one.
<http://www.sailrite.com/droguereport.htm>

If you're handy, you can buy a kit and make the system your self.

<http://tinyurl.com/4199z>

tom

The Leonards
M/V Sea Breeze
Myrtle Beach
MTOA #2743

Subject:
[PUP] Sea anchors and series drogues
From:
"Bob Austin" <thataway4@cox.net>
Date:
Sat, 19 Feb 2005 13:32:56 -0600

I don't think this should be an either or argument: I would carry both a
series drogue and a sea anchor. Their use is entirely different. Also a
boat designed for offshore voyaging should be built so that a boarding sea
aft will not compromise the integrity of the vessel. If you look at
Passagemaker, the aft flush deck has almost as much freeboard as the bow.
There are no doors or openings leading to the aft deck--they are on the
sides of the pilot house. George Buehler designs minimize the risks to aft
boarding seas in similar fashion. As Scott points out, in contrast, most
of the current commercially built voyagers have cockpits aft, with transom
doors, large windows aft and a door going to the cockpit (the better boats
use a quality door which can be dogged securely shut). If the cockpit is

filled with water, there is a change of handling characteristics and the possibility of further damage to the aft cabin structure.

A sea anchor is deployed from the bow to minimize sternway drift--a series drogue is deployed to keep the stern to the seas as the boat has way on--either from the drift of windage, or with small amounts of power.

As Mike pointed out there are huge forces on a boat in severe storm seas if it is riding to a sea anchor. I don't know if a sea anchor or drogue would have saved Sir Wiston Churchill in the Sydney to Hobart race, because she had a sprung plank and was an old and tired wooden boat which was picked up by a wave and thrown so she landed on her side. One might argue that if a drogue had been deployed the boat might not have been sideways--but a racing crew would most likely not deployed a drogue (see the inquest: <http://www.equipped.com/sydney-hobart/Vol%2005%20Docs/STANLEY%20John%20Michael%201.PDF> (also good read on the life rafts in a storm if you read the entire inquest)

I am not sure how to equate fluid dynamics in the human circulation--an area where I have considerable expertise in some of my cardiac research--and storm seas--an area where I have experienced the severe conditions of sustained winds of over 65 knots with a fetch of thousands of miles. The only valid test is "does it work?" There a number of testimonies about the use of drag devices.

There are several other texts which should be reviewed by the passagemaker: Van Dorn' "Oceanography and Seamanship", Earl Hinz "Heavy Weather Tactics using Sea Anchors and Drogues". and Victor Shane's " Drag Device Data Base, " 4th edition. The latter has over 120 actual cases of use of various drag devices. (but like Jordan, he sells a product)

Steve Dashew says it well:

" The best thing you can do to protect yourself and your floating home in stormy offshore conditions is deploy either a sea anchor or a series drogue, go inside, batten down the hatches, and keep the best radar and radio watch possible while you stay dry and get some rest. These devices allow you to park in relative safety, no steering required. Not all sailboats have the structural integrity at the transom or cockpit configuration to use a series drogue, but if you do, this may be the ultimate survival storm device - orienting stern-to the seas, cushioned by the long, weighted rode of multiple cones that pull the transom up through the white water of breaking wave crests as the swell rolls under the boat. Sea anchors are large underwater parachutes deployed from the bow. These provide more resistance to the seas than series drogues, with more potential for violent snatching, and a slower drift speed, an advantage compared to the series drogue if sea

room is limited. We carry both a sea anchor and a series drogue, both ready to go in case of deteriorating conditions, and the attitude that we'll deploy one or the other as early as possible in the development of the storm."

See:<http://www.setsail.com/> A great site to explore. Go to the Dashew offshore and click on the FPB series--and see what they are doing on the new power boat. Steve Dashew's book on heavy weather sailing is also a worth while read--although it pretains mostly to sailboats, the tactics are similar.

One has to substitute power boat for sailboat--but the same applies and the boat must be seaworthy. The series drogue keeps the stern to the seas, and prevents both pitchpoling and the boat getting sideways to a wave. A sail boat can be set up with the center of effort way forward (small storm jib set)--but a power boat will often have the center of effort (windage) amidships or aft, and be more subject to turn sideways to the wind. Also most sailboats have much larger rudders which are more effective in steering in heavy seas. I found that the auto pilot would keep the boat at about 150 degrees (Quatrering with the seas) to the wave set in 30 to 40 foot seas and 60+ knot winds, with a small storm staysail forward and the engine ticking over to give a constant flow of water over the rudder to allow steerage, even in turbulant water. When a wave broke on the aft deck, there was a companion way opening on the stb side aft on the pilot house (about 15 feet from the stern), about 50 gallons of water cascaded down the companionway. If I had fitted storm slides inside of the doors or had sealing doors (those doors present had ventillation slats about 4" x 12" in each door) the water intrusion would have been prevented. With the boat at 150 degrees to the wave train, she would surf down the wave, but not stray much from the set course. A series drogue would have kept the stern square to the waves.

So it is both boat design, tactics and equipment which may determine a boat's survival in extreme storm conditions.

Bob Austin

Subject:
[PUP] Bungee Cord Jumping with your Boat
From:
scottstrickland@comcast.net
Date:
Sun, 20 Feb 2005 14:10:40 +0000

Tom you said

****Actually the Coast Guard seems to have done the study, the retailer only refers to it on their web site. (I have no interest in this other than to forward information that may or may not be of use, that is for you to decide)

*** if you read the report, the CG used a 42' POWER research vessel to test the system, I couldn't find any thing that says it's only for sailboats.

