

# Advanced Cruising reading list and X-reference Overview

## SAILING SKILLS / SAIL TRIM

Basic Cruising Skills by Gillian West, published by the Canadian Yachting Association

Basic Sailing Skills by Sven Donaldson, published by the Canadian Yachting Association

Advanced Sailing Skills by Sven Donaldson, published by the Canadian Yachting Association

Sail Power by Wallace Ross, published by Knopf

Sail like a Champion by Dennis Conner, published by St. Martins Press

The North U. Fast Course text, North Sails now available as the Performance Racing TRIM Coursebook from North Sails, North U. Publications

The Art and Science of Sails by Tom Whidden, published by St. Martins Press

Series of Articles on sail theory by Arvel Gentry <http://www.gentrysailing.com/theory.html>

Sail & Rig Tuning by Ivor Dedekam , Fernhurst (also available as e-book)

Sail Trim & Rig Tuning Bill Gladstone N. Sails West Marine Quick guide

## WEATHER

Wind, Weather and Waves, published by Environment Canada, Available from the Ontario Sailing Assoc.

Meteorology Today by C. Donald Ahrens, published by West Publishing Company

Mariner's Weather Handbook by Steve and Linda Dashew, published by Beowulf Inc.

The Weather Cyler (training aid) can be purchased from American Meteorological Society <https://www.ametsoc.org/ams/index.cfm/education-careers/education-program/k-12-teachers/education-materials/>

Onboard Weather Forecasting by Bob Sweet, West Marine Quick Guide

## SYSTEMS

Troubleshooting Marine Diesels by Peter Compton, International Marine (Camden Maine)  
([www.Boatdiesel.com](http://www.Boatdiesel.com))

Boatowners Mechanical and Electrical Manual by Nigel Calder, International Marine(Camden Maine)

Diesel Engine Care and Repair by Nigel Calder, West Marine Quick Guide

Keeping your Marine Diesel Running by Richard Thief, International Marine Camden Maine

## NAVIGATION

Small Craft Piloting and Coastal Navigation by A. E. Saunders, RTP Sales

## GENERAL SEAMANSHIP

Cruising Fundamentals by Harry Munns, The American Sailing Association

Chapman Piloting Seamanship and Small Boat Handling, Hearst Marine Books

The Annapolis Book of Seamanship by John Rousmaniere, Simon and Schuster

Heavy Weather Sailing by Adlard Coles, International Marine Press

Heavy Weather Cruising, by Tom Cunliffe, Fernhurst

Seamanship by Peter Kemp, Van Nostrum Rhinehold

Knots in Use by Colin Jarman, Adlard Coles Ltd.

Chapman Knots for Boaters Brion Toss, Hearst

Passage Making is the latest in a series of 5 books written as part of US Sailing's certification series. Though this book does not cover the CYA course material in full it will be an addition to my bookshelf and I would recommend it to fellow sailors.

## **PASSAGE MAKING - ASHORE KNOWLEDGE SECTION OVERVIEWS**

### *Section I. Sail Theory*

There is almost nothing in this book relating to sail theory. An extract from the introduction reads "The purpose of this book is to consider those elements that separate passage making from inshore sailing". Refer to some of the suggested texts above. For the Advanced Cruising level, I'd suggest one or more of the books by Donaldson (Advanced Sailing), Ross, Conners and Dedekam

### *Section II. Weather*

This topic is well covered with easy to read descriptions augmented by excellent diagrams. Also recommend Wind Weather and Waves.

### *Section III. Safety*

Many safety related topics are dealt with but the specifics of the PO's are not. Recommended is a copy of the Collision Regulations (Office Consolidation) and Collision regulations study Guides. On the Internet, try [http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,\\_c.\\_1416/page-1.html](http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._1416/page-1.html)

for the regulations as published in the Canada Shipping Act and [www.navrules.com](http://www.navrules.com) for practice recognizing lights. Note the source of study guide information and Internet based tools - you should target the International Rules with Canadian Modifications

### *Section IV. Use, Maintenance and Repair of Boat and Equipment*

There are excellent paragraphs on the systems to be encountered and their maintenance. However once again the specifics of these PO's are not dealt with. You may have to do some digging -, as well as always some in the spring and fall cruising magazines. There is a good checklist on Winterizing in Nigel Calders book and his section on rigging looks excellent.

