

CHECKLIST

N8876B



1958 Cessna 172



**Nebraska
Flight
Center**

Eppley Airfield
3737 Orville Plaza
Omaha, NE 68110
Tel. (402) 342-4314

www.nebflight.com

1958**GENERAL INFORMATION**

Model Cessna 172
Serial No. 36576

Power Plant Continental O-300-A
Type Six Cylinder/ Carbureted
Horsepower 145 HP @ 2,700 RPM
Propeller McCauley, 2 Blade, Fixed Pitch
Electrical System 14 Volts DC

Fuel Capacity 42 Gal
Usable Fuel 37 Gal
Unusable Fuel, Each Tank 2.5 Gal
Fuel Type 100LL

Oil Capacity 4 to 6 Qts
Oil Type Phillips 66 ^x/c 20W50

Main Gear Tire Pressure 21 psi
Nose Gear Tire Pressure 30 psi
Nose Gear Oleo Strut Pressure 45 psi
Nose Gear Oleo Strut Extension 3½ in

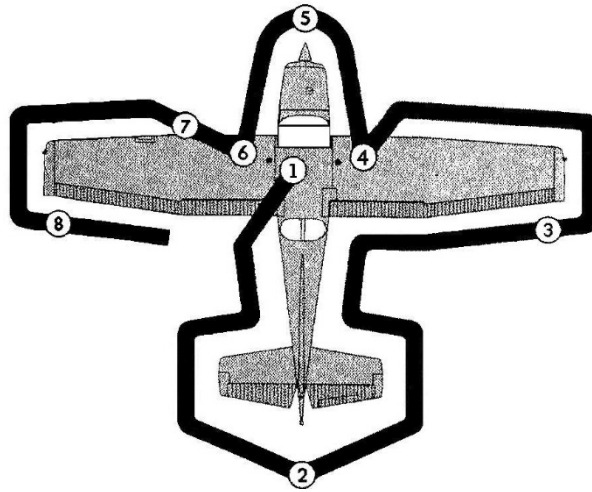
Basic Empty Weight (3-16-1976) 1,338.9 lbs
Arm 37.4 in
Moment 50,123 lbs/in

Maximum Gross Weight 2,200 lbs
Useful Load 861 lbs
Full Fuel 222 lbs
Maximum Useful Load, Full Fuel 639 lbs
Maximum in Baggage Compartment 120 lbs

Cruise Airspeed, 75% Power 106 kias
Fuel Consumption 6 to 8 gph

V_{S0} (flaps down) 42 kias
V_{S1} (clean) 48 kias
V_R 50 kias
V_X 53 kias
V_Y 65 kias
BEST GLIDE 60 kias
V_{FE} 0° - 40° 85 kias
V_{NO} 107 kias
V_{NE} 141 kias
V_A at 1600 lbs (maneuvering) 97 kias
V_A at 1450 lbs 93 kias
V_A at 1300 lbs 88 kias

(*) Maneuvering Speed Decreases As Aircraft Weight Decreases



PREFLIGHT INSPECTION

CABIN (1)

- 1 Required Documents Aboard
- 2 Control Lock..... Remove
- 3 Flaps Extend
- 4 Ignition Switch Off (remove key)
- 5 Electrical Switches Off
- 6 Fuel Shutoff Valve Both
- 7 Fuel Gauges Check
- 8 Master Switch On
- 9 Lights On
- 10 Exit Aircraft Ok
- 11 Position, Anti-Collision & Landing Lights ... Check
- 12 Stall Warning Check
- 13 Lights Off
- 14 Master Switch Off
- 15 Hobbs / Tach Record
- 16 Pilot Side Door Check

FUSELAGE LEFT SIDE

- 1 Windows / Antennas Check
- 2 Underside Check

EMPENNAGE (2)

- 1 Gust Lock / Tie-Down Remove
- 2 Control Surfaces Check
- 3 Trim Tab Check
- 4 Antennas Check

FUSELAGE RIGHT SIDE

- 1 Windows / Antennas Check
- 2 Underside Check
- 3 Right Door Check

RIGHT WING (3) & (4)

- 1 Fuel Tank Sump Drain
- 2 Flap Check
- 3 Aileron Check
- 4 Wingtip Check
- 5 Tie-Down Remove
- 6 Main Wheel Tire Check
- 7 Brake Check Pads / Caliper
- 8 Wing Root Vent Check
- 9 Fuel Tank Check Quantity
- 10 Fuel Tank Cap Secure
- 11 Antennas Check

