

C172S - NORMAL PROCEDURES

MONMOUTH AREA FLYING CLUB USE ONLY.

PILOTS SHALL USE CURRENT POH FOR ALL OPERATIONS.

C172S Checklist. Version: ORIGINAL. Date: 25 April 2016. Page 3.

PREFLIGHT - CABIN

PITOT COVER REMOVE
DOCUMENTS: AROW / G1000 / KAP 140 CHECK
CONTROL WHEEL LOCK REMOVE
FIRE EXTINGUISHER CHECK
FUEL SELECTOR BOTH
FUEL SHUTOFF VALVE ON (push full in)
TRIM SET FOR TAKEOFF
MIXTURE IDLE CUTOFF
THROTTLE IDLE
ALT STATIC AIR VALVE OFF (push full in)
CIRCUIT BREAKERS CHECK
MAGNETOS OFF

BEACON ON
MASTER (ALT & BAT) ON
FLAPS EXTEND
PRIMARY FLIGHT DISPLAY (PFD) CHECK
HOBBS / TACH CHECK
FUEL QUANTITY GAUGES (L & R) CHECK
ANNUNCIATORS CHECK
AVIONICS FANS (BUS 1 & 2) CHECK
PITOT HEAT CHECK
LIGHTS (NIGHT FLIGHTS) CHECK
MASTER (ALT & BAT) OFF

PREFLIGHT - EXTERIOR

FUEL QUANTITY / QUALITY CHECK
FUEL CAPS SECURE / VENTS CLEAR
OIL QUANTITY / DIPSTICK / FILLER CHECK / SECURE
COWL PLUGS REMOVE

BAGGAGE DOOR CHECK LOCKED
RUDDER GUST LOCK (if installed) REMOVE
CONTROL SURFACES CHECK
ANTENNAS CHECK
WING / TAIL TIE-DOWNS DISCONNECT
MAIN WHEEL GEAR / TIRE / BRAKES CHECK
COWLING / AIR INLETS / AIR FILTER CHECK
ALTERNATOR BELT CHECK
PROPELLER / SPINNER CHECK
NOSE WHEEL STRUT / TIRE CHECK
DRAIN TUBES CHECK
STATIC PORTS CHECK
PITOT TUBE CHECK
FUEL TANK VENT CHECK
STALL WARNING OPENING CHECK

PRE-BOARDING

FROST REMOVE
WINDOWS CLEAN
FUEL CAPS SECURE
WING / TAIL TIE-DOWNS / CHOCKS VERIFY REMOVED
PITOT COVER / COWL PLUGS VERIFY REMOVED
AREA AND TAXI ROUTE CLEAR

BEFORE STARTING ENGINE

PREFLIGHT INSPECTION COMPLETE
PASSENGER BRIEFING COMPLETE
SEATS & SEAT BELTS ADJUST & LOCK
BRAKES SET
AVIONICS (BUS 1 & BUS 2) OFF

STARTING ENGINE

FUEL SELECTOR BOTH
MIXTURE IDLE CUTOFF
THROTTLE OPEN 1/4 INCH
STBY BATT TEST (10 seconds) / ARM
ENGINE INSTRUMENTS NO RED Xs
BUS E VOLTS 24 VOLTS minimum
M BUS VOLTS 1.5 VOLTS maximum
BATT S AMPS DISCHARGE (negative)
STBY BATT ANNUNCIATOR VERIFY ON
MASTER (BAT ONLY) ON
BEACON ON

ENGINE PRIME (if engine is warm, do not prime)
PROPELLER AREA CLEAR
MAGNETOS START
MIXTURE RICH
THROTTLE 1000 RPM
OIL PRESSURE CHECK

MASTER (ALT & BAT) ON
AVIONICS (BUS 1 & BUS 2) ON
NAV LIGHTS ON
AMPS (M BATT & BATT S) CHECK (positive)
LOW VOLTS ANNUNCIATOR CHECK (not shown)
FLAPS UP
MIXTURE LEAN (for taxi)
CIRCUIT BREAKERS CHECK
ENGINE START TIME RECORD

BEFORE TAXI

MULTI-FUNCTION DISPLAY (MFD) INITIALIZE
COM & NAV SET
ALTIMETERS SET
IFR CLEARANCE OBTAIN
GPS STATUS VERIFY
GPS FLIGHT PLAN ENTER & ACTIVATE
HDG & ALT BUGS SET
TRANSPONDER SET
STROBE LIGHTS (DAY ONLY) ON
TAXI LIGHT ON
BRAKES RELEASE & TEST

C172S - NORMAL PROCEDURES

MONMOUTH AREA FLYING CLUB USE ONLY.

