bank angle becomes excessive, it is difficult or impossible to recover to wings-level flight using the rudder alone. If the bank is becoming too steep, use any aileron influence available, as well as all available rudder to bring the wings back to level. If a parachute is available and the glider becomes uncontrollable at low airspeed, the best chance to escape serious injury may be to bail out of the glider from a safe altitude.

Rudder Malfunctions

Rudder failure is extremely rare because removing and installing the vertical fin/rudder combination is not part of the normal sequence of rigging and de-rigging the glider (as it is for the horizontal stabilizer/elevator and for the wing/aileron combinations). Poor directional control is so obvious to the pilot from the very beginning of the launch that, if rudder malfunction is suspected, the launch can be aborted early.

Rudder malfunctions are most likely to occur after failure to remove the rudder control lock prior to flight or when an unsecured object in the cockpit interferes with the free and full travel of the rudder pedals. Preflight preparation must include removal of all flight control locks and safe stowage of all items on board. The pretakeoff checklist includes checking all primary flight controls for correct, full travel prior to launch.

Although rudder failure is quite rare, the consequences are serious. If a control lock causes the problem, it is possible to control the glider airspeed and bank attitude, but directional control is compromised due to limited rudder movement. In the air, some degree of directional control can be obtained by using the adverse yaw effect of the ailerons to yaw the glider. During rollout from an aborted launch or during landing rollout, directional control can sometimes be obtained by deliberately grounding the wingtip toward the direction of desired yaw. Putting the wingtip on the ground for a fraction of a second causes a slight yaw in that direction; holding the wingtip firmly on the ground usually causes a vigorous yaw or ground loop in the direction of the grounded wingtip.

Careless stowage of cockpit equipment can result in rudder pedal interference at any time during a flight. During flight, if an object is interfering with or jamming the rudder pedals, attempt to remove it. If removal is not possible, attempt to deform, crush, or dislodge the object by applying force on the rudder pedals. It also may be possible to dislodge the object by varying the load factor, but ensure that dislodging the object does not result in its lodging in a worse place where it could jam the elevator or aileron controls. If the object cannot be retrieved and stowed, a precautionary landing may be required.

Commonly misplaced objects that can cause flight control interference include:

- Water bottles,
- Cameras,
- Electronic computers,
- Containers of food and similar items,
- Clothing, and
- Sunglasses.

Control these items by proper planning and good cockpit discipline.

Secondary Flight Controls Systems

Secondary flight control systems include the elevator trim system, wing flaps, and spoilers/dive brakes. Problems with any of these systems can be just as serious as problems with primary controls.

Elevator Trim Malfunctions

Compensating for a malfunctioning elevator trim system is usually as simple as applying pressure on the control stick to maintain the desired pitch attitude, then bringing the flight to safe conclusion. Inspect and repair the trim system prior to the next flight.

Spoiler/Dive Brake Malfunctions

Spoiler/dive brake system failures can arise from rigging errors or omissions, environmental factors, and mechanical failures. Interruptions or distractions during glider assembly can result in failure to properly connect control rods to one or both spoilers/dive brakes. Proper use of a comprehensive checklist reduces the likelihood of assembly errors. If neither of these spoilers/dive brakes is connected, then one or both of the spoilers/dive brakes may deploy at any time and retraction becomes impossible. This is a very hazardous situation for several reasons. One reason is that the spoilers/dive brakes are likely to deploy during the launch or the climb, causing a launch emergency and a possible tow failure incident. Another reason is that the spoilers/dive brakes might deploy asymmetrically: one spoiler/dive brake retracted and the other spoiler/dive brake extended, resulting in yaw and roll tendencies that do not arise when the spoilers/dive brakes deploy symmetrically. A pilot expecting a smooth ,symmetrical deployment would be faced with a control issue that compromises flight safety. Finally, it is not possible to correct the situation by retracting the spoiler/dive brake(s) because the failure to connect the controls properly usually means that pilot control of the spoiler/dive brake has been lost.

If asymmetrical spoiler/dive brake extension occurs and the extended spoiler/dive brake cannot be retracted, several choices must be made. Roll and yaw tendencies due to