NOSE (5)

- 1 Windshield Condition / Clean
- 2 Gascolator Fuel Strainer Drain
- 3 Venturi Tubes Check
- 5 Tow-Bar Removed
- 4 Nose Tire Check
- 7 Nose Strut Check Leakage / Ext (3/4")
- 8 Propeller Nicks / Security
- 9 Spinner Check
- 10 Cowling Air Inlets Check
- 11 Induction Air Inlet Check
- 12 Oil Quantity 4 to 6 Qt +
- 13 Engine Mounts, Accessories, Leaks Check
- 14 Cowling Door Close / Secure
- 15 Static Port Check

LEFT WING (6), (7) & (8)

- 1 Wing Root Vent Check
- 2 Antennas Check
- 3 Fuel Tank Check Quantity
- 4 Fuel Tank Cap Secure
- 5 Fuel Tank Sump Drain
- 6 Stall Warning Check
- 7 Pitot Tube Check
- 8 Fuel Tank Vent Check
- 9 Tie-Down Remove
- 10 Landing Light Check
- 11 Wingtip Check
- 12 Aileron Check
- 13 Flap Check
- 14 Main Wheel Tire Check
- 15 Brake Check Pads / Caliper

BEFORE STARTING ENGINE

- 1 Preflight Inspection Completed
- 2 Seats Adjust & Lock
- 3 Seatbelts / Shoulder Harness Fasten / Adjust
- 4 Passenger Briefing Complete
- 5 Avionics Off
- 6 Carb Heat Off
- 7 Fuel Selector..... Both
- 8 Flight Controls Free and Correct
- 9 Brakes Test / Apply / Hold

STARTING ENGINE

- 1 Throttle Open ¼”
- 2 Master Switch On
- 3 Anti-Collision Light On
- 4 Primer Prime / Lock
 - *If engine is warm, omit priming.*
- 5 Mixture Full Rich
- 6 Propeller Area Clear
- 7 Magneto Switch Both
- 8 Starter Engage
- 9 Throttle Adjust
- 10 Oil Pressure **Moving up** within 30 Seconds
- 11 Alternator Switch On
- 12 Warm-up 800 RPM
- 13 Mixture **Lean** for Taxi
- 14 Circuit Breakers Check In
- 15 Radios On / Set
- 16 Transponder Standby

FLOODED ENGINE:

- 1 Mixture Idle / Cut Off
- 2 Throttle Full Open
- 3 Starter Engage
- 4 Mixture Advance slowly to RICH when engine starts
- 5 Throttle Retard Promptly
- 6 Oil Pressure **Moving up** within 30 Seconds
 - *Continue with steps 11 to 16 above.*

BEFORE TAXI

- 1 Flaps Retract
- 2 Nav Lights On, as Required
- 3 Listen to AWOS or ATIS Copy
- 4 Contact CLNC DEL / Radio Check Copy

TAXI

- 1 Brakes Check
- 2 Throttle As Required
- 3 Direction Control Check
- 4 Magnetic Compass Check
- 5 Turn Coordinator Check

BEFORE TAKEOFF / RUNUP

- 1 Cabin Doors / Windows Closed and Locked
- 2 Brakes Apply / Hold
- 3 Flight Controls Free & Correct
- 4 Fuel Selector..... Both
- 5 Fuel Gauges Check
- 6 Throttle 1600 RPM
- 7 Mixture Set / Best Rich
- 8 Engine Instruments & Ammeter Check
- 9 Magnetos Check
 - *Right / Both*
 - *Left / Both*
 - *Max Drop 100 RPM*
- 10 Carb Heat On / Check Drop / Off
- 11 Alternator Check Output
- 12 Throttle Check Idle
- 13 Throttle Friction Lock Adjust
- 14 Mixture Full Rich
- 15 Flight Instruments Set
- 16 Primer Locked
- 17 Elevator Trim Set
- 18 Seats Locked
- 19 Seat Backs Erect
- 20 Landing Light, Nav Lights On
- 21 Transponder Alt

TAKEOFF - NORMAL

- 1 Flaps Retracted
- 2 Mixture Full Rich
- 3 Carb Heat Off
- 4 Power Full Throttle, Slowly
- 5 Avoid dragging brakes by keeping heels on floor
- 6 Apply slight back pressure on the elevator control to raise nosewheel when take-off speed is reached.
 - *Notice that **Knots** are indicated on the inside arc of the airspeed indicator.*
- 7 Climb 70 kias

