

K. AMMETER SHOWS DISCHARGE

- 1) Alternator OFF
- 2) Nonessential Electrical Equipment OFF
- 3) Terminate flight as soon as practical.

L. ICING - inadvertent encounter

- 1) Turn pitot heat switch ON (if installed).
- 2) Turn back or change altitude to obtain an outside air temperature that is less conducive to icing.
- 3) Pull cabin heat control full out to obtain maximum defroster air temperature. For greater air flow at reduced temperatures, adjust the cabin air control as required.
- 4) Open the throttle to increase engine speed and minimize ice build-up on propeller blades.
- 5) Watch for signs of carburetor air filter ice and apply carburetor heat as required. An unexpected loss in engine speed could be caused by carburetor ice or air intake filter ice. Lean the mixture for maximum RPM, if carburetor heat is used continuously. Plan a landing at the nearest airport. With an extremely rapid ice build-up, select a suitable "off airport" landing site.
- 7) With an ice accumulation of 1/4 inch or more on the wing leading edges, be prepared for significantly higher stall speed.
- 8) Leave wing flaps retracted. With a severe ice build-up on the horizontal tail, the change in wing wake airflow direction caused by wing flap extension could result in a loss of elevator effectiveness.
- 9) Open left window and, if practical, scrape ice from a portion of the windshield for visibility in the landing approach.
- 10) Perform a landing approach using a forward slip, if necessary, for improved visibility.
- 11) Approach at 65 to 75 kts. depending upon the amount of ice accumulation.
- 12) Perform a landing in level attitude.

M. STATIC SOURCE BLOCKAGE

- 1) Alternate Static Source Valve ON
- 2) Consult appropriate airspeed calibration tables in Section 5.

N. LANDING WITH A FLAT MAIN TIRE

- 1) Wing Flaps AS DESIRED
- 2) Approach NORMAL
- 3) Touchdown GOOD TIRE FIRST,
- 4) Hold airplane off flat tire as long as possible with aileron control.

PILOT CHECKLIST C-172

NORMAL PROCEDURES

A. PRE-FLIGHT INSPECTION - interior

- 1) Hobbs Meter CHECK
- 2) Control Lock REMOVE
- 3) Ignition Switch OFF
- 4) Elevator Trim SET FOR TAKEOFF
- 5) Avionics Master Switch (if installed) OFF
- 6) Master Switch ON
- 7) Fuel Quantity Gauges CHECK
- 8) Fuel Selector Valve ON BOTH
- 9) Wing Flaps LOWER
- 10) Exterior Lights CHECK VISUALLY
- 11) Master Switch OFF
- 12) Required Papers/Inspections CHECK

B. PRE-FLIGHT INSPECTION - exterior

- 1) Check for contamination while draining left fuel tank sump.
- 2) Check that baggage compartment door is secure & locked.
- 3) Check left side fuselage & underside for damage.
- 4) Check condition of vertical and horizontal stabilizers.
- 5) Check elevator: Hinges, movement and condition.
- 6) Check rudder: Hinges, movement and condition.
- 7) Check all visible elevator and rudder cables.
- 8) Remove tail tie-down.
- 9) Check trim tab alignment.
- 10) Check right side fuselage & underside for damage.
- 11) Check condition of right main wheel tire, brake & brake line.
- 12) Check for contamination while draining right fuel tank sump.
- 13) Check right flap, actuator, & track for condition & security.
- 14) Check aileron, hinges & actuator for condition, movement & security.
- 15) Inspect wing upper & lower surfaces, & wing tip for damage.
- 16) Inspect wing leading edge for damage.
- 17) Remove wing tie-down.
- 18) Visually check right fuel tank for quantity & proper grade.
- 19) Secure right fuel filler cap and then check upper wing surface.
- 20) Open engine access door & check oil (4 or 6 qt. minimum).
- 21) Check for contamination while draining fuel from fuel strainer.
- 22) Secure engine access door.
- 23) Check condition of windshield. (continued)

Preflight Inspection - CONTINUED

- 24) Check right side nose wheel steering linkage & shimmy dampener.
- 25) Check nose wheel tire & strut for condition & inflation.
- 26) Check carburetor air filter for obstructions.
- 27) Inspect propeller for damage.
- 28) Inspect spinner for secureness.
- 29) Check cowling & air intake for secureness and obstructions.
- 30) Check alternator belt for secureness & condition.
- 31) Check left side nose wheel steering linkage, tire & strut.
- 32) Check static source for obstruction.
- 33) Visually check left fuel tank for quantity & proper grade.
- 34) Secure fuel filler cap.
- 35) Check pitot tube for obstruction.
- 36) Test stall warning horn for operation.
- 37) Check fuel tank vent for obstruction.
- 38) Remove left wing tie-down.
- 39) Inspect left wing leading edge for damage.
- 40) Inspect wing upper & lower surfaces, & wing tip for damage.
- 41) Check aileron, hinges & actuator for condition, movement & security.
- 42) Check left flap, actuator, & track for condition & security.
- 43) Check condition of left main wheel tire, brake, & brake line.

