

**Dealing with emergencies:
“Oh dear, what do I do now?”**

**Presented at Fremantle Sailing Club Cruising
Section topics night
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by

Kim Klaka

Outline

- Why things go wrong
- Three typical emergencies- how to act and how to prevent
- Summarise findings of the audience

Injury Prevention Center, Brown University USA

Preliminary Raw Data from Sailing Injury and Safety Survey

Response Rate/Demographics

- o 1,431 completed surveys
- o 1,036 Reported 1 injury, 294 2 injuries, 44 3 injuries
- o Gender 84% Male, 16% Female
- o Age Mean = 40 (S.D. 13.3)
- o Experience
 - 2% Beginners
 - 75% Intermediate
 - 23% Professional/ Pro equivalent
- o Number of days sailed per year = 65 (S.D. 49)
- o Citizenship 97% N. America
- o Injury in last 12 months? 73% Yes

Type of Injury

- o Bruise 32%
- o Laceration 30%
- o Sprain 18%
- o Other* 10% (* Rope burn, blisters, rotator cuff, disc)
- o Fracture 6%
- o Dislocation 2%
- o Concussion 2%

Cause of injury

- o Trip/Fall 29%
- o Hit by Object* 22% (*Boom, Crew member, Block, Sail)
- o Lines/Halyards 9%
- o Fall Overboard 1%
- o Winch 1%
- o Other 30%

**Injury Severity
(What happened
as a result of
this Injury)**

" No Treatment
Required 52%

" Sought Medical
Care 25%

" First Aid on Boat
21%

" Hospitalized 1%

" Evacuated <1%

Contributing Factors

- o Heavy Weather 18%
- o Tacking 16%
- o Crew Error 10%
- o Jibing 9%
- o Sail Change 7%
- o Capsize 6%
- o Equip. Failure 3%
- o Docking 3%
- o Fatigue 3%
- o Broach 3%
- o Not Applicable 8%

Why do things go wrong?

bad luck lack of attention unskilled operator

Solution:

TRAINING + PRACTICE!

1. What do I do now?
2. How could I prevent it?

(a) Sinking (whale collision)

(b) Dismasting

(c) Out of control (heavy weather)

Cruising Section Risk Management Plan on sinking:

<u>Risk</u>	<u>Type</u>	<u>Likelihood</u>	<u>Consequence</u>	<u>Inherent</u>
<u>Risk</u> 6B. Collision leading Serious to abandoning the vessel at sea.		4	E	

Treatment

- a) Procedure in place for rapid response to Mayday.
- b) Radio transceiver on board and continuous radio watch by all vessels on emergency and cruise frequency eg VHF dual watch 16 & 73.
- c) Handbook for Radiotelephone Ship Station Operators to be carried on board. Recommend all hold Radio Operator's certificate
EPIRB serviced, in date, accessible.

Sinking: what do I do next?

- Determine extent of damage and how quickly boat is sinking
- COB? (Crew Over Board)
- Work out then tell everyone the plan
- Lifejackets on
- Record position
- EPIRB/Mayday
- Get liferaft/dinghy ready
- Grab bag – shelter, water, comms, medical
- Check injuries

Sinking: How could I prevent it?

- Avoid whales?! – good lookout
- Maintain predictable course and speed
- Collision bulkhead
- Collision umbrella
- Stronger hull
- Buoyancy – float packs
- Test bilge pumps

Dismasting:

