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Free resources for watersports & snow instructors

PWC INSTRUCTOR TRAINING



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Key Teaching Points

Clothing & Buoyancy

Aim: To explain the safety equipment for the PWC and individual, and protection against the elements.

Fundamentals: Buoyancy aid/impact vest – differences, suitability, correct fit. Protection against the elements/submersion – hot and cold

Aboard: Considerations for lesson plans: Wetsuit & wind protection, drysuit & under garments, foot wear. Gloves. Headwear. Eye protection.

Introduction to the PWC:

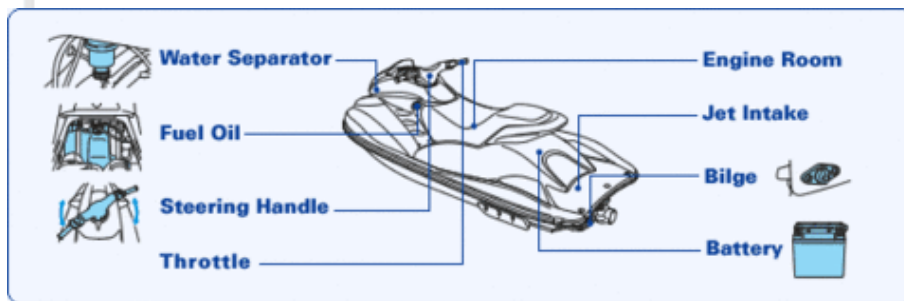
Aim: To demonstrate the equipment that should be carried on any PWC to make it effective to carry out its role/ safety & emergency situations.

Fundamentals: Killcord, correct length, works & spare carried. Know how to use emergency equipment including VHF. Ensure winch is serviceable on trailer. Bungs in. Hull intact. Start at the front of the PWC and work towards the stern. Fuel & oil levels. Where to attach killcord (to PFD).

Launching & Recovery:

Aim: Be able to launch and recover a PWC off and on to a trailer safely and be aware of slipway dangers. Condition of slip, width, surface. Permission to launch. Hazards and other water users. State of tide and waves. Byelaws.

Fundamentals: Check bungs! Float PWC off trailer and on again when recovering. Use rope between car and trailer if required. Communication at all times. Remove trailer board & straps prior to launch. Park car and trailer properly. Think about manual handling issues. Stay out of danger areas (between car & trailer, behind trailer). Check ownership of slip and local authority byelaws on PW use.



Running up engine:

Aim: Be able to start & stop engine safely and be aware of the importance of the killcord at all times. Understand when the engine is running you will be in forward motion.

Try to run up engine prior to launch but definitely before you release it if possible. Check all oil levels. Check tell-tale for water flow through engine. Do not start engine when afloat until minimum depth is obtained (0.5m?). Explain suction system of engine.

Boarding in shallow water:

Aim: To understand the depth of water required prior to boarding & starting the engine

Fundamentals: Waist/chest deep water, clear of obstructions behind, checking in F gear or N.

Stopping distances:

Aim: To understand the amount of time it takes to bring the craft to a stop. Difference in period of time it takes to slow down between displacement & planing speed.

Session: Ask rider to ride from A to B at displacement speed, once reach B let go of throttle/pull killcord/press stop button and count elephants until you come to a rest. Repeat exercise at planing speed. Compare time taken to come to a stop. Only 1 PW carrying out exercise at a time.

Slow speed manoeuvres:

Aim: Be able to control the PWC safely at low speed highlighting the importance of the killcord. Communication during all manoeuvres.

Fundamentals: Wear the killcord at all times when the engine is running. Communication prior to powering up or down. Where to hold on as a passenger.

Look 360 degrees before setting off and all round vision at all times. Assess balance and trim. Effect of wash and noise on other boats & water users. U, S & Figure 8 turns at slow speed, forward and reverse

Reversing:

Aim: Be able to control the PWC in reverse focusing on balance. All round vision and communication.

Fundamentals: Look all around but especially over your shoulder. Steering is opposite to forward gear. Keep engine revs and speed low. Explain the workings of the bucket system.

