



1977 CESSNA 172 SYSTEMS SUMMARY N734DN

ENGINE

Lycoming 4 cylinder O-320, 160 HP @ 2700 RPM, air cooled, direct drive, horizontally opposed, normally aspirated. Major accessories include starter, belt driven alternator, dual magnetos, and a vacuum pump. Oil capacity is 6 quarts maximum; 4 quarts minimum required for flight.

PROPELLER

McCauley, two blades, fixed pitch, 75 inch all metal propeller.

BRAKES

Hydraulic discs located on each of the two main landing gear's provide braking. Two master cylinders, one behind each brake pedal on the pilot's side control each individual wheel. The co-pilot's brake pedals are mechanically connected linked to the pilots brake pedals.

FLAPS

The flaps are electrically operated single slot type. Flaps are extended or retracted by positioning the wing flap switch lever to the desired flap deflection position. The flap switch lever has stops at the 10° and 20° positions. A scale and pointer indicates the flap travel in degrees.

FUEL SYSTEM

Fuel is carried in two wing tanks with a total capacity of 43 gallons. A total of 40 gallons usable fuel is available. The fuel selector valve is labeled with the total useable fuel. Fuel is gravity fed to the engine. The fuel selector valve has four positions: Both, Left, Right, Off. The fuel selector should be set to Both for all takeoffs and landings. Each fuel tank has one sump. The entire fuel system can be sumped by pulling on the fuel strainer knob located under the access panel on the right side of the engine cowling.

ELECTRICAL SYSTEM

Electrical energy is supplied by a 14 volt direct current system powered by an engine driven alternator. A 12 volt battery is located left forward side of the firewall. The ammeter indicates the charging rate, in amperes, of current supplied from the alternator to the battery. The ammeter will show a discharge when the alternator is not functioning or the electrical load exceeds the output capacity of the alternator. Electrical circuits are protected by circuit breakers mounted on the instrument panel.



1977 CESSNA 172 RECOMMENDED PROCEDURES N734DN

STEEP POWER TURNS

Two 90° or one 180° turns. Set power to 2100 RPM and adjust airspeed to 90 KIAS. Roll into a bank angle of 50°. Begin applying back pressure and add 100 to 200 rpm passing through 30° angle of bank. Begin roll out 15° -20° before assigned heading and relax back pressure, reduce power to 2100 RPM passing 30° angle of bank. Maintain a constant altitude, airspeed, and roll out on the assigned heading.

SLOW FLIGHT

Two 90° or one 180° clearing turns. Apply carburetor heat on and set power to 1500 RPM. Increase pitch attitude to maintain altitude and decelerate to 50 KIAS. Add flaps as desired. Increase power to 2000 RPM and adjust pitch to maintain altitude and airspeed. Maintain airspeed with pitch control, altitude with power, and a constant heading with an emphasis on rudder control. To recover apply full power, carburetor heat off, lower the nose, select the flaps up in increments while accelerating to cruise.

APPROACH TO LANDING STALL

Two 90° or one 180° clearing turns. Apply carburetor heat on and set power to 1500 RPM. Below 85 KIAS select full flaps. Establish the aircraft in a landing attitude. Set the power to idle. Hold the landing attitude until obtaining the stall buffet or full stall. Recover by relaxing back pressure to hold a climb attitude. Select full power, carburetor heat off, retract flaps to 20°. As aircraft accelerates continue raising the flaps to 0° after passing through 60 KIAS.

TAKEOFF/DEPARTURE STALL

Two 90° or one 180° clearing turns. Apply carburetor heat on and set power to 1500 RPM. Slow to 60 KIAS. Turn carburetor heat off. Increase pitch to slightly higher than climb attitude while increasing to full power. Hold this attitude by increasing elevator back pressure until obtaining stall buffet or stall. To recover, relax the back pressure to lower the nose to a climb attitude while accelerating to climb airspeed. If the aircraft drops a wing during the maneuver, it is caused by lack of rudder coordination. To pick up the wing, Do Not Use aileron. Use the rudder to pull the wing up.

MAXIMUM PERFORMANCE TAKEOFF OVER AN OBSTACLE

Select 10° flaps, hold brakes, apply full power smoothly, release brakes: Accelerate to 55 KIAS, rotate and climb out at 59 KIAS until obstacle is cleared. Lower the nose, accelerate, to V_y , raise the flaps after passing through 60 KIAS. Accelerate to V_y 73 KIAS and after passing through 1000 feet climb at 80 - 85 KIAS cruise climb airspeed.

SHORT/SOFT FIELD TAKEOFF

Select 10° flaps, yoke positioned full aft, advance power to full, do not hold brakes and establish a takeoff attitude. Let the airplane fly itself into the air, once airborne and in ground effect, lower nose to accelerate to climb speed.

NORMAL LANDING

Select carburetor heat on. Set power to 2000 RPM in the pattern maintain 85 KIAS. At the abeam position reduce power to 1500 RPM, add 10° flaps adjust airspeed to 75 KIAS. Base leg flaps to 20° airspeed to 70 KIAS. On final set flaps to 30° or 40° maintain airspeed 60 - 65 KIAS. In the landing flare reduce power to idle, touch down on the mains holding the nose wheel off until the elevator loses effectiveness.

SHORT FIELD LANDING

Select carburetor heat on. Set power to 2000 RPM in the pattern maintain 85 KIAS. At the abeam position reduce power to 1500 RPM, add 10° flaps adjust airspeed to 75 KIAS. Base leg flaps to 20° airspeed to 70 KIAS. On final, select flaps to full, maintain airspeed 60 KIAS. In the landing, flare reduce power to idle, touch down on the mains first, lower the nose to the runway, retract the flaps, apply maximum braking without skidding the tires.

