

To check the empennage area, untie the seaplane, gently push it away from the dock, and turn it 90° so the tail extends over the dock. Take care not to let the water rudders contact the dock. In addition to the normal empennage inspection, check the cables that connect the water rudders to the air rudder. With the air rudder centered, look at the back of the floats to see that the water rudders are also centered. (On some systems, retracting the water rudders disengages them from the air rudder.) If the seaplane has a ventral fin to improve directional stability, this is the time to check it. Spray frequently douses the rear portion of the seaplane, so be particularly alert for signs of corrosion in this area.

With the empennage inspection complete, continue turning the seaplane to bring the other float against the dock, and tie it to the dock. Inspect the fuselage, wing, and float on this side. If the seaplane has a door on only one side, turn the seaplane so the door is adjacent to the dock when the inspection is complete.

When air temperatures drop toward freezing, ice becomes a matter for concern. Inspect the float compartments and water rudders for ice, and consider the possibility of airframe icing during takeoff due to freezing spray. Water expands as it freezes, and this expansion can cause serious damage to floats. A large amount of water expanding inside a float could cause seams to burst, but even a tiny amount of water freezing and expanding inside a seam can cause severe leakage problems. Many operators who remove their floats for the winter store them upside down with the compartment covers off to allow thorough drainage. When the time comes to reinstall the floats, it's a good idea to look for any bugs or small animals that might have made a home in the floats.

STARTING THE ENGINE

Compared to a landplane, a seaplane's starting procedures are somewhat different. Before starting the engine, the seaplane usually needs to be pushed away from the dock, and quite often, it is the pilot who pushes off. Therefore, the pilot should perform as many of the items on the starting checklist as possible prior to shoving off. This includes briefing passengers and seeing that they have fastened their seatbelts. The passenger briefing should include procedures for evacuation, the use of flotation gear, and the location and operation of regular and emergency exits. All passengers are required to be familiar with the operation of seatbelts and shoulder harnesses (if installed). When the engine is primed and ready to start, the pilot leaves the cockpit, shoves off, returns to the pilot's seat, quickly turns on the master switch and magnetos, verifies that the propeller area is clear, and starts the

engine. With oil pressure checked, idle r.p.m. set, and the seaplane taxiing in the desired direction, the pilot then fastens the seatbelt and shoulder harness, secures the door, and continues preparing for takeoff.

When a qualified person is available to help launch the seaplane, the pilot can strap in, close the door, and start the engine while the helper holds the seaplane. In most situations, the helper should position the seaplane so it is facing outward, perpendicular to the dock. It is very important that the helper have experience in the proper handling of seaplanes, otherwise an innocent mistake could cause serious damage to the seaplane or to nearby boats, structures, or other seaplanes.

TAXIING AND SAILING

One major difference between taxiing a landplane and taxiing a seaplane is that the seaplane is virtually always in motion, and there are no brakes. When idling, a landplane usually remains motionless, and when moving, brakes can be used to control its speed or bring it to a stop. But once untied, the seaplane floats freely along the water surface and constantly moves due to the forces of wind, water currents, propeller thrust, and inertia. It is important that the seaplane pilot be familiar with the existing wind and water conditions, plan an effective course of action, and mentally stay ahead of the seaplane.

There are three basic positions or attitudes used in moving a seaplane on the water, differentiated by the position of the floats and the speed of the seaplane through the water. They are the idling or displacement position, the plowing position, and the planing or step position.

IDLING POSITION

In the **idling position** or **displacement position**, the buoyancy of the floats supports the entire weight of the seaplane and it remains in an attitude similar to being at rest on the water. Engine r.p.m. is kept as low as possible to control speed, to keep the engine from overheating, and to minimize spray. In almost all circumstances, the elevator control should be held all the way back to keep the nose as high as possible and minimize spray damage to the propeller. This also improves maneuverability by keeping more of the water rudder underwater. The exception is when a strong tailwind component or heavy swells could allow the wind to lift the tail and possibly flip the seaplane over. In such conditions, hold the elevator control forward enough to keep the tail down. [Figure 4-5 on next page]