

LEANING FOR GROUND OPERATIONS

1. For all ground operations, after starting the engine and when the engine is running smoothly:
 - a. set the throttle to 1200 RPM.
 - b. lean the mixture for maximum RPM.
 - c. set the throttle to an RPM appropriate for ground operations (800 to 1000 RPM recommended).

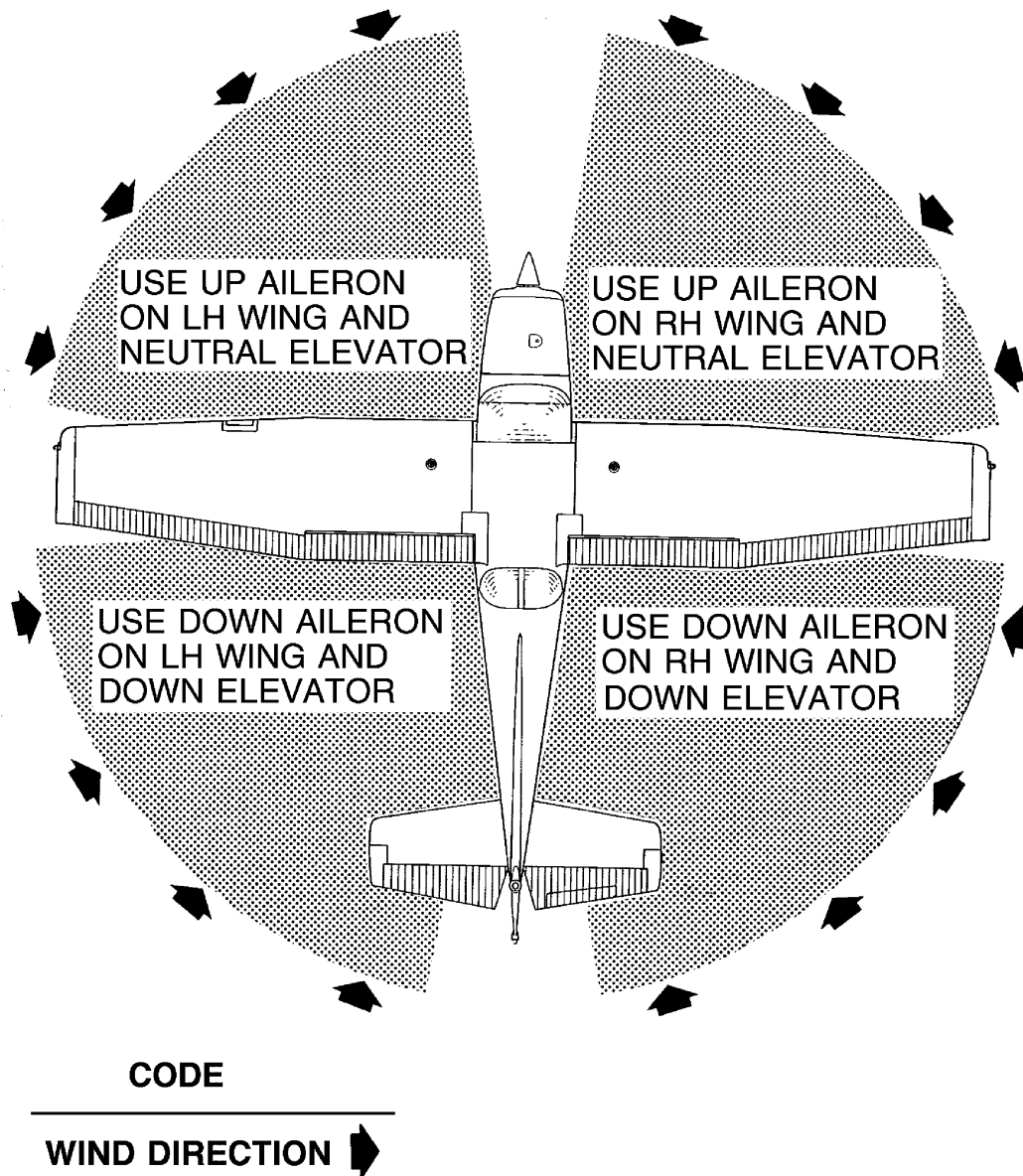
NOTE

If ground operation will be required after the BEFORE TAKEOFF checklist is completed, lean the mixture again (as described above) until ready for the TAKEOFF checklist.

TAXIING

When taxiing, it is important that speed and use of brakes be held to a minimum and that all controls be utilized (Refer to Figure 4-2, Taxiing Diagram) to maintain directional control and balance.

Taxiing over loose gravel or cinders should be done at low engine speed to avoid abrasion and stone damage to the propeller tips.



NOTE

Strong quartering tail winds require caution. Avoid sudden bursts of the throttle and sharp braking when the airplane is in this situation. Use the steerable nose wheel and rudder to maintain direction.

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Figure 4-2. Taxiing Diagram

RH SIDE PANEL LAYOUT

The RH panel contains the hour meter, ELT switch, and room for expansion of indicators and other avionics equipment. Below this sub panel are the glove box, cabin heat and cabin air controls, and wing flap switch.