PILOTS SHALL USE CURRENT POH FOR ALL OPERATIONS.

C172S Checklist. Version: ORIGINAL. Date: 25 April 2016. Page 4.

RUN-UP

BRAKES SET
FUEL SELECTOR BOTH
FLIGHT CONTROLS FREE & CORRECT
AUTOPILOT TEST
MANUAL ELECTRIC TRIM TEST
FUEL QUANTITY CHECK

MIXTURE RICH
THROTTLE 1800 RPM
MAGNETOS CHECK (175 / 50 RPM)
ENGINE INSTRUMENTS CHECK
VAC CHECK
AMPS & VOLTS CHECK
THROTTLE CHECK IDLE
GPS FLIGHT PLAN REVIEW AS DESIRED
CDI SOFT KEY SELECT NAV SOURCE
PITOT HEAT AS REQUIRED

BEFORE TAKEOFF

TRIM SET
FLAPS SET & VERIFY
MIXTURE RICH
ENGINE AND FLIGHT INSTRUMENTS CHECK
ABORT PLAN BRIEFING COMPLETE
DOORS & WINDOWS CLOSED & LATCHED
ALL LIGHTS ON
BRAKES RELEASE

CLIMB

FLAPS RETRACT
MIXTURE BEST POWER
ENGINE INSTRUMENTS CHECK
TRANSPONDER VERIFY ALT

CRUISE

POWER SET
MIXTURE LEAN
ENGINE & FLIGHT INSTRUMENTS CHECK

IN RANGE

WEATHER OBTAIN
ALTIMETERS SET
ARRIVAL BRIEFING COMPLETE
APPROACH BRIEFING COMPLETE

PRE-DESCENT

FUEL SELECTOR BOTH
MIXTURE RICHEN
POWER SET
ENGINE & FLIGHT INSTRUMENTS CHECK

BEFORE LANDING

AUTOPILOT OFF
FUEL SELECTOR BOTH
MIXTURE RICH
SEAT BELTS & SWITCHES (LIGHTS) ON

AFTER LANDING

TRIM SET FOR TAKEOFF
FLAPS UP
MIXTURE LEAN (for taxi)
PITOT HEAT OFF
LANDING LIGHT OFF
TRANSPONDER VERIFY

SECURING AIRPLANE

AVIONICS (BUS 1 & BUS 2) OFF
THROTTLE IDLE
MIXTURE IDLE CUTOFF
MAGNETOS OFF / KEY OUT
MASTER OFF

LIGHTS (except BEACON) OFF
HOBBS & TACH RECORD
STBY BATT OFF
FUEL SELECTOR LEFT OR RIGHT
CONTROL LOCK INSTALL

WING / TAIL TIE-DOWNS SECURE
PITOT COVER / COWL PLUGS INSTALL
AIRCRAFT CHECK (general condition)

FLIGHT PLAN CLOSED

C172S - EMERGENCY PROCEDURES

MONMOUTH AREA FLYING CLUB USE ONLY.

PILOTS SHALL USE CURRENT POH FOR ALL OPERATIONS.

C172S Checklist. Version: ORIGINAL. Date: 25 April 2016. Page 5.

ENGINE FAILURE - During Takeoff Roll

MAINTAIN AIRCRAFT CONTROL

THROTTLE IDLE
BRAKES APPLY
FLAPS RETRACT
MIXTURE IDLE CUTOFF
MAGNETOS OFF
STBY BATT OFF
MASTER OFF

ENGINE FAILURE - Immediately After Takeoff

MAINTAIN AIRCRAFT CONTROL

AIRSPPEED 70 KTS(FLAPS UP) / 65 KTS (FLAPS 10°)
FUEL SHUTOFF VALVE OFF (pull full out)
MIXTURE IDLE CUTOFF
THROTTLE IDLE
MAGNETOS OFF
FLAPS AS REQUIRED (FULL recommended)
STBY BATT OFF
MASTER OFF
DOORS UNLATCH
LAND STRAIGHT AHEAD

