

# RESCUE ON THE LAKE

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Albert Park Yacht Club

## **Disclaimer:**

This book has been written with every safety procedure in mind. However, it is not a be-all and end-all and the author takes no responsibility for any misinterpretation or misapplication of the text. The author writes this book as a guide and the information contained herein may mean nothing in any given situation. The author stresses that nothing beats experience, and that you read this book on the understanding that you read this book only as a guide. All power boats drivers must have a current Victorian Boat Operators Licence and are covered by all the rules and regulations under state and federal law. It is the wholly the responsibility of the operator to abided by these regulations.

## Albert Park Yacht Club Rescue Boating Manual

### 1. The boats

Albert Park Y.C. has five powerboats, each completely different. This is just an overview.

#### **Pilot:**

Pilot, the start boat, is an 18' fibreglass displacement hulled boat. It is equipped with a Yanmar 15HP diesel inboard engine. It has a half-cabin and has steering by rudder. The rudder is linked by cables to a steering wheel located on the port hand side of the cabin. It is kept moored just in front of APYC.

#### **Grey Duck:**

This is a 4m Avon water-ballasted inflatable equipped with a 15HP four-stroke Honda outboard motor. It has tiller steering and although it leaks a bit is serviceable. It is kept on a trolley in the boat shed.

#### **Red Duck (Cygnet):**

This is a 3.8m with a 18hp Toshatsu Two-stroke motor on the back. It has tiller steering. It is a completely open boat. All ducks are used primarily for rescue. Cygnet is kept in the boat shed.

#### **Red Duck (Escort):**

This is a 3.8m 15hp Honda Four-stroke motor on the back. It has tiller steering. It is a completely open boat. All ducks are used primarily for rescue. Albert is kept in the boat shed.

#### **Tinbin:**

This is a 4.5m tinny equipped with a 20HP blue band Mercury motor. It has forward controls located just behind the windscreen. It is the least used of all the boats, to be used for shorten course signals and if two start boats are required. It is kept in the open yard.

### 2. Fuel

Should you find it necessary, there are several Jerry cans in the shed for re-fuelling the boats. Two cans contain straight unleaded petrol, one contains 50:1 premix and one contains diesel fuel. They are all clearly marked, **do not get them mixed up!** If you put the wrong sort of petrol in the wrong boat, the motor is likely to seize or die. In the ordinary way, though, you should not have to touch the Jerry cans. If you do not know which fuel to use ask.

The boats take the following fuel:

**Pilot:** Diesel fuel.

**Cygnet:** 50:1 premix

**Escort:** Straight unleaded petrol

**Grey duck:** Straight unleaded petrol

**Tinbin:** 50:1 premix.

If you need to refill the tanks, do it out in the open in the court yard. Do not smoke, and know where the fire extinguishers are. Don't refill a tank inside a boat, except in Pilot where you can't take the tank out.

## The Engines:

**Pilot:** This engine needs particular care. Before starting:

1. Check fuel. The tank is fixed in the stern. It has an opening on the rear deck, the cap can be screwed off using an implement found in one of the stem seat-lockers. A dipstick is stowed in the stem locker with a hatch below the fuel cap. **Diesels must never be allowed run out of fuel.** If it does, it will mean bleeding the fuel line of air for about twenty minutes.
- NB. This boat must have diesel fuel and diesel fuel only! The containers are clearly marked.
2. Turn on water stopcock found under the floorboard just in front of engine (big box in centre).
3. Turn on electrics found under cover behind driver's seat. The switch has a black handle which must be pushed all the way up for contact.
4. Put gearstick in neutral. (This is the central click, you will have to feel for it.) A knob below the gearstick/throttle pulls out when in neutral.
5. Pull out knob below gearstick. This disengages the motor from the gearbox and you can increase the revs of the motor without the propeller turning. Then push this lever forward a bit to up the engine revs.
6. Turn key **one** notch. (It will make a screaming noise and red lights will shine... this is normal, don't worry. They should stop a few seconds after the engine is started, if they don't , turn the motor off as per instructions below.) The third key position is not used.
7. Press starter button just above keyhole.
8. Press button for approximately 5 seconds. If the motor does not start, up the revs and try again. (NB. On cold days, this engine will take almost full throttle to start.)
9. If motor persistently does not start, tow boat to shore and ask committee person to investigate.
10. Once started, warm boat up for about four minutes at 1000 RPM
11. Check water is pumping out of exhaust port in stern.

