

Powerboating CD

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Note on Version 1.1, March 2007

The author welcomes any suggestions and improvements to this index. Please email him at bmoffatt@wetpaper.com.au

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Powerboating CD

Powerpoint lecture contents

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Lecture 1 - How a boat is designed and where it can go

Boat features

Where a boat can go

Vessel configurations

Stability

Hull types

Hull features

Suitability

Boat systems

Propulsion

Jet drives

Fuel and ignition

Steering and gear

Engine cooling

Electrical and navigation

- simple boat circuits, marine batteries, circuits and fuses, depth sounder, GPS and charts

Anchoring

Mooring and berthing

Trailer

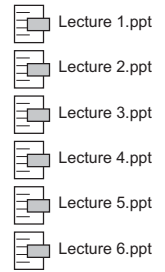
Fasteners, fittings

Places on a boat

Revision

Shown as:
Lecture 1.ppt
on CD.

These are
editable
powerpoint
presentations
with all the
slides in them.



Lecture 2: The general safety obligation

Boat maintenance

Inspect the vessel for damage

Check the trailer and winch

Run the motor

Ear muffs and hose

Check the prop and check the plugs

Replace old fuel with new

Check batteries and electric circuits

Check your radio and navigation lights

Organise a basic tool kit

Rope maintenance

Check the bilge and bungs

Check that you have a spare set of bungs

Check the linkages, steering and fittings

Check the operation of trim and tilt mechanisms

Check stowage and anchor

Check provisions for emergencies

Service your boat regularly

Comply with regulations and safety equipment

Registration - numbers and labels

Licences/tickets

Compass and chart

Anchor with chain

Bucket, bailer or bilge pump

Signalling devices

EPIRBs

Fire extinguishers

Paddles, oars/rowlocks

Personal flotation devices - lifejackets

Navigation equipment

Marine radio

Navigation lights

Flotation - builders plates, capacity labels

Commonwealth and State laws

Boating accidents and incident reports

Avoiding infringements - alcohol/drugs

Pollution

Waterside land management

Noise

Heritage wrecks

Marine animals and plants, turtles, dugong, whales

Revision

Lecture 3: How to avoid collisions

IALA buoyage system

- lateral marks, cardinal marks, safe water marks, special marks

Other navigation aids

- channel markers in rivers, blue channel marks
- advisory signs, speed and operation zones
- combined signs
- leads

Boating rules

- rivers and channels rule
- sailing boats and power driven boats
- overtaking rule
- approaching bow on to another boat
- power driven boats crossing
- cross river ferries rules
- action by stand-on vessel and give-way
- the give-way vessel
- responsibilities of vessels
- restricted visibility

Flags and signals

- ski signals, sound signals
- divers flag

Identify navigation lights on vessels

- light definitions
- masthead, stern and side lights
- all round and combined
- combined stern and sidelights
- towing light
- lights on sailing boats and power boats
- power boats less than 7 metres long and less than 20 metres long
- boats to stay away from

Lights

- towing, aground, not under command, at anchor
- boats fishing, boats trawling
- dredging
- diving, ferries
- other vessels restricted in their ability to manoeuvre
- cross river ferry
- dive boat

Revision

Lecture 4 - Planning a trip

Where you want to go and how much fuel you need

Stow emergency equipment for easy access

Plan for emergencies

Learn how to read your weather map

Summer - winter

Morning - afternoon

Offshore - onshore

Sources of weather information

Interpreting weather warnings

Cyclones or low pressure warnings, storm surge

Anticipate the weather conditions

Use clouds as a guide

Use wind and waves as a guide

Wind over tide

Wave height and limits of safety

Waves on coastal bars

Interpreting tidal information

Sources of tide information

Daily tides

Spring and neap tides

Identify chart soundings

Depth of water under boat at a given time

Navigate a compass course

- latitude and longitude
- magnetic variation
- chart equipment
- where do you want to go?
- use parallel rules to work out the true bearing
- calculate which compass course to steer
- measure the distance
- calculate the time
- use the compass to steer your course
- waypoint navigation
- back bearing

Boat emergency plans

- leave a note
- log on with local VMR

Planning a trip

- plan where you want to go
- weather conditions

Lecture 5 - Boating skills

Row a boat

Fuel the tank

- outboard oil bottle

- follow the rules

Mount an outboard motor and pre-departure check

Start an outboard motor

Exercise minimum control speed

- driving in a straight line

- reverse thrust

- reverse into the wind

Depart from a beach

Return to a beach

Drive a boat with the helm at the stern

- onto the plane

- faults

Drive a boat with forward controls

- onto the plane

- faults

Organise mooring/docking lines

Depart from a dock

Dock at a jetty

Cross a wash

Make a turn in a confined space

Complete a figure of eight and S turn

Make an emergency stop

Moor at a buoy

Handle adverse conditions

- approaching a lee shore

- offshore

- bar crossing out

Anchoring

- locate anchorage

- determine time and type

- short stay, overnight

- determine seafloor conditions and swing circle

- determine scope

At the boat ramp

- launching, retrieving

- spot the errors

Bowline

Sheet bend

Round turn and two half hitches

Splicing

Revision

Lecture 6 - Emergency response

Conduct a safety briefing

Rescue a person overboard

Use flares and signalling devices

Accept a tow

Deal with engine failure

Fight a fire

Use a radio

Activate an EPIRB

Help others in distress

Deal with a capsized boat

Abandon ship

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