ENGINE FAILURE - During Flight

AIRSPPEED 68 KTS
NOTE WIND DIRECTION & VELOCITY
BEST FIELD SELECT
FUEL PUMP ON
FUEL SELECTOR BOTH
FUEL SHUTOFF VALVE ON (push full in)
MIXTURE RICH
MAGNETOS BOTH (START if propeller has stopped)

FORCED LANDING - No Engine Power

AIRSPPEED 70 KTS(FLAPS UP) / 65 KTS (FLAPS 10°)
FUEL PUMP OFF
FUEL SHUTOFF VALVE OFF (pull full out)
MIXTURE IDLE CUTOFF
MAGNETOS OFF
RADIOS DECLARE EMERGENCY
ELT ON
TRANSPONDER SQUAWK 7700
SEATS & SEAT BELTS UPRIGHT AND SECURE
DOORS UNLATCH
FLAPS AS REQUIRED (FULL recommended)
MASTER OFF
STBY BATT OFF
TOUCHDOWN SLIGHTLY TAIL LOW
BRAKES APPLY HEAVILY

PRECAUTIONARY LANDING - With Power

AIRSPPEED 65 KTS
SEATS & SEAT BELTS UPRIGHT AND SECURE
FLAPS 20°
SELECTED FIELD .. FLY OVER (noting terrain and obstructions)
FLAPS FULL (on final approach)
AIRSPPEED 65 KTS
MASTER OFF
STBY BATT OFF
DOORS UNLATCH
TOUCHDOWN SLIGHTLY TAIL LOW
MIXTURE IDLE CUTOFF
MAGNETOS OFF
BRAKES APPLY HEAVILY

FORCED LANDING - Ditching

AIRSPPEED 68 KTS
NOTE WIND DIRECTION & VELOCITY
BEST AREA SELECT
RADIOS DECLARE EMERGENCY
ELT ON
TRANSPONDER SQUAWK 7700
HEAVY OBJECTS SECURE OR JETTISON (if possible)
SEATS & SEAT BELTS UPRIGHT AND SECURE
WITH POWER: ESTABLISH 300 FPM DESCENT AT 55 KTS
NO POWER: AIRSPPEED 70 KTS (flaps up) / 65 KTS (flaps 10°)
APPROACH:
HIGH WINDS, HEAVY SEAS INTO THE WIND
LIGHT WINDS, HEAVY SWELLS PARALLEL TO SWELLS
DOORS UNLATCH
TOUCHDOWN LEVEL ATTITUDE
FACE CUSHION AT TOUCHDOWN

ENGINE FIRE DURING START

MAGNETOS START (continue cranking)

IF ENGINE STARTS:

THROTTLE 1800 RPM FOR A FEW MINUTES
THROTTLE IDLE
MIXTURE IDLE CUTOFF
MAGNETOS OFF
MASTER OFF
STBY BATT OFF
FUEL SHUTOFF VALVE OFF (pull full out)
EVACUATE AIRPLANE

IF ENGINE DOES NOT START:

MAGNETOS ... CONTINUE CRANKING FOR A FEW SECONDS
THROTTLE FULL
MIXTURE IDLE CUTOFF
FUEL SHUTOFF VALVE OFF (pull full out)
FUEL PUMP OFF
MAGNETOS OFF
MASTER OFF
STBY BATT OFF
EVACUATE AIRPLANE

C172S - EMERGENCY PROCEDURES

MONMOUTH AREA FLYING CLUB USE ONLY.

PILOTS SHALL USE CURRENT POH FOR ALL OPERATIONS.

C172S Checklist. Version: ORIGINAL. Date: 25 April 2016. Page 6.

ENGINE FIRE IN FLIGHT

MIXTURE IDLE CUTOFF
FUEL SHUTOFF VALVE OFF (pull full out)
FUEL PUMP OFF
MAGNETOS OFF
MASTER OFF
CABIN VENTS OPEN (as needed)
CABIN HEAT & CABIN AIR OFF
AIRSPPEED 100 KTS OR HIGHER (within limitations)
(to extinguish fire)
LAND AS SOON AS POSSIBLE

WING FIRE

PITOT HEAT OFF
STROBES OFF
NAV LIGHTS OFF
LANDING & TAXI LIGHTS OFF
SIDESLIP TO KEEP FLAMES FROM FUEL TANK & CABIN
FLAPS . ONLY AS NEEDED FOR APPROACH & TOUCHDOWN
LAND AS SOON AS POSSIBLE