When I read a report I always like to know the self interest of the author. I started at the top of the report, and on the first page it lists Donald Jordan the designer of the JORDAN series drogue.

>> From the report

"U.S. Coast Guard Research and Development Center Avery Point, Groton, Connecticut 06340-6096 and Donald Jordan Consulting Engineer "

At the end of the report In the recommendation page (that's the part of the report that is probably the most useful for us...)

It only mentions sailboats.

>> From the report:

"it was found that for a small sailing yacht with a displacement of 7500 lbs"

For extrapolating the data they use a 60 ft 60,000 lbs displacement boat. I do not know of any production built ocean going power boats that displace only 60,000 lbs. Most 60 footer ocean going power boats displace about twice that! That is closer to the weight of a sail boat.

Tom also stated "the multiple small chute system will keep a constant tension on the line and be easier on the vessel and the occupants."

I do not know if the shock loads would be any lower.

The sea anchor recommendation I got from Para-tech was to stick a couple of hundred feet of chain in the system with 400 feet of nylon line. The chain will sag and provide lots of shock absorption.

The question about the load is at best confusing.

About Bob Austin's comment,

"Also a boat designed for offshore voyaging should be built so that a boarding sea aft will not compromise the integrity of the vessel."

I agree, but I have never seen a boat with a stern as strong as the bow.

The bow is pointy so it faces less load since the angle of the seas impacting it is lower. In addition the bow structure will experience far more of the load in compression than in tension.

Bob also said

"I am not sure how to equate fluid dynamics in the human circulation--an area where I have considerable expertise in some of my cardiac research"

I never did anything with human circulation, we design filters and cardiac pumps, blood reservoirs and model the flow of fluid thru the open heart/lung circuit used in cardiac surgery.

I think modeling human circulation to predict turbulent flows (or forces acting on a vessel wall) would be insainly difficult.

My point was using more advanced techniques trying to model simpler fluid flows was not very accurate. In our blood labs they compare the actual results to our predicted results. Hence we know that the models are not super accurate.

In the USCG report they do not have the benefits of this type of real world results versus predicted results. Yet they have to predict forces on a boat in turbulent flows.

Subject:

Re: [PUP] Sea anchors and series drogues

From:

"S/Y Truelove" <truelove@stratosnet.com>

Date:

Mon, 21 Feb 2005 07:18:38 -0500

I don't think we're at odds here at all, Bob.

Your 53' boat sounds a lot like my 53' Skookum, except the Skookum displaces 75,000 with a 7' draft. Basically a sailboat hull (the Skookum 53 was originally a ketch-rigged salmon troller). As you say, a drogue is an accepted procedure on these hull types. And I would use a drogue on her in conditions such as exist when running to the Canal from here (Windwards) at this time of year. Big wind, big seas from astern; big speed for days all the way.

>> From what I know and have read about, a drogue is not generally appropriate for hurricane conditions anyway; heaving to with a sea anchor is more appropriate when actually in hurricane force winds and seas; running off can be downright dangerous and there are limits. I have spoken with people who

thought they could run off and did so for a day, but it got too intense and they finally hove to, making the turn in the trough. Despite the accolades heaped upon the series drogue by some, the single small chute, properly deployed, has proved itself many times and saved many a boat. I have one on the Westsail, and I am not about to buy a Jordan because it may be a bit better.

But I'll stick to my statement that I wouldn't use one on a fat boat with a "conventional trawler transom." What I mean is the wide, low transom that many trawlers have, as opposed to the wine-glass transom on my Skookum.

John
"Seahorse"

Bob Austin writes:

> My experience was in 53 foot boat which weighed 60,000 lbs. The hull form was very similar to Passagemaker. This hull form is double ended at the waterline, but with reserve buoyancy, and a relatively narrow counter transom. This is not unlike a number of passagemaking motor vessels, such as the Romsdahl trawlers. I was able to handle the boat in 65 knot winds, 40+ seas for three days, with out a drogue. If the conditions had deteriorated further I was prepared to steam a drogue of tires, wooden 4x6 timbers, chain and rope. The series drogue had not been built at that point--but would have been a much better alternative. The use of a drogue in this type of boat is an accepted procedure.

>

> As Mike pointed out, the force of wind and waves with a boat which rides to a sea anchor in very heavy seas and high winds is huge. There is question if the sampson posts /bits would hold this strain. Running with large seas decreases the effective velocity which the wave overtakes the boat--and the boat can be steered to some degree to ease the effect of the wave. A lot depends on the design of the boat and this needs to be taken into consideration. This is a decision made on the spot by an informed skipper.

>

> Handling any gear on the deck of a boat when the seas are huge and the wind us over 60 knots is very difficult and dangerous. One has the made decisions on the spot as to which is their best option. My personal feeling is that under moderate conditions where one needed to do repairs a sea anchor is a viable option, in survival conditions, the serious drogue may be better.

>

> I have seen some passagemaking motor boats which are similar to Steve's power boat--which shares some characteristics with his last sailboat Boewolfe in hull form. Nothing wrong with this hull form--it is very

effecient.

>

> Regards,

>

> Bob Austin

Subject:

Re: [PUP] Sea Anchors

From:

Mike Maurice <mikem@yachtsdelivered.com>

Date:

Wed, 23 Nov 2005 18:36:46 -0800

To:

Passagemaking Under Power List <passagemaking-under-power@lists.samurai.com>

At 03:22 PM 11/23/2005 -0800, you wrote:

> We're continuing to outfit our boat for next years departure from Southern California and are looking at sea anchors. I'm wondering about the differences between ParaTech and Fiorentino anchors, quality of materials and construction, etc. Any comments from users of either brand would be appreciated.