### *Section V. Seamanship*

There is good coverage of this section. The missing elements can be easily dealt with reference to other books such as Chapman, Annapolis Book of Seamanship and Heavy Weather Sailing.

AFLOAT SKILLS:	
<p>The assessment of the coverage for this section relates to the usefulness of the theoretical material as background to these practical skills. These skills must be demonstrated on board. An indication of page numbers of supporting material has been compiled along with appropriate commentary.</p>	

CYA Advanced Cruising Standard	Passage Making US Sailing
OBJECTIVE	
To be able to act safely as skipper and crew of a sailing cruiser of 8 - 15 metres, operating by day and night in coastal or inland water in any weather.	Coastal Passage Making graduates will have successfully demonstrated their ability to responsibly skipper and crew an inboard auxiliary powered cruising sailboat during passages on coastal waters, in all weather conditions, including all levels of visibility and all hours of the day and night
<p>The adequacy has been categorized as follows:</p> <p>AC = Adequately Covered (<math>&gt;75\%</math>)  PC = Partially Covered (40 - 75%)  NC = Not (or insufficiently) Covered (0-40%)</p>	

ASHORE KNOWLEDGE		
Section I. Sail Theory		
<p><b>Section Overview</b>  <i>There is almost nothing in this book relating to sail theory. Other resources need to be used – the purpose of this book is to consider those elements that separate passage making from inshore sailing</i></p>		
Performance Standard		Assessment
The candidate must be able to:	Page(s)	
1. Describe the theory of true and apparent wind;	17,82	NC see Dedekam, Donaldson or alternate
2. Describe the theory of sailing with diagrams showing force diagrams of sails, keel and boat and a method of finding centre of effort and centre of lateral resistance;	139	NC see Dedekam, Donaldson or alternate
3. Describe with the aid of diagrams the causes of lee and weather helm, and the method of correcting them. Included must be: a) The reason for preference for slight weather helm. b) The effects of adjustments in sail area made by sail change or reefing c) The effect of mast position and rake;	178	NC see Dedekam, Donaldson or alternate
4. Describe the effects on sail shape of adjustments to the following: a) halyard tension      d) Cunningham tension b) outhaul tension      e) traveller position c) boom vang tension    f) jib fairlead position		NC see Dedekam, Donaldson or alternate

<b>Section II. Weather</b>		
<b>Section Overview</b> <i>This topic is well covered with easy to read descriptions augmented by excellent diagrams.</i>		
Performance Standard		Assessment
The candidate must be able to:	Page(s)	
5. Describe the progress of a low pressure area and its associated warm and cold fronts with regard to their related winds, pressure changes, temperature changes, wind shifts and clouds and be able to use these factors to make elementary weather forecasts;	31-39 117-124	AC
6. Demonstrate the ability to decode a surface level synoptic chart and describe the expected weather including forecast wind speed and direction, locations of highs, lows, fronts and their expected direction of motion;	125	PC numerous internet resources
7. Demonstrate an understanding of how to interpret a weather forecast in relation to expected maximum wave heights and wind gusts and related considerations when approaching land or establishing vessel route;	125	AC
8. Give visual description of cirrus, altostratus and cumulus type clouds, and be able to describe the expected weather associated with each.	35 - 37	AC

<b>Section III. Safety</b>		
<b>Section Overview</b> <i>Many safety related topics are dealt with but the specifics of the PO's are not.</i>		
Performance Standard		Assessment
The candidate must be able to:	Page(s)	
9. Apply Rules 1 through 36, 40 and 45 of the <i>Collision Regulations</i> so as to be able to recognize all lights;		NC See ColRegs
10. Cite from memory the distress signals in Annex IV of the <i>Collision Regulations</i> ;	48, 68, 131	NC (Radio & Flares only) See ColRegs
11. Describe the recommended methods of grounding for lightning: a) permanent installation b) temporary installation for those vessels not so fitted.		NC See Calder

