latch handle, the window must be reattached and wired by a qualified mechanic using a single strand of QQ-W-343, Type S, .020 diameter copper wire prior to further airplane operation.

UNLATCHED DOOR IN FLIGHT

If the cabin door is not properly latched, it may unlatch in flight. This may occur during or just after takeoff. The door will trail open approximately 3 inches but the flight characteristics of the airplane will not be affected, except that rate of climb will be reduced. Return to the field in a normal manner. If practical, during the landing flare-out have a passenger hold the door to prevent it swinging open.

SPINS

Spins are prohibited. If a spin is entered inadvertently:

Immediately move the control column full forward and simultaneously apply full rudder opposite to the direction of the spin; continue to hold this control position until rotation stops and then neutralize all controls and execute a smooth pullout. Ailerons should be neutral and throttle in idle position at all times during recovery.

EMERGENCY SPEED REDUCTION

In an emergency, the landing gear may be used to create additional drag. Should disorientation occur under instrument conditions, the lowering of the landing gear will reduce the tendency for excessive speed buildup. This procedure would also be appropriate for a non-instrument

6. BUS VOLTMETER - Indicated voltage should be 24 volts before start and 28.5 volts after start.
7. All Engine Instruments - CHECK
8. Lights - AS REQUIRED
9. Avionics Equipment - ON, AS REQUIRED
10. Brakes - RELEASE AND CHECK

CAUTION

Never taxi on a flat shock strut.

BEFORE TAKEOFF

1. Parking Brake - SET
2. Seat Belts and Shoulder Harness - CHECK
3. Avionics - CHECK
4. Engine Instruments - CHECK, (within operating range)
5. Flight Instruments - CHECK AND SET

NOTE

To ensure adequate gyro pressure when operating two air-driven gyros during ground operation and/or holding prior to takeoff, maintain an engine speed of 700-800 rpm in order to hold a value of 4.3 in. Hg. on the instrument pressure gage. If three or more air-driven gyros are installed, maintain an engine speed of 1200 rpm.

6. ANNUNciator TEST Push-button — Press (All Annunciators, Landing Gear Position Lights and Flap Position Lights should illuminate.)
7. Throttle - 1700 RPM
8. Propeller - EXERCISE to obtain 200 to 300 rpm drop, then return to high rpm

9. Magnetos - CHECK at 1700 rpm on each magneto (variance between individual magnetos should not exceed 50 rpm; maximum drop should not exceed 150 rpm.)
10. Instrument Air Gage - CHECK PRESSURE
11. Standby Generator (If installed) - CHECK
12. Throttle - IDLE to 1200 rpm
13. Autopilot and Electric Trim (If installed) - CHECK
14. Trim - SET
    a. Aileron - NEUTRAL
    b. Elevator - 3° NOSE UP (6° nose up if only front seats are occupied)
15. Flaps - CHECK OPERATION; SET FOR TAKEOFF
16. Doors and Windows - SECURE (on serials E-2458, E-2468 and after - check cabin door lock indicator - CLOSED)
17. Flight Controls - CHECK FREEDOM OF MOVEMENT AND PROPER DIRECTION OF TRAVEL
18. Mixture - FULL RICH
19. Auxiliary Fuel Pump - OFF
20. Parking Brake - RELEASE

TAKEOFF

Take-off Power.....Full Throttle, 2700 RPM
Minimum Recommended Oil Temperature .....24°C

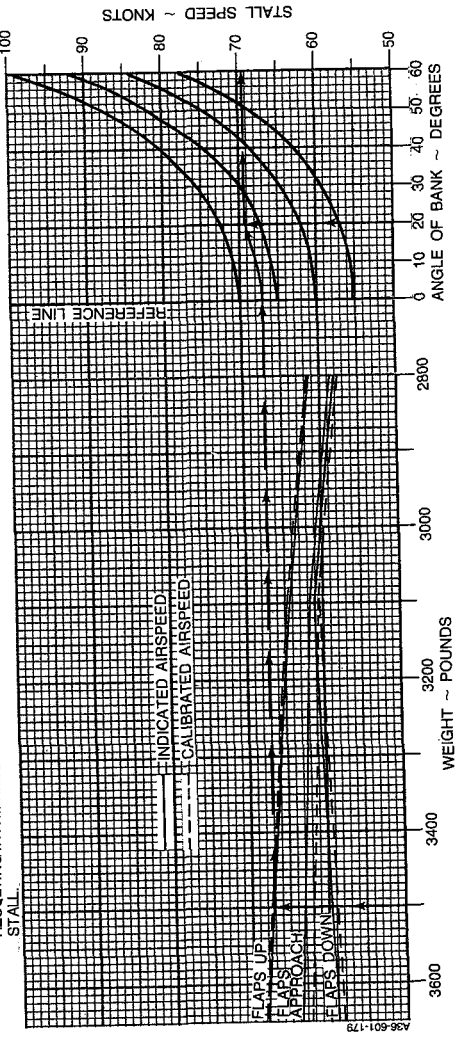
1. Power - FULL THROTTLE, (Propeller - High rpm, Mixture - FULL RICH)
2. Brakes - RELEASE
3. Instruments - CHECK (make final check of manifold pressure, fuel flow, rpm and oil pressure at the start of take-off run.)
4. Airspeed - Accelerate TO AND MAINTAIN TAKEOFF SPEEDS.
5. Landing Gear - RETRACT (when positive rate of climb is established)
6. Airspeed - ESTABLISH DESIRED CLIMB SPEED when clear of obstacles

STALL SPEEDS – POWER IDLE

NOTES:
1. THE MAXIMUM ALTITUDE LOSS EXPERIENCED WHILE CONDUCTING STALLS IN ACCORDANCE WITH CAR 3.120 WAS 320 FEET.
2. THESE STALL SPEEDS WERE DETERMINED AT THE FORWARD CENTER OF GRAVITY LIMIT FOR EACH WEIGHT. AT SOME LOADINGS THE AIRPLANE IS ELEVATOR LIMITED, RESULTING IN A MINIMUM STEADY SPEED RATHER THAN A STALL.