Everybody should have a look at the article in Cruising World (Dec 2005) by Hal Roth about sea anchors in general but mostly about the Jordan Series Drogue.

Mike

Capt. Mike Maurice

Tualatin(Portland), Oregon

Subject:

[PUP] Discussions useful to passagemakers - AIS - WX - Paravanesetc.

From:

Philip Eslinger <pslinger@mindspring.com>

Date:

Wed, 5 Apr 2006 12:38:33 -0600

John,

I don't weigh in often, but it's probably time to add my two cents in response to your request for equipment discussions. I have a Nordhavn 50 that I am bringing down the coast from the PNW to Long Beach in three weeks. There, I'm having much extra equipment added to enhance my long range capability in anticipation of crossing to Hawaii this summer:

AIS: I have chosen the Furuno F150 full AIS. The full capability is a definite plus but expensive when compared to the passive units. One of the most important features is its ability to be displayed on my Nobeltec display which is our primary navigation aid.

WATERMAKER: I am having the new Sea Recovery Aquamatic Compact 900 gph unit installed. Sea Recovery claims the new unit is almost operator free. It can go 8000 hours before maintenance is required.

SEA ANCHOR: Ace Sail is manufacturing a Jordan Series Drogue for me right now. This is a decision that I have agonized about for a while and could be discussed at length in future threads. The Jordan Series Drogue is much more expensive than a regular para anchor and still somewhat unproven. I feel that some sort of sea anchor is just as important as a life raft. Hopefully, I will never have to use either one. I will also have some sort of a towable drogue such as the Gailrider or the Delta Drogue.

DIVE GEAR: I have added quite a bit of dive gear to enhance diving off the boat. This is not a subject totally appropriate to this board; however, it will significantly enhance my enjoyment of our cruises as we work our way across the South Pacific.

SATCOM: I am having an Iridium unit permanently installed for voice and email communication. My co-captain (brother) feels that we would be just as well off with a much less expensive portable unit. What does the PUP board think?

SSB (HF radio): I am not short wave/ham certified; however, I have used these radios extensively while flying across the Pacific to Hawaii. Jim Leishman declared that it was the most expensive piece of gear that got the least amount of use during the around the world cruise. I think it is important for access to the cruising nets for conveying and up-to-date local information. I would like input from the PUP board on the usefulness vs cost of the SSB, particularly in view of the SATCOM.

Phil Eslinger
Flat Earth Nordhavn 50

Subject:

Re: [PUP] Discussions useful to passagemakers - AIS - WX - Paravanesetc.

From:

Mike Maurice <mikem@yachtsdelivered.com>

Date:

Wed, 05 Apr 2006 16:02:18 -0700

To:

Passagemaking Under Power List <passagemaking-under-power@lists.samurai.com>

At 12:38 PM 4/5/2006 -0600, you wrote:

> WATERMAKER: I am having the new Sea Recovery Aquamatic Compact 900
> Series Drogue is much more expensive than a regular para anchor and

- > still somewhat unproven. I feel that some sort of sea anchor is just
- > SATCOM: I am having an Iridium unit permanently installed for voice
- > and email communication. My co-captain (brother) feels that we would
- > be just as well off with a much less expensive portable unit. What
- > does the PUP board think?
- > SSB (HF radio): I am not short wave/ham certified; however, I have
- > of gear that got the least amount of use during the around the world
- > cruise.
- > Phil Eslinger

The SR watermaker, is not on my list of recommendations. Compact means tightly packed to me and I hate working on equipment like that. And I will believe it is maintenance free after proof...

The Jordan Series drogue is not "unproven", it is not popular for reasons of storage and expense. It is not all that necessary in moderate storms. But, moderate is not always what comes your way and it is difficult to switch even if you have a Jordan in reserve if it is not used first.

SSB equipment is not likely to be used by those who are not "tuned" to using it. And it is admittedly much more difficult to use than a Sat Phone. Frankly, I would go for the SSB and Pactor 3 and a portable, less expensive Iridium hand set, combination.

Mike

Capt. Mike Maurice
Tualatin(Portland), Oregon

Subject:
[PUP] Storm tactics - sea anchors and such for trawlers?
From:
Peter Pisciotta <peter@seaskills.com>
Date:
Thu, 6 Apr 2006 08:42:26 -0700 (PDT)

- > SEA ANCHOR: Ace Sail is manufacturing a Jordan
- > Series Drogue for me right now. I will also have some sort of a
- > towable drogue such as the Gailrider or the Delta Drogue.

A recent issue of Latitude 38 (Sausalito-based sailing magazine) had a story of a couple who deployed a parachute anchor in heavy seas when their rudder broke. I don't recall the exact details, but they had tremendous difficulties with chafe even though they

had (in their mind) prepared and had chafe gear aboard. I believe they lost the sea anchor within a few hours. I also seem to recall Lynn/Larry Pardy recently published tests with sea anchors in storm conditions, finding that for many boats, the best connection was a bridle from the bow and a side or stern attachment that keeps the boat at a slight angle to the sea anchor.

What are the "best practices" for preventing chafe? Where should the attachment point(s) be? When should a drogue or sea anchor be attached to the bow, and when to the stern? Is there an acceptable way for a boat without sails to heave-to?