ELECTRICAL FIRE IN FLIGHT

MASTER OFF
STBY BATT OFF
AVIONICS (BUS 1 & BUS 2) OFF
CABIN VENTS, CABIN HEAT & CABIN AIR CLOSED
FIRE EXTINGUISHER ACTIVATE
IF FIRE EXTINGUISHED:
CABIN VENTS OPEN
CABIN HEAT & CABIN AIR ON
IF ELECTRICAL POWER IS NECESSARY:
CIRCUIT BREAKERS CHECK (if open, do not reset)
MASTER (ALT & BAT) ON (only if critical)
STBY BATT ARM (only if critical)
AVIONICS AND ELECTRICAL ON (only if critical)
LAND AS SOON AS POSSIBLE

CABIN FIRE

MASTER OFF
STBY BATT OFF
AVIONICS (BUS 1 & BUS 2) OFF
CABIN VENTS, CABIN HEAT & CABIN AIR CLOSED
FIRE EXTINGUISHER ACTIVATE
IF FIRE EXTINGUISHED:
CABIN VENTS OPEN
CABIN HEAT & CABIN AIR ON
LAND AS SOON AS POSSIBLE

EMERGENCY DESCENT

LANDING AREA / DIRECTION SELECTED
THROTTLE IDLE
BANK UP TO 45°
AIRSPPEED (FLAPS 0°) 129 KTS
AIRSPPEED (FLAPS EXTENDED) 85 KTS

ICING ENCOUNTER DURING FLIGHT

PITOT HEAT ON
EXECUTE STD RATE 180° TURN OR CHANGE ALTITUDE
CABIN HEAT ON (pull full out)
DEFROSTER CONTROLS OPEN
CABIN AIR ADJUST (to obtain max defroster heat and airflow)
THROTTLE AND MIXTURE ADJUST
FLAPS LEAVE RETRACTED
LAND AS SOON AS PRACTICAL
LAND AS SOON AS POSSIBLE (with rapid ice build-up)
APPROACH AIRSPPEED 65 - 75 KTS
LAND IN LEVEL ATTITUDE

STATIC SOURCE BLOCKAGE

ALT STATIC AIR VALVE ON (pull full out)
CABIN VENTS CLOSED
CABIN HEAT & CABIN AIR ON (pull full out)
AIRSPPEED AS PER POH

IDLE POWER ENGINE ROUGHNESS

DUE TO EXCESSIVELY RICH IDLE FUEL FLOW

MIXTURE LEAN (as necessary for smooth engine operation)
LAND AS SOON AS PRACTICAL

AUTOPILOT OR ELECTRIC TRIM FAILURE

AP OR PTRM ANNUNCIATORS COME ON

CONTROL WHEEL ... GRASP FIRMLY (regain control of airplane)
A/P TRIM DISC BUTTON ... PRESS / HOLD (throughout recovery)
ELEVATOR TRIM ADJUST MANUALLY (as necessary)
AUTO PILOT CB OPEN (pull out)
A/P TRIM DISC BUTTON RELEASE

WARNING

FOLLOWING AN AUTOPILOT, AUTOTRIM OR MET SYSTEM
MALFUNCTION, DO NOT ENGAGE AUTOPILOT UNTIL THE
CAUSE OF THE MALFUNCTION HAS BEEN CORRECTED.

HIGH CARBON MONOXIDE (CO) LEVEL

CO LVL HIGH ANNUNCIATOR COMES ON

CABIN HEAT OFF (push full in)
CABIN AIR ON (pull full out)
CABIN VENTS AND WINDOWS OPEN

IF CO LVL HIGH ANNUNCIATOR REMAINS ON:

LAND AS SOON AS PRACTICAL

LOW VACUUM ANNUNCIATOR

VACUUM INDICATOR (VAC) CHECK IN GREEN BAND

CAUTION

IF VACUUM INDICATOR (VAC) IS OUT OF GREEN BAND
DURING FLIGHT OR THE GYRO FLAG IS SHOWN ON THE
STANDBY ATTITUDE INDICATOR, THE STANDBY ATTITUDE
INDICATOR MUST NOT BE USED FOR ATTITUDE INFO.

C172S - ABNORMAL PROCEDURES

MONMOUTH AREA FLYING CLUB USE ONLY.

PILOTS SHALL USE CURRENT POH FOR ALL OPERATIONS.