The motor must be turned off in this order:

1. Put motor in neutral
2. Pull either cork attached to string coming out of engine box or knob on transom that says " ENG". **STOP, DO NOT TOUCH KEY UNTIL YOU HAVE DONE THIS.**
3. Release knob or cork when engine has completely finished turning over and screaming noise can again be heard.
4. Turn key to 'OFF'.
5. Turn off electrics. Switch under cover behind driver's seat.
6. Re-cover boat.

## Grey Duck:

This is an electric-start four stroke. It runs on straight unleaded petrol. It has an oil sump that can be checked with a dipstick located under the cowling.

To start:

1. Check that fuel tank is full and fuel lines are connected.
2. Make sure motor is all the way down.
3. Pump fuel bulb until hard.
4. Check motor is in neutral. (Gear lever on small black handle, starboard side of motor)
5. Pull out choke. (Black knob on front of motor.)
6. Wrap dead man lanyard around wrist. Depress starter button. (Located on left hand side of gear lever. The lever has a cover that will hide the button if it is in gear.)
7. Try for five seconds.
8. If the motor does not start, turn the hand throttle (twist grip) so the motor has more revs. and try again.
9. If does not start, release choke (push it all the way in) and try again..
10. To stop, press red button on tiller.

**Red Duck: ( Escort)**

This is an electric-start four stroke. It runs on straight unleaded petrol. It has an oil sump that can be checked with a dipstick located under the cowling.

To start:

1. Check that fuel tank is full and fuel lines are connected.
2. Make sure motor is all the way down.
3. Pump fuel bulb until hard.
4. Check motor is in neutral. (Gear lever on small black handle, starboard side of motor)
5. Pull out choke. (Black knob on front of motor.)
6. Wrap dead man lanyard around wrist. Depress starter button. (Located on left hand side of gear lever. The lever has a cover that will hide the button if it is in gear.)
7. Try for five seconds.
8. If the motor does not start, turn the hand throttle (twist grip) so the motor has more revs. and try again.
9. When started release choke (push it all the way in) .
10. To stop, press red button on tiller.

**Red Duck (Cygnet):**

1. Check fuel and lines. NB Fuel is a 50:1 premix!
2. Pump bulb when motor is down all the way.
3. Check "Dead Man's switch" is wrapped around your wrist and in position'.
4. Check motor is neutral position. (Dead centre)
5. Pull out choke if motor is cold
6. Press starter button.
7. Turn motor over for five seconds, if no go then try again.
8. If no go after second go, release choke. Try again. If no go, try again.
9. If no go, try a bit more throttle
14. To stop it, press red button.
15. To pull up the motor, the motor will need to off and the gear lever in forward.

**Tinbin:**

1. Check fuel tank and lines. NB. Fuel is 50:1 premix. If you run motor without oil, it will seize!!!
2. Pump fuel bulb when motor is completely down.
3. Check hand throttle is in neutral (No markings, you will have to feel for it.)
4. Pull up fast idle throttle and depress choke. (Black button on top of control box.)
5. Click key all the way till the starter motor engages.
6. Turn motor over for five seconds, if it doesn't go then try again.
7. If it doesn't go after second try, release choke. Try again, If no go, try again.
8. If no go, push hand throttle all the way back and try again.
9. If no go, the batteries will be close to gone or the motor might be flooded.. Wait ten minutes, then try again.
10. If it is a cold day, let the engine run at high revs for about 1 5 seconds when started
11. Make sure fast idle lever is all the way in before attempting to change into gear.
12. When you want to stop the motor, turn the key to the left.

**Driving:****General notes:**

Driving powerboats is a skilled task. It requires practice, like anything. You will generally be driving powerboats as part of duty for a Saturday afternoon race. These following notes are

designed to give a general overview, but nothing beats experience. If you are in doubt, don't hesitate to ask someone who has it! If necessary, they can give you a lesson.