<b>Section IV. Use, Maintenance and Repair of Boat and Equipment</b>		
<b>Section Overview</b> <i>There are excellent paragraphs on the systems to be encountered and their maintenance. However once again the specifics of these PO's are not dealt with.</i>		
Performance Standard		Assessment
The candidate must be able to:	Page(s)	

12. Describe how to winterize candidate's hull and equipment in local area (excluding sails and spars) and to prepare for spring launch. In location where the vessel is afloat all year, describe yearly haul-out and overhaul;		NC See Calder
13. Describe seasonal checks of sails, spars, standing rigging, and running rigging;		NC See Calder
14. List the factors that adversely affect the operation of Radio Direction Finder (RDF), Loran, Radar, GPS or other electronic aids to navigation aboard the vessel being used for instruction.		NC Need reference

<i>Section V. Seamanship</i>		
<b>Section Overview</b> <i>There is good coverage of this section. The missing elements can be easily dealt with by the use of handouts or reference to other books.</i>		
Performance Standard		Assessment
The candidate must be able to:	Page(s)	
15. Describe two methods of using a second anchor to reduce swinging;	94?	NC ( In the Dinghy Management section the idea of using a dinghy as a means of laying a kedge anchor is mentioned without any reference to what or why)  See Chapman
16. Describe: a) when and how to use a trip line and anchor buoy b) three other methods of recovering an anchor which is fouled on the bottom;	91	a) AC b) NC (One method described) See Chapman
17. Describe how the vessel should be handled, and what remedial action should be taken when the following emergencies occur while under sail: a) the vessel is dismasted b) the vessel runs aground on a lee shore	140	a) AC b) NC  See Basic cruising Skills
18. Describe towing bridles for both disabled and towing boats and to describe precautions to be taken prior to getting underway, while getting underway, and while underway;	80	PC (Does not adequately cover precautions nor towing boat issues) See Chapman
19. Describe the selection of sails for use on the vessel selected, in relation to weather, in all conditions likely to be found in the local area, and give reasons for the selections made. Include the full range of sail combinations available from full canvas to bare poles;	15-19 104-108 151,152	AC
20. Describe the appropriate heavy weather precautions for the vessel selected, and describe how they are carried out. To include sail changes, use of special equipment such as safety harness, sea anchor, doubling up of gear, special checks in areas likely to chafe, storage of equipment above and below decks, checks on condition of bilge, special arrangements for dinghy tender (if used), methods of dealing with and avoiding fatigue, selection of clothing, and schedule of watches;	28, 66 - 71, 148 - 154	AC (The book gives a good overview and deals with all the subjects. No book could fully deal with this PO as written)
21. Describe the actions in the vessel selected for heaving to and lying a-hull;	152, 154	AC
22. Plan a cruise of 5 days with a non-stop passage of 40 hours, taking into account food, watches, navigation (as per CYA Standards) anchorages and alternative routes and shelters;		PC (Topics discussed in a general sense only)  Handout

23. Describe (and where practical demonstrate) the appropriate remedial action for the following electro-mechanical problems: a) Stoppage in the fuel supply line, b) Failure of the engine's raw water pump impeller, c) Defective starter motor and/or glow plug solenoids, d) Blocked or defective head, e) Faulty domestic water system, f) Fire;	56 -67	AC
24. Describe when and how to carry out an oil change on the engine;	59	AC
25. Describe how to change a fuel filter and bleed fuel supply lines for a diesel engine;	60, 61	AC
26. Demonstrate the use of safety harness, personal strobe light, and an 406 EPIRB.	50, 69, 70, 71, 131, 132	AC
27. Discuss and describe how to dock and leave dock under sail, and how to anchor and weigh anchor under sail.		
28. Describe the dangers and/or risks associated with sailing in reduced visibility and at night, and procedures to minimize the identified risks and dangers.		
29. Describe the general aspects of ballasted monohull yacht stability, including (a) Centre of gravity (CG) d) Righting moment (RM) (b) Centre of buoyancy (CB) e) Angle of Vanishing Stability (AVS) (c) Righting lever (GZ) f) Free surface effect	98-101	AC
30 Discuss the stability differences between ballasted monohull yachts and unballasted multi-hull yachts (a) Sketch GZ curves for various types of vessels (b) Compare and contrast the GZ curves for traditional narrow beam heavy displacement vessels and modern wide beam high volume light displacement vessels (c) discuss the capabilities of the vessel used in the course.	98-101	AC