Peter
www.SeaSkills.com

Subject:
[PUP] Storm tactics - sea anchors and such for trawlers? Peter Pisciotta
From:
Philip Eslinger <pslinger@mindspring.com>
Date:
Thu, 6 Apr 2006 10:11:22 -0600

Peter,

The Jordan Series Drogue I am getting is an interesting piece of gear. Ace Sails have thought a lot about the construction of it in association with Don Jordan. They are making me a bridle to go with the drogue. Each leg of the bridle is twice the length of my beam or 32' in this case. No metal will be used in the attachment in order to reduce chafe. The Jordan Series Drogue apparently doesn't have the high forces pulling on it that a parachute sea anchor does which also limits chafe. When I mentioned earlier that the Jordan Series Drogue is "somewhat unproven", that came from a discussion with Don Jordan himself. It's not that the concept is unproven. Don did extensive testing with the Coast Guard, but it was all on sail boats. His data for power boats, especially those with a broad flat transom like mine, is limited. Don is certain that the same principles will apply to a power boat; he just doesn't know if there will be any difference in how a power boat reacts on the drogue. My biggest obstacle was getting over laying stern to the weather. It just seems counterintuitive.

Phil Eslinger
Flat Earth Nordhavn 50

Subject:
Re: [PUP] Storm tactics - sea anchors and such for trawlers?

From:
"Nunas" <nunas@nunas.com>
Date:
Fri, 7 Apr 2006 07:45:04 +1200

Warning, I'm about to mount the soap box <VBG>.

The problem with this topic on other lists has been manifold. First, nearly all the respondents have never used a sea anchor or drogue, and I suspect that most don't even own either. Second, we keep getting the same dogma repeated as each inexperienced person passes on his or her favorite war story or quote from some manual. Just because somebody writes it in a book does not necessarily make it so! We keep getting sailboat information, much of which probably does not apply well to our boats, as most trawlers have much more windage and an entirely different underwater hull shape. And, finally, there seems to be constant confusion as to the role of the drogue vs. the sea anchor, possibly driven by terminology disagreement. Now, with that off my chest, here is my disclaimer. Although we have repeatedly rigged our chute and drogue for long passages, we have never had to use either and hope not to. On with my [less than experienced] thoughts...forgive me for straying from the original question, which really concerned chafe.

Terminology: We consider a drogue to be something towed behind the boat, to keep it from yawing and broaching while running before the storm. We consider a sea anchor or "chute" to be something deployed from the bow to keep it into the weather while riding out a storm.

Drogues: One of the posts on this thread mentions a Jordan series drogue and sea anchor in the same sentence. As its name implies, a Jordan is not a sea anchor; it's a drogue. And IMHO it has insufficient resistance to keep a trawler (let alone a sailboat) bow into the weather if deployed as a chute. Aboard AKAMA we carry a Para-anchors of Australia double drogue. We rig one or both to an 80 foot line that we carry in the lazarette. We doubt we will ever use it for the following reasons. One, most trawlers have some sort of flat transom. Krogens have very little hull in the water below the transom, just enough to keep the hull zincs wet, so it is nearly a canoe stern below the water and a flat stern above. Nevertheless, we think that the action of huge waves passing under the boat would raise havoc with stern slap. We've seen some trawler transoms that are so thin that we think they would risk punching through or at least cracking, for example, some of the Choy Lees. Two, if you have hydraulic stabilizers, our experience is that the last thing you want to do is deploy something that will slow the boat down to the point where the sea runs faster than the boat. Indeed, when running before a storm we generally speed up, admittedly, we've only experienced up to gale force winds, not a serious storm. The stabilizer

vanes get caught in "backwards" water flow, sometimes even when centered, and yaw the boat. Third, most trawlers have no grinders on the stern (or any at all for that matter). Once a drogue of any size is deployed in any sort of sea there is no way to adjust the bridle from side to side (to assist with steering) or to retrieve it. We carry one of those Chicago Cutlery "Miracle Knives" and if we need to we would simply cut it away. Finally, and most importantly, we are concerned that wave action might carry the drogue or its line into the propeller.

Sea anchors: We carry a 30-foot Para-anchors of Australia chute. This we think we might use some day and it gets rigged before any long passage. Any discussion about chutes inevitably includes a post by some well-meaning person quoting some well intended book on how to deploy the thing off the bow. We can't think of a more asinine place to be on a power boat in a storm (or a sailboat for that matter). We have a nylon rode in the port locker, the bitter end of which has chain on it. Actually, this is our secondary anchor rode, which is part chain and part rope, turned the wrong way around. We lead it over the bow roller and outside the boat to the stern cockpit until the chain part extends about a foot beyond the bow roller. This we hope will minimize chafe where it leaves the bow. The chain is wrapped around a heavy cleat and below decks a rod is run through a link. Ditching it would entail removing the rod. More probably it would foul and have to be cut. Cutting it away would require someone to go out on the bow, which we don't plan to ever do, but that is why we only leave a foot of chain exposed...the Miracle Knife would be used. The nylon rode is attached to the stanchions along the side of the boat with light cable ties. In the aft cockpit the rode is piled in figure-of-eight and attached to the chute. To deploy we would turn to weather (a dangerous maneuver in its own right) throw it over the side, drift aft, hoping not to broach. We recon with our windage, our 400 feet of rode would pay out rather rapidly.