Remember, just because a boat may have a steering wheel doesn't mean it drives like a car. In a boat, your steering is at the rear, not the front. The boat will not turn like a car, it will simply pivot around the bow of the boat. Remember always: When your motor is in gear, your propeller is spinning. Propellers have the capacity to hurt or kill people. So play it safe when there are people in the water.

### **Pilot and Tinbin:**

These boats all have steering wheels and hand throttles. When you want to change your direction, simply turn the steering wheel that way, much like a car. To accelerate and decelerate, give the throttle a firm and deliberate shove forward or backward into gear. **DO NOT DO THIS GRADUALLY OR THE GEARS WILL GRIND!!!** On the other hand, don't bash it so hard that you go flying off. The engine speed can then be increased by pushing the throttle forward or back, depending if you are in forward or reverse. When you change from forward into reverse, pull the lever into neutral, wait one or two seconds then put into reverse, and vice versa. If you put it directly from forward to reverse, it does huge damage to the gearbox!

NB. Pilot is only to be driven once you have been cleared by an authorised committee member as it is a far more difficult boat to drive than any other.

### **All Ducks:**

This is a tiller steered twist grip control system. It has a steering system exactly like a sailboat. If you want to go left, you must push the tiller to the right, and vice versa. To change gear, you push the black gear lever forward or back for forward and reverse. To increase speed, push the twist grip anti-clockwise and the reverse to reduce speed. When changing gear, the engine **must** be at minimum revs, or the motor will try and jump off the transom. When changing from forward to reverse, slow the motor down to minimum revolutions, push the gear lever into neutral, wait two seconds and then push it into reverse. This is to conserve the gears,

### **Rescue boating-**

When rescue boating, you are on the water for one thing. To help troubled sailors. At APYC, we usually run two rescue boats, one to patrol the St Kilda leg and one to patrol the gybe/bottom mark areas. Organise with the other rescue boat crew before you go out who will be doing what. One rubber duck will have to lay the port end of the start line for Pilot, so organise that, too. (NB. Once boats have finished going to St Kilda, that rescue boat can come and help patrol the other areas)

Please co-operate with the Sailing club people. It helps us maintain good relations with them, which makes life a lot easier for all of us. They will usually put two rescue boats on the water, sometimes three. Please make -sure that you do not have a concentration of rescue boats in one area, spread out so the whole lake can be covered, and every inch of the lake is in sight by at least one rescue boat. In this way, we avoid a sailor having to wait too long for assistance.

When patrolling, it is a good idea to keep to the edges of the lake. When going to St Kilda, patrol the edge of the lake opposite Lakeside drive and keep your speed down. (Parks Victoria are trying to impose a five-knot speed limit on the lake, but at the moment it is 5 knots within 30 m of shore.). Sailboats rarely go there because of the influence of the trees on the wind. While you patrol, do not get in the way of sailboats or let them be affected by your wake unless there is a good reason (Like attending a rescue) Sailors become very annoyed when they are given waves.

When patrolling; signs of a boat in trouble are:

- Capsized or upturned boat.
- Boat with its sails down
- Uncontrollable tacking and gybing.
- Boat stationary
- Sailors flapping arms to attract your attention.
- Boat on a wall, unable to get off.
- Boat without sailor

Common problems are tired sailors, de-masted boats (when tipped over, these will be completely inverted), gear failure, boat on a wall with a wind blowing against them making it impossible to get off, leaks and hypothermia. Look for all of these things while patrolling and you will make a good rescuer.

When you attend a rescue, first of all, count heads. If you can see enough for the class of boat, fine, but if you can't, look all over it. (Look for bumps in the sail, sailors can easily get trapped there.) If you can't find two people, immediately call another boat to the scene and notify shore. Delegate another rescue boat to begin searching while you take care of the boat, or vice versa. Once you have ascertained that there is a full complement of crew, ask the boat if they are ok.. If they say yes, stay with them but keep away. If there are other boats over, go and check on them (but make sure the first crew know where you're going). If they say no, they are your priority. If the crew is showing signs of fatigue or hypothermia, put a swimmer in the water with them. Then, if you need to, get the crew in the rescue boat and leave your swimmer in the yacht and tow them in.