<b>AFLOAT SKILLS:</b>		
The assessment of the coverage for this section relates to the usefulness of the theoretical material as background to these practical skills. These skills must be demonstrated on board. An indication of page numbers of supporting material has been compiled along with appropriate commentary.		
The candidate must be able to:	Page(s)	Comment
<b><i>Section VI. Preliminaries</i></b>		
1. Check out a given boat for extended passage to include: a) soundness of hull, spars, rigging, deck hardware, sails, engine, internal systems, head, galley, stowage, safety equipment, spare parts b) suggest needed improvements, repairs and additions to make the vessel totally seaworthy and sound;	Ch 9, 14, 21	High level discussion, well written with good diagrams.
<b><i>Section VII. Underway</i></b>		

2. Apply Rules 1 through 36, 40 and 45 of the <i>Collision Regulations</i> in practical on-water situations;		See Colregs
3. Manoeuvre under power in simulated tight conditions with high winds and/or tidal currents and dock the boat under same conditions;		See Saunders
4. Sail a vessel of the given size at an advanced level of skill, on the helm and as crew, on all points of sail;		See range of resources
5. Set and weigh anchor under sail;	88, 89	Discusses anchoring under sail for various wind/current combinations. It does not cover weighing anchor under sail.
6 Pick up and depart a mooring buoy under sail.		
7. Take appropriate action in the event an engine fails in various conditions (to be simulated);		See Calder, seamanship texts
8. Check the tune of a mast;		Not discussed. see Dedekam
9 Rescue a swamped dinghy and, if possible, stow it on deck while underway;		Not discussed.
10. Perform the following Crew Overboard return procedures by day and night: a) Triangle method, b) Alternate method under sail, c) Williamson and Anderson turns under power;	68 - 79	Excellent diagrams for sailing recoveries. W&A turns not covered. <a href="http://www.tc.gc.ca/eng/marinesafety/tp-tp10038-86-emerg-anderson-turn-1858.htm">http://www.tc.gc.ca/eng/marinesafety/tp-tp10038-86-emerg-anderson-turn-1858.htm</a> <a href="http://www.tc.gc.ca/eng/marinesafety/tp-tp10038-86-emerg-anderson-turn-1858.htm">http://www.tc.gc.ca/eng/marinesafety/tp-tp10038-86-emerg-anderson-turn-1858.htm</a>
11. Simulate at least two different methods of recovering a Crew Overboard;	71 - 73	Some methods not mentioned; those that are, are well described.
12. Prepare and serve a hot meal while underway;	27	Good messages, regular food is important.
13. Set an anchor from a dinghy;	94	Good tips.
14. Set a Bahamian moor;		NC. See chapman – anchor to reduce tidal swing.
15. Act as skipper and responsible crew on a live-aboard cruise of at least 48 consecutive hours;	Ch 4	Well worth reading. Deals with many aspects of living and working on board.
16. Satisfactorily demonstrate the ability to assume total command of all operations of the vessel and its crew.		Well worth reading. Deals with many aspects of living and working on board.

<b>Section VIII. Navigation</b>		
The candidate must be able to:	Page(s)	Comment



17. Determine deviation of the ship's compass using a transit;		Chapman
18. Determine accuracy of knotmeter and depthsounder and make adjustments, if possible;		
19. Stand a navigation watch of 20 miles by day and 20 miles by night, keeping a full navigation log including the following: a) Danger bearings b) Clearing bearings c) Advancing a line of position d) Distance off e) Plot course upwind including 3 tacks and the resulting Dead Reckoning (DR) position f) Fix position using electronic navigation equipment g) Plot leeway or current set and drift on 3-5 mile leg and compensate to arrive within a 1/4 mile of estimated position	Ch 6 & 19	Inadequate. These chapters are "thin" on subject matter. Handouts
<b><i>Endorsements</i></b>		
1. Make an eye splice in braided line		
2. Dock and leave dock under sail		
3. Pack, hoist set fly gybe and douse a spinnaker		