U, S & Figure 8 turns at slow speed, forward and reverse

Coming alongside:

Aim: To come alongside another craft or pontoon in a slow & controlled manner. (Boarding a floating platform/pontoon/versadock – where applicable).

Fundamentals: Use of N/R to control speed where applicable. Angle of approach. Effect of wind/tide. Importance of exercise – towing, re-fuelling etc.

Control at speed:

Aim: Demonstrate a good look out at all times, killcord, communications.

Fundamentals: Communicate with crew before powering up or down. All around vision and looking behind. Look behind before slowing down/stopping. Slow down gradually to stop bow submersing.

Slalom:

Aim: To control the PW at planing speed focusing on a good lookout, steering & weight control during tighter turns.

Fundamentals: Communicate with crew before initiating turns. All round vision and looking behind. Slowing down before entering the turn, speeding up on exit once the handle bars are in a central position. Weight/ Position.

Safety:- Only 1 PW on course at a time. Exit run clear of hazards/other craft. Where passenger holds on.

Possible session: Time trials

Towing & being towed:

Aim: Is able to demonstrate how to pick up a tow and be towed from astern

Fundamentals: Can accept a tow line. Can identify strong points on the PWC. Communicate with other vessel. Knows the length & type of tow line in a stern tow. Importance of a floating tow line. Tie tow line onto PWC (bowline & round turn & 2 half hitches).

Approaching the stricken PWC. Setting up a tow can take a long time – assess dangers of drift in tide and wind. Ensure all ropes are clear of the engine/grate prior to starting and during the tow. Speed of tow (brisk walking pace).

Confirm signals and agree terms for salvage if required. Do not become a casualty yourself. Suitable knots (quick release on 'able' PWC).

Session: All students to carry out exercise.

Anchoring:

Aim: Understands how to deploy and recover the anchor and check for holding using transits.

Fundamentals: Communicate with crew and prepare anchor. Types of Anchors suitable for PWs (i.e. bag, danforthm grapnel) & stowage (padding). Use transits to check holding position. Selecting an anchorage (depth/sea bed). Pay out a minimum of 5 times depth of water for rope.

Session: Instructor demonstrates. Invites students to take part if appropriate. Shore session completed if not possible to carry out afloat.

Falling off & re-boarding in deep water

Aim: To regain control of the PW after falling off!

Fundamentals: Make sure engine is off before re-boarding. Passenger awareness. Use of boarding step if available. Keeping weight low and central. Good crew communication. Wait for passenger to give 'go ahead' prior to re-starting engine.

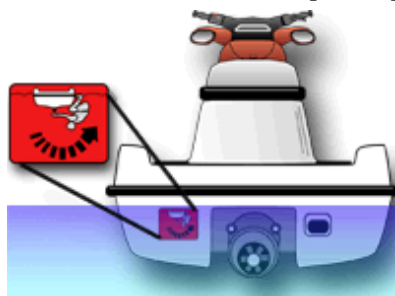
Capsize

Aim: To understand how to correctly right a PWC after capsize.

Fundamentals: Check sticker/owners manual for roll direction. Make sure all hoods, hatches, seats are closed/sealed. Tie off ski in strong wind/tidal conditions. Make sure engine is off prior to righting. (*As per deep water re-boarding*)

Safety: Be aware of hazards to intake and ride plate.

Session: Instructor demonstrates capsize method afloat. Invites students to have a go if they are willing. If student does not wish to participate, check understanding through questions.



IRPCS/Collision avoidance:

Aim: Understands collision avoidance techniques to be a safe operator keeping a look out at all times and making intentions clear. Can demonstrate these skills. Has knowledge of sound signals.

Fundamentals: Maintain a safe speed. When giving way. Alter course or slow down or both. Stay out of narrow channels where commercial shipping operates. Cross channels at 90 degrees when safe to do so. Stay on starboard side of channels, power passes port to port. Overtaking vessel keeps clear. Power gives way to sail. Head on situation, both turn starboard, pass port to port. Actions of stand on and give way vessels. Use real situation whilst afloat to point out IRPCS. Demonstrate afloat and consolidate ashore.