C. BEFORE STARTING ENGINE

- 1) Seats.....ADJUST & LOCK
- 2) Seat Belts/Harnesses.....FASTENED
- 3) Fuel Selector Valve.....ON BOTH
- 4) Autopilot (if installed).....OFF
- 5) Radios.....OFF
- 6) Avionics Master Switch (if installed).....OFF
- 7) Electrical Switches.....OFF
- 8) Circuit Breakers.....CHECK

D. STARTING ENGINE

- 1) Brakes.....HOLD
- 2) Carburetor Heat.....OFF
- 3) Mixture.....RICH/lean for alt.
- 4) Primer.....AS NEEDED & LOCK
- 5) Throttle.....OPEN 1/8" TO 1/4"
- 6) Master Switch.....ON
- 7) Rotating Beacon.....ON
- 8) Propeller Area.....CALL "CLEAR"
- 9) Ignition Switch.....TO START
- 10) Engine RPM.....1000 RPM
- 11) Oil Pressure.....GREEN ARC (continued)

Starting Engine - CONTINUED

- 12) Wing Flaps.....RETRACT
- 13) Avionics Master Switch (if installed).....ON
- 14) Radios.....ON
- 15) Transponder.....STANDBY (SBY)
- 16) Altimeter.....SET
- 17) Directional Gyro.....SET
- 18) Taxi.....CLRNC & TEST BRAKES

E. BEFORE TAKEOFF

- 1) Brakes.....HOLD
- 2) Flight Controls.....CHECK
- 3) Elevator Trim.....SET FOR TAKEOFF
- 4) Throttle.....1700 RPM
- 5) Engine Instruments.....GREEN ARCS
- 6) Ammeter/Alternator Light.....CHECK
- 7) Suction.....GREEN ARC
- 8) Mixture.....SET BEST POWER
- 9) Carburetor Heat.....CHECK RPM DROP
- 10) Magnetos.....CHECK (R) (L) (BOTH)
- 11) Throttle.....MAX DROP 125 RPM
- 12) Flight Instruments.....CHECK IDLE (THEN 1000 RPM)
- 13) Radios.....RESET
- 14) Transponder.....SET/VOLUME ADJUSTED
- 15) Doors & Windows.....ON ALTITUDE
- 16) Takeoff.....CLOSED & LOCKED
- 17) Takeoff.....CLEARANCE
- 18) Takeoff.....CHECK FOR TRAFFIC

F. TAKEOFF - normal

- 1) Wing Flaps.....RETRACTED
- 2) Throttle.....FULL OPEN
- 3) Lift Nose Wheel.....60 kts.
- 4) Climb Speed.....70 - 80 kts.

TAKEOFF - short field

- 1) Wing Flaps.....RETRACTED
- 2) Brakes.....HOLD
- 3) Throttle.....FULL OPEN
- 4) Brakes.....RELEASE
- 5) Climb Speed.....60 kts.
- 6) Obstacles Cleared.....65 kts.

EMERGENCY PROCEDURES

CLIMB SPEEDS

- 1) Vx 60 kts.
- 2) Vy 70 kts.
- 3) Cruise Climb 70 - 85 kts.

G. CRUISE

- 1) Power 75%: 2200 - 2650 RPM
- 2) Elevator Trim SET
- 3) Mixture LEAN FOR BEST POWER

H. BEFORE LANDING

- 1) Mixture SET
- 2) Fuel Selector Valve ON BOTH
- 3) Carburetor Heat ON
- 4) Seat Belts & Harnesses SECURE
- 5) Autopilot (if installed) OFF

I. AFTER LANDING

- 1) Wing Flaps UP
- 2) Carburetor Heat OFF
- 3) Elevator Trim SET FOR TAKEOFF
- 4) Transponder OFF
- 5) Electrical Switches AS REQUIRED

J. ENGINE SHUTDOWN

- 1) Radios OFF
- 2) Autopilot (if installed) OFF
- 3) Avionics Master Switch (if installed) OFF
- 4) Throttle Setting 1000 RPM
- 5) Ignition HOT MAGNETO CHECK
- 6) Mixture IDLE CUT-OFF
- 7) Lights OFF
- 8) Ignition Switch OFF
- 9) Master Switch OFF
- 10) Control Lock INSTALL
- 11) Record HOBBS, TACH, FUEL, OIL
- 12) Aircraft TIE-DOWN & SECURE

A. ENGINE FAILURE

- 1) Air Speed (Best Glide) 65 kts.
- 2) Landing Site Select

TRY TO RESTART ENGINE:

- 3) Fuel Selector Valve ON
- 4) Mixture RICH
- 5) Carburetor Heat ON
- 6) Ignition Switch BOTH
- 7) Master Switch ON
- 8) Primer IN & LOCKED
- 9) Engine Gauges CHECK
- 10) Fuel Quantity CHECK
- 11) Radio (Call Mayday) 121.5 OR OTHER

IF UNABLE TO RESTART: EXECUTE FORCED LANDING PROCEDURES

B. FORCED LANDING - landing without engine power

- 1) Air Speed 65 kts. (FLAPS UP)
60 kts. (FLAPS DOWN)

SECURE AIRCRAFT FOR LANDING:

- 2) Fuel Selector Valve OFF
- 3) Mixture IDLE CUT-OFF
- 4) Throttle CLOSED
- 5) Ignition Switch OFF
- 6) Wing Flaps AS REQUIRED
(40° RECOMMENDED)
- 7) Master Switch OFF
- 8) Doors UNLATCH
- 9) Touchdown TAIL LOW

C. FORCED LANDING - landing with partial engine power

- 1) Air Speed 60 kts.
- 2) Wing Flaps 20°

FLY OVER SELECTED FIELD NOTING TERRAIN & OBSTRUCTIONS, THEN
RETRACT FLAPS UPON REACHING SAFE ALTITUDE & AIRSPEED.

- 3) Electrical Switches OFF
- 4) Wing Flaps 40°
- 5) Air Speed 60 kts.
- 6) Master Switch OFF
- 7) Doors UNLATCH (continued)

Forced Landing With Partial Power - CONTINUED

- 8) Touchdown.....TAIL LOW
- 9) Ignition Switch.....OFF

D. FIRES - on the ground

- 1) Cranking--CONTINUE, to get a start which would suck the flames & accumulated fuel through the carburetor & into the engine.

IF ENGINE STARTS:

- 2) Power.....1700 RPM
- 3) Engine.....SHUTDOWN & INSPECT
FOR DAMAGE

IF ENGINE FAILS TO START:

- 4) Cranking.....CONTINUE
- 5) Fire Extinguisher.....OBTAIN & USE
- 6) Fuel Selector Valve.....OFF
- 7) Ignition Switch.....OFF
- 8) Master Switch.....OFF

E. FIRES - in flight

- 1) Fuel Selector Valve.....OFF
- 2) Mixture.....OFF
- 3) Master Switch.....OFF
- 4) Cabin Heat & Air.....OFF
- 5) Air Speed.....100 kts.

IF FIRE IS NOT EXTINGUISHED, INCREASE GLIDE SPEED TO FIND AN AIRSPEED WHICH WILL PROVIDE AN INCOMBUSTIBLE MIXTURE.

- 6) Forced Landing.....EXECUTE

F. ELECTRICAL FIRE IN FLIGHT

- 1) Master Switch.....OFF
- 2) Electrical Switches.....OFF
- 3) Cabin Air & Heat.....CLOSED
- 4) Fire.....EXTINGUISH
- 5) Wing Vents or Windows.....OPEN
- 6) Master Switch.....ON
- 7) Circuit Breakers.....CHECK & DO NOT RESET
- 8) Turn radios and electrical switches ON one at a time with delay after each until short circuit is localized.
- 10) Continue flight with faulty equipment OFF and land as soon as practical.

G. CABIN FIRE

- 1) Master Switch.....OFF
- 2) Vents/Cabin Air/Heat.....CLOSED--AVOID DRAFTS
- 3) Fire.....PUT OUT
- 4) Land as soon as possible & inspect for damage.

H. WING FIRE

- 1) Navigation Light Switch.....OFF
- 2) Strobe Light Switch.....OFF
- 3) Pitot Heat Switch.....OFF
- 4) Perform a side slip to keep the flames away from the fuel tank & cabin, and land as soon as possible with flaps retracted.

I. ELECTRICAL POWER MALFUNCTION - excessive rate of charge

- 1) Alternator.....OFF
- 2) Alternator Circuit Breaker.....PULL
- 3) Nonessential Electrical Equipment.....OFF
- 4) Terminate flight as soon as practical.

NOTE

Illumination of the low-voltage light may occur during low RPM conditions with an electrical load on the system such as during low RPM taxi. Under these conditions, the light will go out at higher RPM. The master switch need not be recycled since an over-voltage condition has not occurred to deactivate the alternator.

J. ELECTRICAL POWER MALFUNCTION - low-voltage warning light on

- 1) Radios.....OFF
- 2) Avionics Master Switch (if installed).....OFF
- 3) Alternator Circuit Breaker.....CHECK IN
- 4) Master Switch.....OFF
- 5) Master Switch.....ON
- 6) Low Voltage Light.....CHECK OFF
- 7) Avionics Master Switch (if installed).....ON
- 8) Radios.....ON

IF LOW-VOLTAGE LIGHT ILLUMINATES AGAIN:

- 9) Alternator.....OFF
- 10) Nonessential Electrical Equipment.....OFF
- 11) Terminate flight as soon as practical.