TAKEOFF – SHORT FIELD

MINIMUM GROUND RUN TAKEOFF

- 1 Flaps 10° (First Notch)
- 2 Mixture Set / Best Rich
- 3 Carb Heat Off
- 4 Power Full Throttle
 - *For training purposes, brakes are NOT to be held during power application due to potential propeller damage.*
- 5 Elevator Control Slightly Tail Low
- 6 Lift Off Lift Nose 50 kias
- 7 Climb Vx until obstacle cleared - 53 kias
- 8 Transition to Vy 65 kias

OBSTACLE CLEARANCE TAKEOFF

- 1 Flaps Retracted
- 2 Mixture Set / Best Rich
- 3 Carb Heat Off
- 4 Power Full Throttle
 - *For training purposes, brakes are NOT to be held during power application due to potential propeller damage.*
- 5 Elevator Control Slightly Tail Low
- 6 Lift Off Lift Nose 50 kias
- 7 Climb Vx until obstacle cleared - 53 kias
- 8 Transition to Vy 65 kias

SOFT FIELD TAKEOFF

- 1 Flaps 10° (First Notch)
- 2 Mixture Set / Best Rich
- 3 Carb Heat Off
- 4 Power Full Throttle
 - *For training purposes, brakes are NOT to be held during power application due to potential propeller damage.*
- 5 Elevator Raise Nose Wheel Clear of Ground
- 6 Lift Off Tail Low
- 7 Level off momentarily to accelerate to safe speed
- 8 Climb Vx until obstacle cleared - 53 kias
- 9 Transition to Vy 65 kias

TAKEOFF – CROSSWIND

TAKEOFF IN STRONG CROSSWIND

- 1 Flaps Retracted
- 2 Mixture Set / Best Rich
- 3 Carb Heat Off
- 4 Power Full Throttle
- 5 Aileron Into the wind to maintain wings level
- 6 Hold nosewheel on ground 5 to 9 kias above normal takeoff speed
- 7 Take off abruptly to prevent airplane from settling back to runway while drifting
- 8 Transition to Vy 65 kias

CLIMB

- 1 Airspeed 70 to 80 kias
- 2 Throttle Full Open
- 3 Engine Instruments Check
- 4 Trim Adjust
- 5 Mixture Lean Above 3,000' MSL

CRUISE

- 1 Landing Light Off, or as needed
- 2 Power Set for Cruise
 - *After cruise IAS has been reached, 2450 to 2650 RPM.*
 - *No more than 75% is recommended.*
- 3 Trim Adjust
- 4 Mixture Lean / Best Power
- 5 Oil Pressure 30 to 40 psi
- 6 Oil Temperature Within Green Arc Range
- 7 Engine Instruments Check
- 8 Lean mixture as required to obtain smooth engine operation when using carburetor heat in cruise

DESCENT

- 1 Mixture ENRICHEN
- 2 Power Reduce, As Required
- 3 Carb Heat On, As Required
- 4 Landing Light On
 - *Prior to traffic pattern entry.*

LANDING

BEFORE LANDING

- 1 Seatbelts / Shoulder Harness Fasten / Adjust
- 2 Fuel Selector Valve Both
- 3 Carb Heat On before closing throttle
- 4 Mixture Best Rich
- 5 Airspeed 60 to 70 kias

NORMAL LANDING

- 1 Airspeed (flaps up) 60 to 70 kias
- 2 Flaps 10° to 40° Below 86 kias
- 3 Airspeed (flaps down) 56 to 65 kias
- 4 Touchdown Main Wheels First

SHORT FIELD LANDING

- 1 Airspeed (flaps up) 60 to 70 kias
- 2 Flaps 40° Below 86 kias
- 3 Airspeed (flaps down) 52 kias
- 4 Throttle, after clearing obstacle Idle
- 5 Touchdown Main Wheels First
- 6 Lower nosewheel to ground immediately after touchdown
- 7 Brakes Apply Heavily, Avoid Skidding
- 8 Flaps Retract

CROSSWIND LANDING

- 1 Flaps Minimum Required for Field Length
- 2 Use wing low, crab, or combination method of drift correction
- 3 Land In nearly level attitude
- 4 Hold straight course with steerable nosewheel and occasional braking if necessary