#### **Laying the port end of the start line:**

Occasionally you may be asked to do this. Follow the start boat out, when they have anchored come alongside them. They will tell you approximately how long they want the line. Then head out to port of them directly across wind. Get your crew member to watch the start boat, you watch where you're going. Pilot will indicate to stop when the line is long enough. Then head into the wind. Put the buoy out the back of the boat and very slowly tow it upwind by its anchor. When you are far enough up wind, Pilot will indicate to drop it. If you are having difficulty communicating with Pilot, use the radio.

#### **Using the radio:**

At APYC, we operate on UHF hand held radios. You are not required to hold a licence to use it. Locations of radio:-

**Pilot:** Above driver's seat.

**All Ducks** use a portable radio, kept in the storeroom ask if you do not know where they are.

Turn the volume knob to 2 o'clock, Make sure you are on Channel one. You are now ready to transmit.

To transmit, press the button on the side of the microphone and speak across the mike. Radio procedure is as follows: (This is procedure as set out by the Spectrum Management Authority, the ruling body of the airwaves.)

*'RED DUCK, RED DUCK, RED DUCK'*, (Boat you are calling, said 3 times) *'THIS IS GREY DUCK'*, (Your call sign)

*'OVER'* (This indicates that you have finished what you are saying and the other can transmit)

The other boat will reply:

*'GREY DUCK, GREY DUCK,*

*THIS IS RED DUCK,  
OVER'.*

You then say what it is you want to say. *'RED DUCK, THIS IS GREY DUCK,  
PLEASE ASSIST A BOAT CAPSIZED BY THE LEEWARD MARK. THEY HAVE BEEN  
CAPSIZED FOR SOME TIME'. 'OVER'*

They will acknowledge: *'GREY DUCK, THIS IS RED DUCK. WE WILL ASSIST. RED DUCK  
OUT'*. (This indicates that the conversation has finished as far as they are concerned, and are clearing the channel for others to transmit.)

You say; *'GREY DUCK OUT'*.

If you did not hear what the other station said: *'PLEASE SAY AGAIN, OVER'*.

If you are busy: *'PLEASE STAND BY. GREY DUCK OUT'*.

Then call them back when you are ready.

If you are turning off your radio, say: *'GREY DUCK CLOSING DOWN'*.

Please do not use the radio more than necessary, as both clubs use the same channel. When you go out, call up shore (Apple base) and request a radio check. Then call up the other rescue boat and do the same.

The call signs are as follows:

**Pilot:** APYC Start boat. **Escort :** APYC red duck name on boat

**Grey duck:** APYC grey duck. **Tin bin:** (APYC shorten course boat)

**Apple base:** APYC tower. **Lakeside base:** ASC tower

**Lake 1:** ASC start boat. **Green Duck:** ASC rescue boat.( Green Vest Worn by the operator)

**Red Duck:** ASC rescue boat (red vest worn by the operator).

**Cygnnet:** APYC red Duck name on boat

### **Rescue boat handling procedures:**

#### Approaching a capsized yacht:

The biggest factor in rescue boat handling is the wind. Always remember that. When approaching, begin your run from not directly downwind, but about 45 degrees to downwind. Your approach should be fairly slow, but you must have enough power to steer against the wind. Before you start your approach, make sure there is no-one between the yacht and you. At all times, make sure the crew of the sailboat know what you are doing.

About a boat length from the yacht, put your motor in neutral and steer your bow away from the yacht. This will slow you down and put you parallel to the yacht. You should straighten the nose up when you are directly into the wind. Have your crew grab something on the yacht. NB. Don't be afraid to give the yacht a gentle nudge, after all, you are, "a giant fender."

#### Righting a capsized sailboat

1. From the water:

If you have jumped in to right a sailboat, first get the boat head to wind. Then make sure that the mainsheet and traveller are let off. Then, while the boat is head to wind, grab the centreboard near the hull and gently pull down on it. Gradually pull yourself up onto the centreboard help the boat come over. If there isn't a centreboard available, put your fingers in the slot and lean out! If you need to, stand up on the centreboard with your feet near the hull. This should be enough to get it over. If you still can't get it back up, have someone hold onto you to add more weight. The rescue boat can lift the mast to help you. Once you have got it up, keep it head to wind and if you are going to tow it in, get the sails down. If not, help the sailor back in.