As for the length of rode, two wave lengths are consistently mentioned and books show a nice neat diagram how this is supposed to keep the anchor parked neatly behind a wave. Bullsh!t! None of the people espousing this theory could ever have been caught in much of a storm. Our experience is that the huge waves are very confused, with no consistent distance between them. Moreover, there are usually very deep breaks between waves through which the chute could pull, not one nice continuous wave followed by another some set distance away. Even if there were, nobody we know has the means to pay out and pull in the sea anchor rode to put the chute nicely behind the second wave, which leads us to retrieval. Again, conventional wisdom and writing implies that this is simple. We doubt that even with our tripping line and float arrangement that we would ever be able to get the damned thing back aboard, unless we wait for the storm to be completely over before pushing on...yea' right! Again, the Miracle Knife is our probable solution to "adjustment and retrieval".

Well, enough ranting. We bought all this stuff because for us, as full-time cruisers, it is cheap insurance. We've talked to hundreds of other boaties who have done likewise, none of whom has ever deployed the chute in a serious sea. But, we have thought through (carefully we hope) the rigging and deployment issue, including the probability of chafe.

Here's hoping that none of us ever needs to use a drogue or a chute!

Cheers,
Maurice
MV AKAMA
KK 48 Whaleback
(Currently in New Zealand and moving soon to Australia)

-----Original Message-----

From: Peter Pisciotta [mailto:peter@seaskills.com]
Sent: Friday, 07 April 2006 03:42
To: Passagemaking Under Power List
Subject: [PUP] Storm tactics - sea anchors and such for trawlers?

- > SEA ANCHOR: Ace Sail is manufacturing a Jordan
- > Series Drogue for me right now.
- > I will also have some sort of a
- > towable drogue such as
- > the Gailrider or the Delta Drogue.

A recent issue of Latitude 38 (Sausalito-based sailing magazine) had a story of a couple who deployed a parachute anchor in heavy seas when their rudder broke. I don't recall the exact details, but they had tremendous difficulties with chafe even though they had (in their mind) prepared and had chafe gear aboard. I believe they lost the sea anchor within a few hours. I also seem to recall Lynn/Larry Pardy recently published tests with sea anchors in storm conditions, finding that for many boats, the best connection was a bridle from the bow and a side or stern attachment that keeps the boat at a slight angle to the sea anchor.

What are the "best practices" for preventing chafe?
Where should the attachment point(s) be? When should a drogue or sea anchor be attached to the bow, and when to the stern? Is there an acceptable way for a boat without sails to heave-to?

Peter
www.SeaSkills.com

Subject:
Re: [PUP] Storm tactics - sea anchors and such for trawlers?
From:
Mike Maurice <mikem@yachtsdelivered.com>
Date:
Thu, 06 Apr 2006 14:28:39 -0700
To:
Passagemaking Under Power List <passagemaking-under-power@lists.samurai.com>

At 07:45 AM 4/7/2006 +1200, you wrote:

> Well, enough ranting. We bought all this stuff because for us, as full-time
> cruisers, it is cheap insurance. We've talked to hundreds of other boaties
> who have done likewise, none of whom has ever deployed the chute in a
> serious sea. But, we have thought through (carefully we hope) the rigging

Nunas is correct in most of his comments. To summarize, not so much his words as the general issues.

The Jordan is a drogue and is not intended as an Anchor. It is intended to slow a boat down, orient it down the long length into a breaking wave and keep the boat from being tossed into the trough. Because of this it may be a poor choice for being deployed from the bow, unless you want to make way going backwards. If this short summation is not clear enough then you will benefit from reading the detailed literature on the Jordan Series Drogue.

I have had chute anchors on some boats and could never figure out a plan that I was convinced would work in a major storm such that the gear would not chafe through. Simply put, I was convinced that sooner or later it would chafe through. One of the problems with a standard drogue or even any sea anchor is the need to adjust the scope to changing conditions. This need makes it difficult to rig the gear to prevent chafe. The best chafe is simply chain and shackles at any point of wear. The Jordan uses a fixed length system and does not suffer as much from this problem.

If you deploy a Jordan from the stern, the design is such that the breaker should pass you by at about 15 knots, rather than the 25-40 knots of the underlying wave. If your stern won't withstand this sort of impact, then the Jordan MAY not be a suitable choice. However, this may not be the most important issue. Jordan designed the drogue PRIMARILY to prevent the boat from being caught broadside AND pitchpoled. Such waves are infrequent, but the Jordan is designed to make the boat survive by twisting it into perpendicular alignment with the wave, to slow the boat down, just so, and allow the wave to pass on by with minimal impact and therefore damage.

If you will follow along a bit farther, here is the gist of the argument as I understand it.

If you won't use a parachute anchor, because of all the impediments to it's use, chafe, difficulty of deployment/whatever, load on the hull and gear; then you won't have anything out and therefore anything you use will be SOME improvement.

{{{{{{Therefor, deploying a Jordan from the bow is better than nothing. But, remember you will not be able to keep way on and it will most likely not keep the bow into the predominance of the waves. An object which you may have thought was your primary objective. However, the Jordan should provide the essential element for which it was designed, namely that of twisting the boat into straight on alignment with an oncoming breaking wave and preventing the boat from being rolled and or pitched into the trough in front of the breaker.}}}}}} Don Jordan notes that usage of the drogue from the BOW is definitely not to be done. Forget this comment of mine.

If you read the literature and tests on the Jordan, the INTENT was that a boat caught even broadside on, would be twisted around and headed straight on before the actual slam occurs. Remember, the Jordan drogue is designed to allow the boat to be accelerated by the approaching wave, such that the difference in speed is about 15 knots, all the while twisting the boat to the optimum alignment with the breaking wave. It has minimal effect with waves that are not breaking and this must be kept in mind in understanding it's paramount usefulness.