REJECTED LANDING

REJECTED LANDING (GO AROUND)

- 1 Power Full Throttle
- 2 Carb Heat Off, or as necessary
- 3 Flaps Retract to 20°
- 4 Airspeed 53 kias
- 5 Obstacle Cleared
- 6 Flaps Retract to 10°
- 7 Airspeed 65 kias
- 8 Flaps Retract

AFTER LANDING

(Aircraft Clear of the Runway, Stopped)

- 1 Carb Heat Off
- 2 Mixture **Lean** for Taxi
- 3 Flaps Retract
- 4 Landing Light Off, or as needed
- 5 Transponder Off, then **set to 1200**

SECURING AIRPLANE

- 1 Brakes Apply / Hold
- 2 Electrical Equipment Off
- 3 Avionics Master Switch **Off**
- 4 Radio and Transponder Off
- 4 Lights Off
- 5 Throttle Retard
- 6 Mixture Idle / Cut-Off
- 7 Magneto Switch Off (remove key)
- 8 Alternator Switch Off
- 9 Beacon **Always ON**
- 10 Master Switch Off
- 11 Control Lock Install
- 12 Hobbs / Tach Record
- 13 Airplane Chock / Tie Down

DO NOT PUSH AIRPLANE FROM NOSE COWL OR SPINNER. PUSH ONLY FROM PROPELLER ROOT AND/OR WING STRUTS

CLOSE YOUR FLIGHT PLAN !

EMERGENCY CHECKLIST

ENGINE FIRE DURING START

- 1 Starter Continue Cranking
 - *Abandon, obtain fire extinguisher, if fire continues.*

IF ENGINE STARTS

- 2 Throttle 1700 RPM for a few minutes
- 3 Mixture Idle / Cut-Off
- 4 Engine Shut down & inspect for damage

IF ENGINE FAILS TO START

- 5 Throttle Full Open
- 6 Mixture Idle / Cut-Off
- 7 Starter Continue Cranking
- 8 Fuel Shutoff Valve OFF
- 9 Ignition Switch Off
- 10 Master Switch Off
 - *Abandon, obtain fire extinguisher, if fire continues.*

ENGINE POWER LOSS DURING TAKEOFF

- 1 **If sufficient runway for landing straight ahead:** **LAND**

IF INSUFFICIENT RUNWAY REMAINS

- 1 Maintain Safe Airspeed 60 kias
 - *Make only shallow turns to avoid obstructions.*
- 2 Flaps As Required
- 3 Throttle Off
- 4 Mixture Idle / Cut-Off
- 5 Fuel Shutoff Valve OFF
- 6 Ignition Switch Off
- 7 Master Switch Off
- 8 Cabin Door Unlatch
- 9 Touch Down Minimum Controllable Airspeed

IF SUFFICIENT ALTITUDE FOR RESTART

- 1 Maintain Safe Airspeed 60 kias
- 2 Carb Heat On
- 3 Fuel Shutoff Valve On
- 4 Primer In and Locked
- 5 Mixture Enrichen
- 6 Ignition Switch Both, or Start if Prop Stopped
 - *If power is not restored, proceed with power-off landing.*

ENGINE ROUGHNESS

- 1 Carb Heat On
- 2 Fuel Shutoff Valve On

IF ROUGHNESS CONTINUES AFTER ONE MINUTE

- 3 Carb Heat Off
- 4 Mixture Adjust Max Smoothness
- 5 Engine Gauges Check
- 6 Magneto Switch L then R then Both
 - *If operation is satisfactory on either one magneto, continue on that magneto at reduced power and full rich mixture to first suitable airport.*

PREPARE FOR POWER OFF LANDING

ENGINE POWER LOSS IN FLIGHT

- 1 Maintain Safe Airspeed 60 kias
- 2 Carb Heat On
- 3 Fuel Shutoff Valve On
- 4 Primer In and Locked
- 5 Mixture Enrichen
- 6 Engine Gauges Check
- 7 Ignition Switch Both, or Start if Prop Stopped
 - *If power is not restored, proceed with power-off landing.*