SOFT FIELD LANDING

Select carburetor heat on. Set power to 2000 RPM in the pattern maintain 85 KIAS. At the abeam position reduce power to 1500 RPM, add 10° flaps adjust airspeed to 75 KIAS. Base leg flaps to 20° airspeed to 70 KIAS. On final, select flaps to full, maintain airspeed 60 KIAS. In the landing, flare reduce the power to slightly above idle, attempt to hold aircraft off runway as long as possible by landing on the mains while increasing back pressure until elevator loses its effectiveness. Use no brakes, power should be reduced to idle after landing, during roll-out.

GO AROUND

Power to full throttle, carburetor heat off, establish a climb attitude, retract flaps to 20° immediately, retract flaps to 10° passing through 55 KIAS, retract flaps to 0° passing through 60 + KIAS. Accelerate to V_y (73 KIAS) and climb to pattern altitude.

INSTRUMENT APPROACH POWER SETTINGS

ILS :

90 KIAS 1700 RPM

NON-PRECISION:

90 KIAS 1400 - 1500 RPM



1977 CESSNA 172N AIRCRAFT CHECK-OUT N734DN

Aircraft Make and Model _____.
Engine Make and Model _____.
Rated Horsepower _____ BHP at _____ RPM
Propeller Type _____.
Maximum Gross Weight _____ LB. Maximum Weight in Baggage _____ LB.
Basic Empty Weight for N _____ is _____ LB.
Useful Load for N _____ is _____ LB.

Speeds

Vne _____ KIAS Vfe _____ KIAS Vr _____ KIAS
Vno _____ KIAS Vy _____ KIAS Vso _____ KIAS
Va _____ KIAS at _____ LB. Vx _____ KIAS Vs1 _____ KIAS
Enroute Climb Speed _____ KIAS
Final Approach Speed with Flaps Down _____ KIAS
Final Approach Speed with Flaps up _____ KIAS
Demonstrated Crosswind Component _____ KIAS
Best Glide Speed _____ KIAS

Fuel/Oil System

Number of Fuel Tanks _____.
Total Capacity of each Tank _____.
Total Usable Fuel _____ Gallons
Where are the fuel drains located? _____.
Fuel Grade and color _____.
Oil Capacity _____ Qt.
Minimum Oil Quantity for Flight _____ Qt.
Oil Type Used? _____ Wt. Oil used _____.

Electrical System

_____ Volt Battery _____ Volt Alternator
If the ammeter is indicating a Discharge, what might this be indicative of?
1. _____ or
2. _____.
Where is the battery Located _____.
Where is the External Power Receptacle Located _____.

Power Setting and Engine Care

1. What is Climb Power Setting? _____ RPM.
2. What is Cruise Power Setting? _____ RPM.

Aircraft Performance

1. Complete the following Weight and Balance

Basic Empty Weight	_____ LB.	Moment	_____
Usable Fuel	_____ LB.	Moment	_____
Pilot and Front Passenger	_____ LB.	Moment	_____
Rear Passengers	_____ LB.	Moment	_____
Baggage	_____ LB.	Moment	_____

Total Weight _____ LB. divide by Total Moment _____ = _____ CG

2. Takeoff

Calculate the ground roll and total to clear a 50 foot obstacle takeoff distances at maximum gross weight, departing from a field elevation of 2500 feet. ATIS reports wind calm and temperature 75 degrees F.

3. Enroute:

Calculate the maximum endurance and fuel flow per hour at 7500 feet cruise altitude, using a cruise power setting of 2400 RPM.

What percentage BHP and TAS can you expect at 2300 RPM?

4. Landing:

Calculate the ground roll and total to clear a 50 foot obstacle landing distance at maximum gross weight, sea level field elevation, standard temperature, wind calm.

What is the recommended short field approach speed and configuration?

What are the recommended soft field takeoff and landing configurations and procedures?

Describe the go around procedure: _____

Pilots Name _____

Date _____

Instructor _____



Golden Wings, Inc. Aircraft Checkout Form Cessna 172N, N734DN

Name _____
 Date Last Biennial _____ or Date Last Annual _____
 Date Last Medical _____ Class _____ Pilot Cert.# _____
 Hours PIC _____ Hours last 6 months _____ Pilot Ratings _____
 Aircraft Check Out (Date) _____ Type A/C _____ N _____

Phase I: Oral Operational Quiz **Check if satisfactory**

Recent changes in FAR's	_____
Airspace, controlled and uncontrolled	_____
Airplane and equipment documents	_____
Airplane performance and proper operation of all installed equipment	_____
Airplane loading, weight and balance	_____
Preflight line check	_____
STOL Equipment	_____
High Altitude operations (density altitude)	_____
Speed brakes, long range tanks, etc. _____	_____

Phase II: Basic Piloting Technique

Normal and crosswind takeoffs and landings	_____
Short field takeoff and landing over 50' obstacle	_____
Soft field takeoff and landing	_____
Flight at minimum controllable airspeeds	_____
Stalls from all normally anticipated flight attitudes	_____
Go-arounds	_____
720°steep turns(45° bank minimum)	_____
Slips to a landing	_____
In-flight emergency procedures	_____
Simulated equipment failures	_____
Radio communication and navigation	_____
STOL Operations	_____
High Density Altitude Operations	_____
Other (specify) _____	_____

Phase III: Instrument Flight

Straight and level, shallow climbing and descending turns to given altitude heading _____	_____
Approaches (# _____, type _____), for IFR pilots	_____
Recovery from start of power-on spiral	_____
Recovery from the approach to a climbing stall	_____
High Altitude flight operations	_____
Emergency descents	_____
Other (specify) _____	_____

Comments _____
 Instructor Name _____ Signature _____
 CFI No. _____ Expiration Date _____

Signature of pilot _____ Date _____