There is subtle issue which is really hard to explain, but if the choice is a damaged stern versus a rolled boat, I would inclined to take the former than the latter. I suspect that the Jordan Series Drogue may be just this sort of dilemma.

There are two objectives described here, one is more comfort related and the other is survival related. I can not resolve these two issues beyond this level of detail and there are precious few who can simply because there is so little real world experience to bolster the arguments. But, this is the best explanation of the issues that I have been able to muster and it has not been easy. I trust that at least one of you will get something out of this explanation.

Regards,
Mike

Capt. Mike Maurice
Tualatin(Portland), Oregon

Subject:
[PUP] Discussions useful to passagemakers - AIS - WX - Paravanes, etc.
From:
Truelove39@aol.com

Date:

Thu, 6 Apr 2006 19:02:35 EDT

Hi Phil:

Thanks for sharing your thoughts and choices. Here's some feedback on the equipment you mention:

AIS: I looked up the F 150. Wow! I guess you can't do much better than that! More than I want to spend, though! Congrats!

Watermaker: I guess you must mean 900 GPD. Even though I have owned a Village Marine unit for ten years and now have had a Spectra 380 for 2 years I can't comment on these big machines. Although it won't help you, others may have an interest in knowing that Echo Marine here in Trinidad has a great reputation for excellent watermakers of their own design and manufacture. Watermakers are not rocket science, and these guys make up sizes from small sailboat units to big shoreside desal units. <http://www.ech2otec.com/> (<http://www.ech2otec.com/>) No connection.

Sea anchor: I have a Para-Tech 18' on the sailboat and the troller came with a 24-footer. I hope I never need 'em, but I have read the directions as well as Pardeys bridle deployment revision, which makes a lot of sense. My boat has sailboat hull and I'm sure she will lie to a sea anchor just fine. I don't know about yacht/trawler hulls - YMMV. But seriously, you guys can outrun most any really bad WX, can't you?

Drogue: Have a Delta on both sailboat and troller, too, but somehow, the wind always seems to be ahead of the beam!

Dive gear: I am not a diver but I do have a 12 V Super Snorkel and drywall saw in case I am unlucky enough to wrap a line the spurs can't handle in the wheel.

Satphone: I made the right choice with Iridium for the Eastern Caribbean. I have the 9505 unit and was lucky to get the docking station before they discontinued them. I now carry the handset back to the States in spring to use on the troller. I have the "real" marine antenna permanently mounted on the sailboat and use the Kojak antenna and DC charger on the troller. No problems unless near high terrain. I used to use it for email but now go ashore and do wi-fi and also surf. Can't do that on Iridium! Globalstar is ng here and always has been in the Windwards, although I hear it's gotten better further west.

SSB: Well, you don't need any certification for marine SSB. Hams call us non-hams "eggs." If you are an egg you could use Sailmail for free email but the cost of a TNC is high and the guys who have them are always having to fuss with them. Also, the Pactor transmissions screw up voice comms for others for miles around.

I have a 10 year old SEA 235R rig/coupler on the sailboat and love it. I inherited an ICOM M-710 and I don't care for it at all although it gets out OK. SSB is invaluable for

hooking up with cruising friends etc. There is regional as well as NOAA WX available too but it has been a long time since I tuned in to any SSB WX and I don't miss it. I get the wx off the Capsat for free and it gets saved on the computer. I do find it enjoyable to listen to BBC and AFR and occasionally an aircraft or two. Inmarsat pay-for play is way too expensive -- and hey, I come down here to get away from all that civilized stuff, anyway!

Regards,

John

Phil wrote:

I don't weigh in often, but it's probably time to add my two cents in response to your request for equipment discussions. I have a Nordhavn 50 that I am bringing down the coast from the PNW to Long Beach in three weeks. There, I'm having much extra equipment added to enhance my long range capability in anticipation of crossing to Hawaii this summer:

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Passagemaking-Under-Power Mailing List

Subject:

[PUP] Storm tactics - sea anchors and such for trawlers?

From:

Truelove39@aol.com

Date:

Fri, 7 Apr 2006 06:42:11 EDT

Hi Maurice:

I don't know whose stories you've been reading, but there is plenty of real-world experience out there: Hiscock, Pardey, Dashew, et al. You just don't have the right boat for a drogue, that's all! :-/

First you dismiss the writings of people such as the aforementioned who have deployed sea anchors in storms and then you proceed to tell us how you'd do it! Well, I haven't done it, either, but I have studied how to, and I know some people who are less capable than I, physically, who have done it, too. And, you are right, you won't be able to counter chafe or adjust your rode if you can't go out on the bow of your conventional trawler yacht, which is one reason why I didn't buy one. <BG>

Regards,

John

"Seahorse"

-----Original Message-----

From: Aquaduck336@aol.com [mailto:Aquaduck336@aol.com]

Sent: Friday, 07 April 2006 14:13

To: passagemaking-under-power@lists.samurai.com

Subject: Re: [PUP] Storm tactics - sea anchors and such for trawlers?

In a message dated 4/6/2006 11:42:35 A.M. Eastern Daylight Time, peter@seaskills.com writes:

When should a drogue or sea anchor be attached to the bow, and when to the stern?

Ahoy Listees,

I cannot believe the coincidence, I have just been asked to assist with a delivery of a 96 ft tugboat to Lima, Peru. After I had suggested drogue be

part of the equipment, I had to admit that I have never used one. Perhaps the learned list might assist with some thoughts about why, when, where & how to use/deploy a sea anchor/drogue.

Thanks for the assistance,

Ciao, Joe

Subject:

Re: [PUP] Storm tactics - sea anchors and such for trawlers?