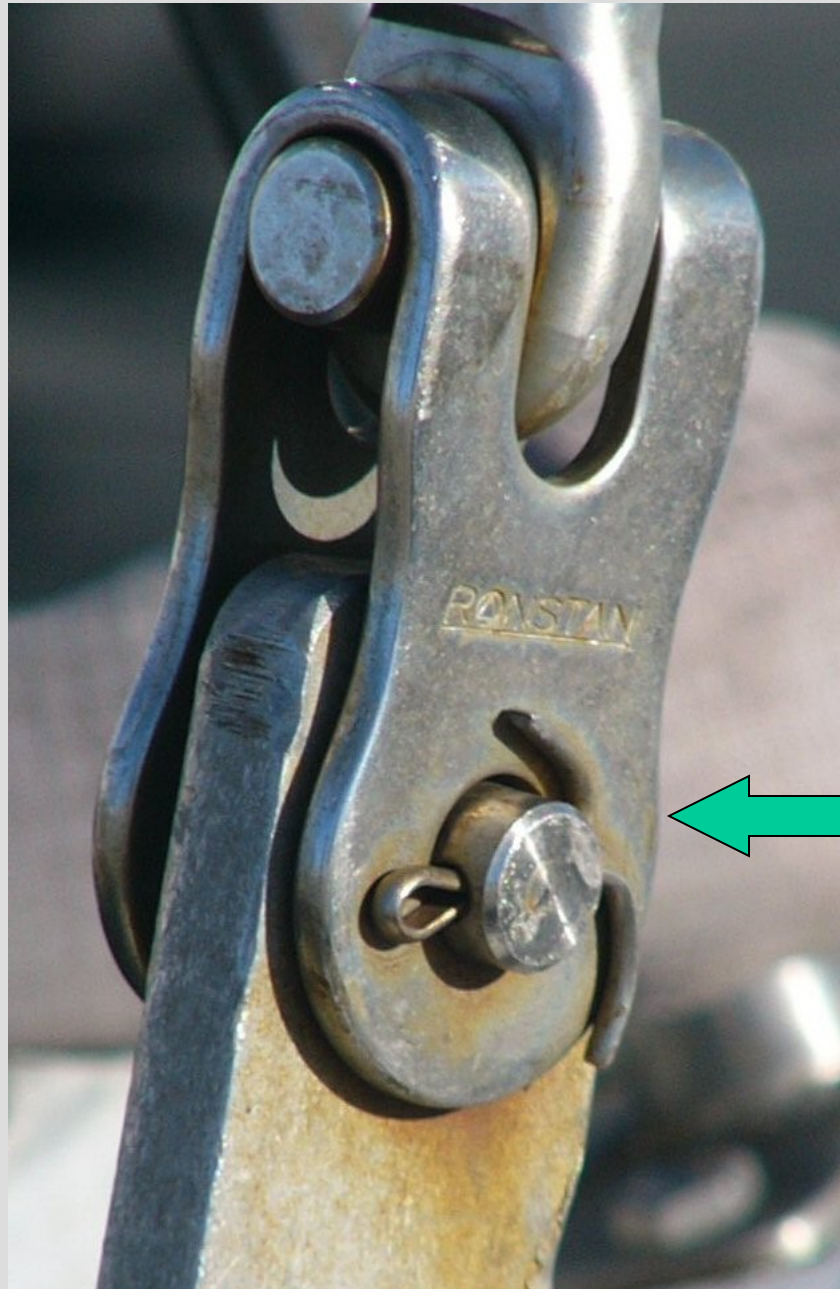
Not specifically covered in Cruising Section
Risk Management Plan

Dismasting: what do I do next?

- Don't panic
- Check Crew Over Board (COB) – Mayday?
- Check injuries
- Safety harnesses on
- DO NOT start engine
- Anchor? (lee shore)
- Cut rig loose if risk of hull damage, or retrieve for use as jury rig
- Check if radio aerials OK – rig emergency aerial?
- Pan Pan?

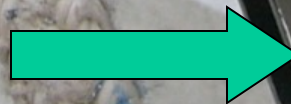
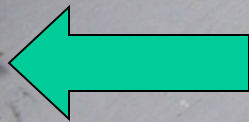
Dismasting – How could I prevent it?