CENTER PEDESTAL LAYOUT

The center pedestal, located below the center panel, contains the elevator trim control wheel, position indicator, handheld microphone bracket and fuel shutoff valve control. The fuel selector valve handle is located at the base of the pedestal.

GROUND CONTROL

Effective ground control while taxiing is accomplished through nose wheel steering by using the rudder pedals; left rudder pedal to steer left and right rudder pedal to steer right. When a rudder pedal is depressed, a spring loaded steering bungee (which is connected to the nose gear and to the rudder bars) will turn the nose wheel through an arc of approximately 10° each side of center. By applying either left or right brake, the degree of turn may be increased up to 30° each side of center.

Moving the airplane by hand is most easily accomplished by attaching a tow bar to the nose gear strut. If a tow bar is not available, or pushing is required, use the wing struts as push points. Do not use the vertical or horizontal surfaces to move the airplane. If the airplane is to be towed by vehicle, never turn the nose wheel more than 30° either side of center or structural damage to the nose gear could result.

The minimum turning radius of the airplane, using differential braking and nose wheel steering during taxi, is approximately 27 feet. To obtain a minimum radius turn during ground handling, the airplane may be rotated around either main landing gear by pressing down on a tailcone bulkhead just forward of the horizontal stabilizer to raise the nose wheel off the ground. Care should be exercised to ensure that pressure is exerted only on the bulkhead area and not on skin between the bulkheads. Pressing down on the horizontal stabilizer is not recommended.

LANDING GEAR SYSTEM

The landing gear is of the tricycle type, with a steerable nose wheel and two main wheels. Wheel fairings are standard equipment for both the main and nose wheels. Shock absorption is provided by the tubular spring steel main landing gear struts and the air/oil nose gear shock strut. Each main gear wheel is equipped with a hydraulically actuated disc type brake on the inboard side of each wheel.

BAGGAGE COMPARTMENT

The baggage compartment consists of two areas, one extending from behind the rear passengers seat to the aft cabin bulkhead, and an additional area aft of the bulkhead. Access to both baggage areas is gained through a lockable baggage door on the left side of the airplane, or from within the airplane cabin. A baggage net with tiedown straps is provided for securing baggage and is attached by tying the straps to tiedown rings provided in the airplane. For baggage area and door dimensions, refer to Section 6.

SEATS

The seating arrangement consists of two vertically adjusting crew seats for the pilot and front seat passenger, and a single bench seat with adjustable back for rear seat passengers.

Seats used for the pilot and front seat passenger are adjustable fore and aft, and up and down. Additionally, the angle of the seat back is infinitely adjustable.

Fore and aft adjustment is made using the handle located below the center of the seat frame. To position the seat, lift the handle, slide the seat into position, release the handle and check that the seat is locked in place. To adjust the height of the seat, rotate the large crank under the right hand corner of the seat until a comfortable height is obtained. To adjust the seat back angle, pull up on the release button, located in the center front of seat, just under the seat bottom, position the seat back to the desired angle, and release the button. When the seat is not occupied, the seat back will automatically fold forward whenever the release button is pulled up.

BRAKE SYSTEM

The airplane has a single-disc, hydraulically actuated brake on each main landing gear wheel. Each brake is connected, by a hydraulic line, to a master cylinder attached to each of the pilot's rudder pedals. The brakes are operated by applying pressure to the top of either the left (pilot's) or right (copilot's) set of rudder pedals, which are interconnected. When the airplane is parked, both main wheel brakes may be set by utilizing the parking brake which is operated by a handle under the left side of the instrument panel. To apply the parking brake, set the brakes with the rudder pedals, pull the handle aft, and rotate it 90° down.

For maximum brake life, keep the brake system properly maintained, and minimize brake usage during taxi operations and landings.

Some of the symptoms of impending brake failure are: gradual decrease in braking action after brake application, noisy or dragging brakes, soft or spongy pedals, and excessive travel and weak braking action. If any of these symptoms appear, the brake system is in need of immediate attention. If, during taxi or landing roll, braking action decreases, let up on the pedals and then reapply the brakes with heavy pressure. If the brakes become spongy or pedal travel increases, pumping the pedals should build braking pressure. If one brake becomes weak or fails, use the other brake sparingly while using opposite rudder, as required, to offset the good brake.

ELECTRICAL SYSTEM

The airplane is equipped with a 28-volt, direct current electrical system (Refer to Figure 7-7). The system is powered by a belt-driven, 60-amp alternator and a 24-volt battery, located on the left forward side of the firewall. Power is supplied to most general electrical circuits through a split primary bus bar, with an essential bus wired between the two primaries to provide power for the master switch, annunciator circuits and interior lighting.

Each primary bus bar is also connected to an avionics bus bar via a single avionics master switch. The primary buses are on anytime the master switch is turned on, and are not affected by starter or external power usage. The avionics buses are on when the master switch and avionics master switch are in the ON position.