IF POWER IS RESTORED

- 1 Mixture Adjust Max Smoothness
- 2 Carb Heat On, As Required

IF POWER IS NOT RESTORED PREPARE FOR POWER OFF LANDING

TRIM AND MAINTAIN 60 KIAS

POWER OFF LANDING

- 1 Suitable Field Locate
- 2 Landing Pattern Establish
- 3 Transponder 7700
- 4 Radios Declare Emergency 121.5
- 5 Seat Backs Erect
- 6 Short Final 55 kias
- 7 Flaps Full or As Needed
- 8 Touch Down Minimum Controllable Airspeed

WHEN COMMITTED TO LANDING

- 1 Throttle Off
- 2 Mixture Idle / Cut-Off
- 3 Fuel Shutoff Valve OFF
- 4 Ignition Switch Off
- 5 Master Switch Off
- 6 Cabin Door Unlatch
- 7 Seatbelts / Shoulder Harness Tight
- 8 ELT Activate

PRECAUTIONARY LANDING WITH ENGINE POWER

- 1 Suitable Field Locate
 - *Fly over, noting terrain and obstructions, retract flaps upon reaching a safe altitude and airspeed.*
- 2 Landing Pattern Establish
- 3 Maintain Safe Airspeed 60 kias
- 4 Transponder 7700
- 5 Radios Declare Emergency 121.5
- 6 Seat Backs Erect
- 7 Flaps 20°
- 8 Short Final 55 kias
- 9 Flaps on final approach..... 40°
- 10 Radios and Electrical Switches Off
- 11 Throttle Off
- 12 Mixture Idle / Cut-Off
- 13 Fuel Shutoff Valve OFF
- 14 Ignition Switch Off
- 15 Master Switch Off
- 16 Cabin Door Unlatch
- 17 Seatbelts / Shoulder Harness Tight
- 18 Touch Down Minimum Controllable Airspeed
- 19 ELT Activate

DITCHING

- 1 Transponder 7700
- 2 Radios Declare Emergency 121.5
- 3 Heavy Objects in Baggage Area ... Secure or Jettison
- 4 Seat Backs Erect
- 5 Seatbelts / Shoulder Harness Fasten / Adjust
- 6 Flaps 40°
- 7 Power 300 fpm descent at 55 kias
- 8 No Power 60 kias with flaps up or 55 w/10° Flaps
- 9 Approach into the wind High Seas, Heavy Wind
- 10 Parallel to Swells Light Wind or Heavy Swells
- 11 Cabin Door Unlatch
- 12 Touchdown ... Level attitude at established rate of descent
- 13 Face Cushion at touchdown with folded coat
- 14 ELT Activate
- 15 Airplane Evacuate through cabin doors
 - *If necessary, open window and flood cabin to equalize pressure so doors can be opened.*
- 16 Life vests and raft Inflate w/clear of airplane

FIRE IN FLIGHT

- 1 Source of Fire Determine

ELECTRICAL FIRE (*Smoke in Cabin*)

- 1 Master Switch Off
- 2 Vents Closed
- 3 Cabin Air & Heat Off
- 4 Fire Extinguisher Activate
- 5 Radios and Electrical Switches Off
 - ***After discharging fire extinguisher and ascertained that fire is completely extinguished, ventilate the cabin.***
- 6 Vents / Cabin Air Open
- 7 Cabin Air & Heat On
 - ***If fire is completely extinguished and electrical power is necessary to continue flight to nearest suitable airport or landing area:***
- 8 Master Switch On
- 9 Circuit Breakers Check for faulty circuit, **do not reset**
- 10 Radios / Electrical Switches On
 - ***Only equipment absolutely needed, with delay after each until short circuit is located.***

LAND AS SOON AS PRACTICABLE

FIRE IN FLIGHT (cont.)

CABIN FIRE

- 1 Master Switch Off
- 2 Vents Closed
- 3 Cabin Air & Heat Off
- 4 Fire Extinguisher Activate
 - ***After discharging fire extinguisher and ascertained that fire is completely extinguished, ventilate the cabin.***
- 5 Vents / Cabin Air Open
- 6 Cabin Air & Heat On

LAND AS SOON AS PRACTICABLE

WING FIRE

- 1 Nav Lights Off
- 2 Pitot Heat Off
 - ***Perform a sideslip to keep the flames away from the fuel tank and cabin.***
 - ***Land as soon as possible using flaps only as required for final approach and touchdown.***