Session: Box course, 1 PW at a time. Student rides around in fig-8 at displacement speed (Under 10knots). Instructor creates collision situations at displacement speed & student takes correct early & obvious action

Types of PWC:

Aim: Has a knowledge of several types of PWC available.

Fundamentals: Stand up, sit down. – Engine size range. Special 'gizmos' (brakes, trim, cruise control, no wake mode, steering assistance etc).

Sources of weather:

Aim: Can obtain a weather forecast from a variety of sources and knows how wind will affect the sea state.

Fundamentals: Weather may be different out at sea, be prepared. Try and obtain a specific weather report. Wind direction and tidal state will effect sea state. Weather may affect launch or recovery of PWC off/onto trailer. Ensure adequate sunscreen during summer months. Familiarise yourself with the beaufort scale.

Emergency situations:

Aim: How to cope with fire, break-down, attract attention and make a mayday call.

Man overboard:

Aim: Can approach and recover a Man overboard

Fundamentals: Approach into the wind, tick over speed, utilise Neutral if available. Engine off when contact is made with MOB.

Session: Instructor demonstration, students carry out task until successful.

Basic Navigation:

Buoyage

Aim: Recognise buoyage and their purpose.

Fundamentals: Port & Starboard, Special & Danger marks.

Intro to charts

Aim: Understand the key aspects of a chart

Fundamentals: Colour, Depths, Scale/distance, Direction/Bearings, Hazards/Features

Tides

Aim: To be able to work out the depth of water at HW and LW at a given point i.e. launch site

Fundamentals: Interpreting a tide table. Correlate tide table information with chart datum. Effect of tidal streams.

Creating a basic passage plan / use of a compass afloat

Aim: Create and follow a planned route, identifying buoys & marks making use of a handbearing compass.

Fundamentals: Visual/pictorial (buoy hop) route plan (i.e. rolling road) including hazards, buoys, times and magnetic bearings (to nearest 5/10 degrees).

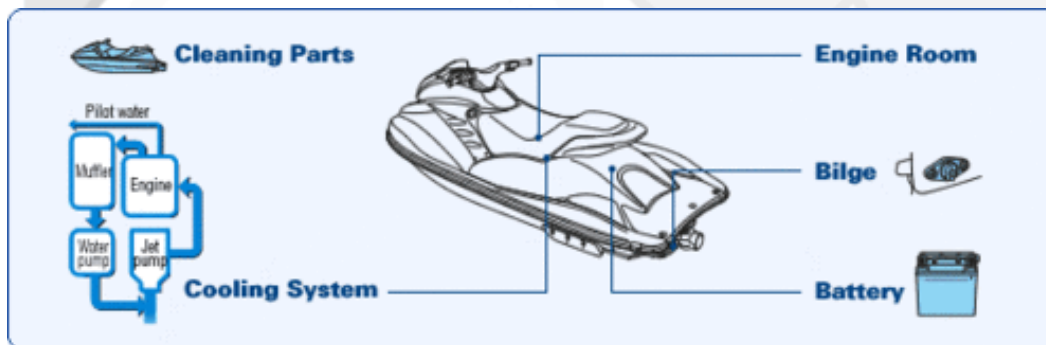
Session: Students navigate/leads group in 'duck-tail' formation along route. Instructor available if required/oversees safety.

Aftercare & Maintenance:

Aim: Knowledge of flushing, lubrication & basic checks

Fundamentals: Flushing procedure – brand specific. Engine started BEFORE turning on water supply and water supply removed BEFORE turning off engine. Salt removal. Drying compartments & checking for leaks.

Session: Demonstrate the fundamentals on one PW, allow students to carry out tasks on their own PW. Ensure procedures are carried out correctly.



Trailing a PWC

Aim: To know what basic checks should be made to a trailer prior to use.


Fundamentals: Legal requirements, basic trailer checks including wheel bearings, winch strap, safety leashes, straps, break away cable, lightboard & registration plate.

Learn, study, test & revise all the essentials to be safe at sea



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