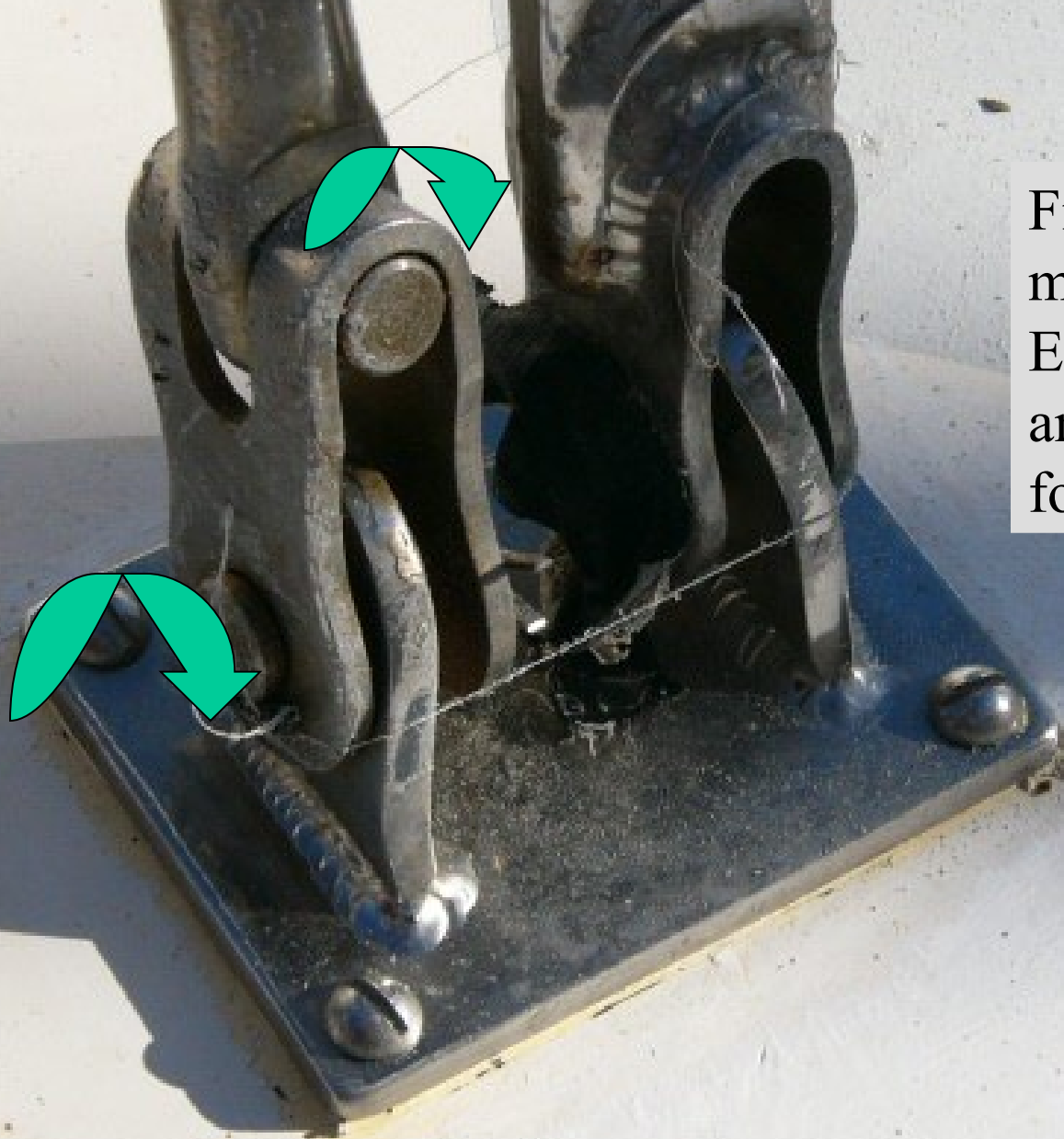
- Use the boat as intended
- Reduce sail early to reduce rig loads
- Avoid bad weather
- Regular rig inspection – mast out, check section, wire and spreaders in particular
- Fit mast steps for inspection afloat
- Use toggles, do not re-use split pins
- Replace rigging every x years (x = 7? 5?)
- Polish mast (cracks then visible)
- Avoid pinholes in paint
- Lightning strike – needs strap for deck-stepped masts



If you must
bend pins back,
replace every
time you
straighten them

Only bend them back 10 degrees. Even then, you might as well replace them every time – 30c spent could save \$10,000





Fit toggles to allow movement.
Especially, fit to top and bottom of forestay

Spreader sockets have been made or fitted wrong. The spreader should bisect the stay angle. On this yacht, the angle is less above the spreader than it is below it. This puts a bending load on the spreader which it is not designed for. The spreader will fail, then mast will fall.



Quick release
pin with string
on forestay; not
good.

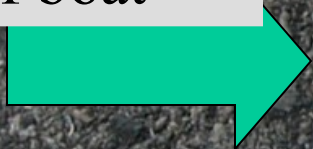
Anchor can pull
string when
released, release-
pin releases, clevis
pin comes out,
mast falls down

anchor



Repaired corrosion of mast section where it passes through the deck (keel stepped mast).

Not visible unless mast is out of boat



Out of Control: Risk Management Plan

<u>Risk Type</u>	<u>Likelihood</u>	<u>Consequence</u>	<u>Inherent Risk</u>
3. Adverse weather	1	B	Serious

Treatment

- a) Advise skippers their responsibility to provide:
 - i) A seaworthy boat.
 - ii) Appropriate safety equipment on board (min. requirement DPI marine transport regulations).
- b) FSC provide training programs to help skippers establish their competence to an appropriate standard.
- c) List in the Briefing Notes contact information for important sources of reliable weather information.

<u>Risk Type</u>	<u>Likelihood</u>	<u>Consequence</u>	<u>Inherent Risk</u>
5. Skipper inexperience	2	B	Medium

Treatment

FSC provide training programs to ensure skippers' competence is to appropriate standard

Out of control (downwind): what do I do next?

- Get back under control – release sheets, vang etc.
- COB?
- Need a good helmsperson to act
- Check no lines in water (in case engine needed)
- Damage – rig, rudder, hatches
- Injuries
- Mayday? Pan Pan?

Out of control: How could I prevent it?

- Avoid bad weather, especially squalls, swell, -weather forecasts, stay home !
- Reduce sail early – how downwind? Maybe furl headsail then head up to drop main.
- Learn to handle boat in big seas
- Change heading angle to waves
- Make early decisions
- Education – learn from others
- Drogues etc.

The End