ENGINE FIRE IN FLIGHT

- 1 Mixture Idle / Cut-Off
- 2 Fuel Shutoff Valve OFF
- 3 Throttle Closed
- 4 Master Switch Off
- 5 Cabin Heat and lower vents Off
- 6 Airspeed 85 kias
 - ***If fire is not extinguished, increase glide speed to an airspeed below V_{ne} that will produce an incombustible mixture .***

LAND AS SOON AS PRACTICABLE

PREPARE FOR POWER OFF LANDING

LOSS OF OIL PRESSURE

LAND AS SOON AS POSSIBLE
PREPARE FOR POWER OFF LANDING

HIGH OIL TEMPERATURE

- 1 Mixture Enrichen
- 2 Airspeed Increase if Slow

PROCEED TO NEAREST AIRPORT
PREPARE FOR POWER OFF LANDING

VACUUM SYSTEM FAILURE

VACUUM FAILURE SUSPECTED

- 1 Vacuum Gauge Check
- 2 Verify Failure of Vacuum System Check
- 3 Partial Panel Procedures Initiate

LAND AS SOON AS PRACTICABLE

STATIC SOURCE BLOCKAGE

ERRONEOUS INSTRUMENT READING SUSPECTED

- 1 Alternate Static Source Valve Open
- 2 Airspeed Adjust Appropriately

SPIN RECOVERY

- 1 Throttle Idle
- 2 Ailerons Neutral
- 3 Rudder Full opposite direction of rotation
- 4 Control Wheel Full Forward
- 5 Rudder Neutral when rotation stops
- 6 Control Wheel As required to smoothly
regain level flight attitude

ELECTRICAL FAILURES

OVER-VOLTAGE LIGHT ILLUMINATES

- 1 Master Switch (Both Sides) Off
- 2 Master Switch On
- 3 Over-Voltage Light Off
 - *If Over-Voltage light illuminates again:*
 - *Land as soon as practicable. The battery is the only remaining source of electrical power.*

AMMETER SHOWS DISCHARGE

- 1 ALT Switch Off
- 2 Electrical Load Reduce
- 3 ALT Switch On

IF POWER NOT RESTORED

- 4 ALT Switch Off
 - *If alternator output cannot be restored, reduce electrical load and land as soon as practicable. The battery is the only remaining source of electrical power.*

LANDING WITH A FLAT MAIN TIRE

- 1 Approach Normal
- 2 Flaps As Required
- 3 Touchdown Good main tire first
 - *Hold airplane off flat tire as long as possible with aileron control.*
- 4 Directional Control Maintain
 - *Use brake on good wheel as required.*

LANDING WITH A FLAT NOSE TIRE

- 1 Approach Normal
- 2 Flaps As Required
- 3 Touchdown On Main Wheels
 - *Hold nose wheel off the ground as long as possible.*
 - *When nose wheel touches down, maintain full up elevator as airplane slows to stop.*

ICING

INADVERTENT ICING ENCOUNTER

- 1 Pitot Heat On
- 2 Turn Back or Change Altitude OK
- 3 Cabin Heat Full Open
- 4 Defroster Outlets Full Open
- 5 Cabin Air Adjust for Max heat and airflow
 - *Watch for signs of engine related icing conditions. Engine RPM loss could be caused by ice blocking the air intake filter or ice blocking the fuel injection air reference tubes.*
- 6 Throttle Adjust in or out for max RPM
- 7 Carb Heat On, As Required
- 8 Mixture Adjust in or out for max RPM
- 9 Flaps Keep Retracted
- 10 Left Window Open
- 11 Ice from windshield Remove if possible
 - *A forward slip may be necessary on final approach to improve visibility.*
- 12 Approach Speed 65 to 75 kias
- 13 Touchdown Level Attitude

PROCEED TO NEAREST AIRPORT

PREPARE FOR OFF-AIRPORT LANDING

PREPARE FOR HIGHER STALL SPEED

LIGHT GUN SIGNALS

Steady Green

Ground Cleared For Takeoff
In Flight Cleared To Land

Flashing Green

Ground Cleared To Taxi
In Flight Return For Landing

Steady Red

Ground Stop
In Flight Give Way, Continue Circling

Flashing Red

Ground Taxi Clear Of Runway In Use
In Flight Airport Unsafe, Do Not Land

Flashing White

Ground Return To Starting Point
In Flight Not Used

Alternating Red & Green

General Warning Signal
Exercise Extreme Caution

A superior pilot
uses his
superior judgment
to avoid situations
that require
the use
of his
superior skills