From:

Mike Maurice <mikem@yachtsdelivered.com>

Date:

Fri, 07 Apr 2006 13:44:29 -0700

To:

Passagemaking Under Power List <passagemaking-under-power@lists.samurai.com>

At 06:42 AM 4/7/2006 -0400, you wrote:

> First you dismiss the writings of people such as the aforementioned who have
> deployed sea anchors in storms and then you proceed to tell us how you'd do
> i

I did not dismiss their writings. Please don't put words in my mouth.

By the way, I also did not say how to do it. What I did was to attempt so summarize the issues.

The debate is useful. I have comments from Don Jordan in regards to my post, which I will post later.

Regards,
Mike

Capt. Mike Maurice
Tualatin(Portland), Oregon

boat is pushed around a bit and the wave pass by. If the boat reaches near wave speed during such a pass, but even if some water is splashing around the effects of striking the boat will be minimal as the water speed and boat speed will be near the same.

However, if a real monster comes along which threatens to roll the boat or pitchpole it, the Jordan will allow enough acceleration to keep the boat speed and the wave speed close coupled, but prevent catastrophic acceleration. If you can design a better "mousetrap", then use it! And if you can't then I submit that the Jordan Series Drogue is at present the best alternative.

By the way, I have a lot of experience with large following breaking waves, some in high winds, and although I have not used the Jordan, I have a high level of confidence that at the moment of possibly being thrown out of control, the Jordan would perform as claimed. If I had to take a chance on the boat taking damage on the stern, versus being rolled or violently pitchpoled, I think I would go for the stern damage. Now, I understand the misgivings that many people have about exposing their stern to large boarding seas. I have the same nervousness.

So, here is my take on the problem. Long period waves are very high speed, but the longer the period the less steep they tend to be. A wave that is very steep and near to breaking, even in the open ocean in deep water, is not moving at near the speed of the underlying swell. It is by definition a wave out of character with the general run of waves. Therefore, it is not nearly as fast, perhaps no more than 20 knots, perhaps as little as 15 knots. Now this is more than fast enough, if tall and steep enough to do real damage. But, if you are running with and have some speed up, then any approaching wave does not have accelerate your boat near as much to reduce the difference in speed between the boat and itself. You are after two things here, to reduce the difference in speed and prevent the boat from being flung out of control This difference in speed can't be expected to prevent any and all stern damage, but you might be pleasantly surprised to see what a huge effect it does have.

It will be a couple of weeks before I will be back to continue with this subject. After tonight you are on your own.

Don is being sent a copy of this. It's too bad he isn't up to writing extensively about all this.

Regards,
Mike

Capt. Mike Maurice
Tualatin(Portland), Oregon

Subject:

Re: [PUP] Storm tactics, sea anchors and such for trawlers

From:

"Dave Cooper" <captdave@surfbvi.com>

Date:

Sun, 9 Apr 2006 20:33:21 -0400

G'day all, I do agree with Don and his rational for the use of the drogue. The only downside that I see to the series or "Jordan" Drogue is that you need sea room to operate in. A 10-12 hour period of running at 5 to 10 kts would eat up lots of distance towards a lee shore.

I don't know the answer to this issue but closing on a shore will cause the seas to become bigger and faster as they feel the bottom. Not a good situation for the left coasters, IMO.

Then again you know my experience with the sea anchor and a bit of nasty weather. Again better to do everything in your kit to practice weather avoidance than to have to wrestle with either of these options.

Cheers

Dave

Swan Song

Roughwater 58

Tortola, BVI

Passagemaking-Under-Power Mailing List

Subject:

[PUP] Series Drogue

From:

Philip Eslinger <pslinger@mindspring.com>

Date:

Fri, 6 Apr 2007 13:26:26 -0600

To:

passagemaking-under-power@lists.samurai.com

Ken,

You bring up some excellent points concerning the size of your new boat. After doing much research into series drogues and para anchors, I elected to go with the Jordan Series Drogue on Flat Earth. During the design process, I was fortunate to be able to talk to Don Jordan himself who is now over 90 years old. Since my boat is an 80,000 pound boat, I thought that my series drogue would be similar to what was posted on the web site for a 70,000 lb boat (which was the largest boat they listed). Not so! Don noted that the design for those boats was actually for a 70,000 lb sail boat and

that a larger drogue would be needed for a flat stern power boat. My drogue ended up being 490' long as opposed to 370' for the 70,000 lb sailboat. I can't imagine how long and big a series drogue for your 200,000 lb boat would be. I think you'll have similar problems getting a properly sized para anchor for your boat that will not rip apart under the stresses.

Posted below are some of the web sites that I used during my research including the site for Ace Sail Makers who manufactured my drogue. Mike Maurice has also done extensive research on the subject. It was his knowledgeable posts several years ago that first got me to look at the Jordan Series

Drogue. Please note that the Galerider Drogue and the Series drogues are two very different animals used under different circumstances. I am also considering adding a towed drogue such as the Galerider to my safety equipment.

http://www.jordanseriesdrogue.com/D_4_m1.htm

<http://www.jordanseriesdrogue.com/>

<http://www.dddb.com/links.html>

<http://www.landfallnavigation.com/galerider.html>

Phil Eslinger
Flat Earth N50
Ko Olina, Hi

Subject:

Re: [PUP] Heavy Weather tactics

From:

Patrick Gerety <alohaboat@yahoo.com>

Date:

Tue, 10 Apr 2007 07:27:49 -0700 (PDT)

To:

Passagemaking Under Power List <passagemaking-under-power@lists.samurai.com>

----- Original Message -----

From: Ken Williams <kenw@seanet.com>

To: Passagemaking Under Power List <passagemaking-under-power@lists.samurai.com>

Sent: Friday, April 6, 2007 9:16:33 AM

Subject: Re: [PUP] Heavy Weather tactics

> >I must confess that I've never personally seen either a drogue or a sea
> >anchor, so forgive my rookie questions about them.