2) From the rescue boat. There are several ways you can do this.

i) Tow the bow of the boat head to wind, then come alongside the mast and lift it, hand over hand along the mast and then the stays until the boat is up. (NB Don't get your propeller near the stays or sail, both can be chopped up quite easily!) This should only be attempted in calm conditions!

ii) Come alongside the hull, and after turning the boat head to wind, have your crew pull down on the centreboard until the boat is up. (You will have to do this at arms' length so the centreboard does not come down inside the rescue boat). Don't get your fingers crushed!

iii) Come alongside the bow of the boat, grab the forestay and lift it up hand over hand. The boat will then naturally turn head to wind.

When attempting these, make sure no-one is near your motor and that the sailors know what you are doing!

#### Putting a swimmer in the water:

When you need someone to jump in, have them get in over the front when you are near the troubled yacht. They then swim towards the yacht while you reverse away. NB Do not dive, the lake can get **very** shallow! Remember, while there are people in the water, keep well away. To recover your swimmer, put the boat about three boat lengths across wind from them. Turn off the motor, then throw them a line and pull them in.

#### Towing a boat

After the boat is up, get its sails down as top priority (You can furl the jib, if it has one.) The put the rescue boat about two lengths ahead of the yacht. Throw them the towline and instruct them to put it through their tow ring (or, if they don't have one, around their forestay) and wrap it twice around their mast (or, if the boat is de-masted, around the thwart). The sailors should hold the end of their rope. Tell them to put the centreboard half-up and to sit down the back. Take up the slack in the towline, then slowly motor ahead. Tow the boat quite slowly, you don't want to pull the boat apart. Get the sailors to steer behind you and bail out water as you go. Have your crew member watch the yacht, you watch where you are going. When coming in amongst moored boats, make allowances for the towed yacht.

#### Getting a boat's mast out of the mud:

Boats masts can very often become stuck in our lovely mud. The aim here is to gently pull the mast out of the mud in the direction that it came, so as not to break the mast,.

1) Come alongside the centreboard. Have your crew then grab it. Then reverse **extremely slowly** at right-angles to the yacht, so you are pulling in the direction the centreboard is pointing.

2) Attach a rope to the front and stem of the yacht. Then attach your tow-rope to the middle of that. **Reverse** gently away so the mast is pulling out of the mud.

3) If all else fails, have a swimmer jump in and manually dig it out of the mud!

#### If a boat is stuck on a mud-bank:

You can put your motor on tilt and go after them, or throw them a towline and gently pull them away from the mud. Don't run aground yourself But if you do, the water will be shallow enough to simply put your foot over the side, pull the motor fight up and push off backwards,

drop the motor, start it and continue with your merry little rescue.

If a boat, is stuck on a wall:

Come alongside the wall just in front of the yacht and pass them the towline. Get them to pull their sails down and then gently tow them off the wall.

If a boat looks like it is about to get stuck on a wall, quickly put the rubber duck between them and the wall. They will get damaged on the wall, but you will not.

If a boat's mast is stuck in trees

If the boat has a gait like a Mirror or Heron, get the yacht to drop the gaff and be free, or if not, get the sailors to capsize their yacht to the mast falls out of the tree. Watch heads!!! If you try to tow the boat out, it may break the mast if it encounters a reasonable-sized branch.

If you have an injured person-

Immediately notify base, delegate another rescue boat to take care of the yacht and administer CPR if necessary. **GET THEM TO SHORE AS FAST AS POSSIBLE!** Shore will notify an ambulance and have someone ready to help with first aid etc. as soon as you get there. There are limited first aid kits in bum bags please take out with radios, and a complete portable kit is in The tower.

Remember, this is only a guide to rescue boating. It is advisable to do a TL3 course of some kind, and even more advisable to get as much experience as you can. The information listed above is only a guide, and it could mean nothing depending on the situation you are in.

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(D Alex St John 1997