EXAMPLE:

WEIGHT	3500 LBS
FLAPS	UP
BANK ANGLE	20°
STALL SPEED	69.4 KTS INDICATED



voltmeter, fuel quantity gages and prop deice ammeter are in the center subpanel. Located in the right subpanel are the flap switch, flap position lights, lighter, panel lighting rheostats, and glove compartment. The avionics circuit breaker panel is below the right subpanel and the electrical circuit breaker panel is on the side panel to the left of the pilot's seat.

The LOW BUS VOLTS annunciator will illuminate when the alternator cannot carry it's load and the battery bus voltage drops below 25 volts. If the battery bus voltage falls below 24 volts, the electrical load will discharge the battery.

OAT GAGE

The OAT (Outside Air Temperature) gage is located on the left cabin side panel just aft of the instrument panel. It's temperature-sensing probe extends through the cabin sidewall into the outside air to measure outside air temperature.

PEDESTAL

The pedestal is located below the center portion of the instrument subpanel. The upper portion of the pedestal houses the throttle (black), propeller (blue), and mixture (red) control levers. The elevator trim handwheel and elevator trim indicator are located on the left of the pedestal. The trim tab on the left aileron is adjustable with the knob mounted on the front of the pedestal.

ANNUNCIATOR SYSTEM

ANNUNCIATOR PANEL

Three annunciators, placarded LOW BUS VOLTS, START, and AFT DOOR are mounted in the glareshield. On serials E-2458, E-2468 and after, a red GEAR UP annunciator is also installed.

The LOW BUS VOLTS annunciator will illuminate when the alternator is not maintaining the battery bus voltage above 25 volts. If the battery bus voltage falls below 24 volts, the electrical load will discharge the battery.

The STARTer energized annunciator will remain illuminated after starting if the starter relay remains engaged.

CAUTION

Operation of the engine with the starter engaged can result in damage to both engine and starter.

The AFT DOOR annunciator will illuminate if the utility doors are not securely closed.

On serials E-2458, E-2468 and after, the GEAR UP annunciator will flash when the gear warning horn sounds (any throttle setting less than 12 in. Hg with the landing gear retracted or full flaps with the landing gear retracted).

ANNUNCIATOR TEST PUSH-BUTTON AND PHOTOELECTRIC CELL

The annunciator test push-button (ANNUN TEST) is located on the lower left subpanel. It is a momentary push-button which, when pushed, will illuminate (bright setting) the annunciators, the landing gear position lights and the flap position lights. A photoelectric cell located above the landing gear handle automatically dims (for night) or brightens (for day) the lights depending on how much ambient light is entering the cabin. The START, AFT DOOR, and GEAR UP (serials E-2458, E-2468 and after) annunciators are the only lights that do not dim.

GROUND CONTROL

Steering is accomplished by use of the rudder pedals through a linkage arrangement which connects the nose gear to the rudder pedal shaft. Nose wheel straightening is accomplished by engagement of a roller with a track as the nose wheel is retracted. The steering link attaches to the

attached to the upper fuselage side structure, just aft of the seat back and is covered with an escutcheon.

NOTE

The seat belt is independent of the shoulder harness, but the outboard seat belt and the shoulder harness must be connected for stowage when the seat is not occupied.

DOORS, WINDOWS, AND EXITS

FORWARD CABIN DOOR

The airplane has a conventional cabin door on the forward right side of the fuselage and when closed, the outside cabin door handle is spring-loaded to fit into a recess in the door to create a flat aerodynamically clean surface. The door may be locked with a key.

To open the door from the outside, lift the handle from its recess and pull until the door opens.

To close the cabin door from the inside, observe that the door handle is in the open position. In this position, the latch handle is free to move approximately one inch in either direction before engagement of the locking mechanism. Then grasp the door and firmly pull the door closed. Rotate the door handle fully counterclockwise into the locked position. Observe that the door handle indicator is in the CLOSED position (serials E-2458, E-2468 and after). When the door is properly locked, the door latch handle is free to move approximately one inch in either direction.

NOTE

When checking the door latch handle, do not move it far enough to engage the door latch release mechanism.

Press firmly outward at the top rear corner of the door. If any movement of the door is detected, completely open the door and close again following the above instructions.

To open the door from the inside, depress the lock button and rotate the handle clockwise.

UTILITY DOORS

The utility doors located on the aft right side of the cabin, provide for loading and unloading of passengers and baggage. The aft door must be closed first. A latch on the forward edge of the aft door moves downward to a locked position to secure the hooks at the top and bottom of the door to the door frame. The forward door cannot be fully closed until the latch of the aft door is latched and flush with the edge of the door. After the forward door is closed, it can be latched from the outside by rotating the half-moon shaped handle to the CLOSED position. A conventional handle on the inside of this door provides for opening or closing from the inside.

The AFT DOOR ajar annunciator, located on the annunciator panel, remains illuminated until the doors are properly latched.

OPERATION WITH AFT UTILITY DOORS REMOVED

The Bonanza A36 is approved for operation with the aft utility doors removed. The factory installed placards pertaining to airspeed and other operating restrictions when the utility doors are removed are reproduced in the LIMITATIONS Section.