I thought that I was a fan of parachute style sea anchors. However a couple of years ago, after doing quite a bit of reading and research, I changed my mind. In my opinion, the downside of a sea anchor is that they are large and cumbersome, they must be deployed from the bow in precarious conditions, and the boat will drift backwards in hazardous seas putting undue strain on the rudder. If you are going to use a sea anchor it is wise to practice deployment in advance in manageable conditions, but it will be necessary to go on deck during big seas to deploy it for real. There is no way to practice that scenario. Flaking the sea anchor to the stern cockpit is a clever solution. But even the people who sell sea anchors caution that it is necessary to go to the bow to adjust the bridle (angle to seas and length of rode) once it is deployed. Again one is exposed to hazardous seas on a pitching bow. This is doable with caution but not a place I relish to be.

Eventually I became interested in using drogues as a heavy weather tactic. The Jordan Series Drogue seemed to be the answer. No device is perfect and the Series drogue is difficult to deploy and retrieve and it is relatively expensive when compared to other devices. I don't think a drogue is the best solution very every boat. The drogue makes particular sense to me because of the design of my boat. I have a double ended hull, no swim platform, the stern bulkhead in the saloon has relatively small windows, and I have probably the lowest A/B ratio of any trawler in this size range.

I attended the Seattle Boat Show last January. While there, I renewed my acquaintance with Zac from Fiorentino Sea Anchors manufactured here in SoCal. Is this a coincidence that there is a Zach at ParaAnchor too? Anyway, Fiorentino was introducing their line of drogues they were adding to their range. I think that Fiorentino makes the best engineered sea anchor and Zac related the research and engineering that went into the design of their drogue. They tested a series drogue as a possible design but found that there were a number of problems with the design. They decided on a more traditional drogue design concept. Their introductory price was more than fair and I was convinced. Mine arrived a couple of weeks later. It fits in a valise that is a little larger than a hat box. Fiorentino recommends using a floating line as a tether. I will avoid using my engine when the drogue is deployed. I plan on making an interior "strongback" that will fit across the stern saloon bulkhead to reinforce the double sliding doors and windows. This will be through bolted in place when conditions merit (which I hope is never).

Did I make the right choice? I don't know, I am not an expert, I'm just trying to make the best decisions. I often lust after a larger boat but I soon realize that with a relatively small passagemaker the equipment (like a drag device) is smaller and easier to handle, the equipment is much less expensive, and a crew of two can handle just about any situation that might arise - except maybe fatigue.

I haven't practiced with the Fiorentino drogue yet, but I will. I am interested to see how this will work out. I also intend to try deploying the drogue off the bow, just to see what happens. Maybe I can talk Ken Williams into helping me with these tests ;-)

Patrick
Willard 40PH
ALOHA
La Paz, MX

Subject:
Re: [PUP] Heavy Weather tactics
From:
"Ken Williams" <kenw@seanet.com>
Date:
Tue, 10 Apr 2007 10:05:56 -0600

I just had an interesting discussion with Don Jordan, designer of the Jordan series drogue.

<http://www.jordanseriesdrogue.com>

I asked him specifically about my boat, describing it as a 100 ton trawler, with plenty of windage, and a boxy-stern.

My concern has been that the Jordan series drogue is available for boats up to only 35 tons. Don felt that the 35 ton drogue (180 cones on 370' of line) would be adequate for my boat. His comment was that there was no data he was aware of, but that his guess was that it would work just fine.

He had a very interesting response when I asked if bow deployment were possible, so that the drogue might be used as a sea anchor. Don was highly opinionated on this topic. He stated that he does not believe (parachute-style) sea anchors work, or have ever worked. His recommendation, if I were dead in the water, was that I use the Jordan series drogue deployed from the stern, and sit stern-to-the wind. I asked whether or not this meant taking waves over the transom, and he didn't think it would be a problem.

Note this comment from his website: "... In the more than 15 years that the drogue has been at sea, no boat has ever been damaged. In particular the rudder, transom, cockpit and companionway doors have all been unscathed...." I don't know Don, or his background, beyond what is on the website, and his website further states that he has no financial interest in the sale of his drogues.

I'm still not sure what I'll do, but he seemed to make sense, and I sure like the idea of stern deployment better than bow deployment. One thought is to ask the makers of the drogue if a slightly larger model is possible...

-Ken Williams

PS to Patrick Gerety ... yes! I'd love to practice deploying one of these things, and there's no lack of wind in La Paz to keep things interesting.

Subject:

Re: [PUP] Heavy Weather tactics

From:

Mike Maurice <mikem@yachtsdelivered.com>

Date:

Tue, 10 Apr 2007 09:22:52 -0700

To:

kenw@seanet.com, Passagemaking Under Power List <passagemaking-under-power@lists.samurai.com>

> > I just had an interesting discussion with Don Jordan, designer of the Jordan

> > series drogue.

> >

I have had similar phone and email contact with Don Jordan.

What Ken reports jibes with what I found. All of this was gone over in the Trawler Forum about 2+ years ago.

I will see if I can find the relevant posts.

Mike