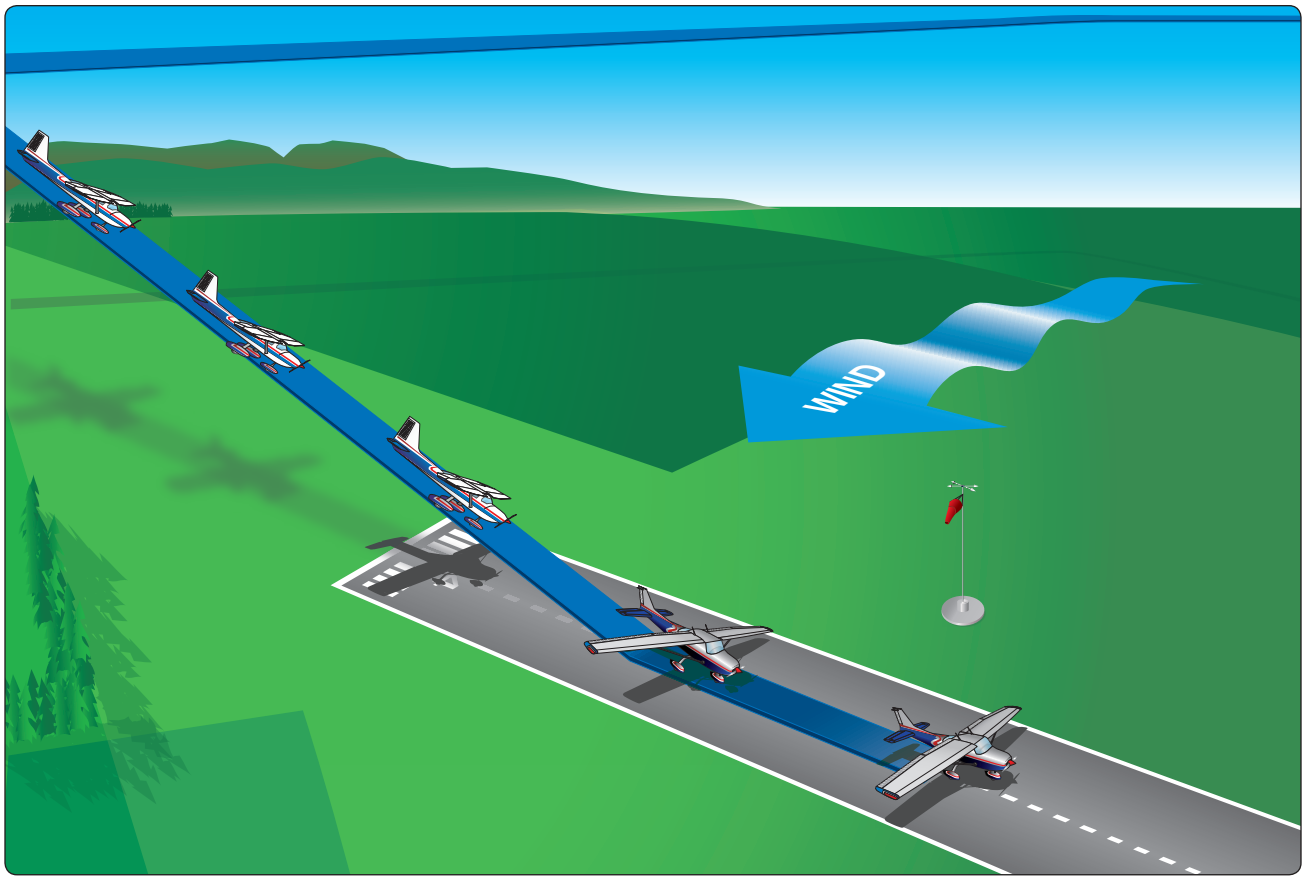

Figure 8-17. *Crosswind approach and landing.*

accomplish this results in severe side loads being imposed on the landing gear.

If the wing-low method is used, the crosswind correction (aileron into the wind and opposite rudder) is maintained throughout the round out, and the touchdown made on the upwind main wheel. During gusty or high wind conditions, prompt adjustments must be made in the crosswind correction to assure that the airplane does not drift as the airplane touches down. As the forward momentum decreases after initial contact, the weight of the airplane causes the downwind main wheel to gradually settle onto the runway.

In those airplanes having nose-wheel steering interconnected with the rudder, the nose wheel is not aligned with the runway as the wheels touch down because opposite rudder is being held in the crosswind correction. To prevent swerving in the direction the nose wheel is offset, the corrective rudder pressure must be promptly relaxed just as the nose wheel touches down.

Crosswind After-Landing Roll

Particularly during the after-landing roll, special attention must be given to maintaining directional control by the use of rudder or nose-wheel steering, while keeping the upwind wing from rising by the use of aileron. When an airplane is airborne, it moves with the air mass in which it is flying regardless of the airplane's heading and speed. When an airplane is on the ground, it is unable to move with the air mass (crosswind) because of the resistance created by ground friction on the wheels.

Characteristically, an airplane has a greater profile or side area behind the main landing gear than forward of the gear. With the main wheels acting as a pivot point and the greater surface area exposed to the crosswind behind that pivot point, the airplane tends to turn or weathervane into the wind.

Wind acting on an airplane during crosswind landings is the result of two factors. One is the natural wind, which acts in the direction the air mass is traveling, while the other is induced by the forward movement of the airplane and acts parallel to the direction of movement. Consequently, a crosswind has a headwind component acting along the airplane's ground track and a crosswind component acting 90° to its track. The resultant or relative wind is somewhere between the two components. As the airplane's forward speed decreases during the after landing roll, the headwind