C172S Checklist. Version: ORIGINAL. Date: 25 April 2016. Page 7.

EXCESSIVE FUEL VAPOR

FUEL FLOW FLUCTUATES >1 GPH OR POWER SURGES OCCUR
FUEL PUMP ON
MIXTURE ADJUST (as necessary for smooth engine operation)
FUEL SELECTOR . OPPOSITE TANK (if vapor symptoms continue)
FUEL PUMP OFF (after fuel flow has stabilized)

HIGH VOLTS ANNUNCIATOR / AMPS > 40

MASTER (ALT ONLY) OFF
AVIONICS (BUS 1) OFF
ELECTRICAL (NON-ESSENTIAL) OFF

NOTE

When M BUS VOLTS < 20 VOLTS, standby batt automatically supplies electrical power to essential bus for up to 30 minutes.

Select COM 1 MIC and NAV 1 on audio panel and tune active frequency before setting AVIONICS BUS 2 to OFF.

If COM 2 MIC and NAV 2 are selected when AVIONICS BUS 2 is set to OFF, the COM and NAV frequencies cannot be tuned.

COM 1 and NAV 1 TUNE TO ACTIVE FREQUENCY
COM 1 MIC and NAV 1 SELECT
(COM 2 MIC and NAV 2 inoperative once AVIONICS BUS 2 is OFF)

NOTE

When AVIONICS BUS 2 is set to OFF, these items will not operate:
Autopilot - COM 2 - Transponder - Audio Panel - NAV 2 - MFD

AVIONICS (BUS 2) OFF (KEEP ON if in clouds)
LAND AS SOON AS PRACTICAL

NOTE

Make sure a successful landing is possible before extending flaps.
The flap motor is a large electrical load during operation.

LOW VOLTS ANNUNCIATOR < 1000 RPM

THROTTLE 1000 RPM
LOW VOLTS ANNUNCIATOR CHECK OFF

LOW VOLTS ANNUNCIATOR AT 1000 RPM

Authorized maintenance personnel must do electrical system inspection prior to next flight.

LOW VOLTS ANNUNCIATOR COMES ON OR REMAINS ON AT HIGHER RPM

MASTER (ALT ONLY) OFF
ALT FIELD CB CHECK IN
MASTER SWITCH (ALT and BATT) ON
LOW VOLTS ANNUNCIATOR CHECK OFF
M BUS VOLTS CHECK 27.5 (minimum)
M BATT AMPS CHECK CHARGING (+)

IF LOW VOLTS ANNUNCIATOR REMAINS ON:

MASTER (ALT ONLY) OFF
AVIONICS (BUS 1) OFF
ELECTRICAL (NON-ESSENTIAL) OFF

NOTE

When M BUS VOLTS < 20 VOLTS, standby batt automatically supplies electrical power to essential bus for up to 30 minutes.

Select COM 1 MIC and NAV 1 on audio panel and tune active frequency before setting AVIONICS BUS 2 to OFF.

If COM 2 MIC and NAV 2 are selected when AVIONICS BUS 2 is set to OFF, the COM and NAV frequencies cannot be tuned.

COM 1 and NAV 1 TUNE TO ACTIVE FREQUENCY
COM 1 MIC and NAV 1 SELECT
(COM 2 MIC and NAV 2 inoperative once AVIONICS BUS 2 is OFF)

NOTE

When AVIONICS BUS 2 is set to OFF, these items will not operate:
Autopilot - COM 2 - Transponder - Audio Panel - NAV 2 - MFD

AVIONICS (BUS 2) OFF (KEEP ON if in clouds)
LAND AS SOON AS PRACTICAL

NOTE

Make sure a successful landing is possible before extending flaps.
The flap motor is a large electrical load during operation.

C172S - ABNORMAL PROCEDURES

MONMOUTH AREA FLYING CLUB USE ONLY.

PILOTS SHALL USE CURRENT POH FOR ALL OPERATIONS.

C172S Checklist. Version: ORIGINAL. Date: 25 April 2016. Page 8.

AIR DATA SYSTEM FAILURE

RED X - PFD AIRSPEED INDICATOR

ADC / AHRS CB CHECK IN (ESS BUS and AVN BUS 1)
If open, reset (close) CB. If CB opens again, do NOT reset.
STANDBY AIRSPEED INDICATOR ... USE FOR AIRSPEED INFO

RED X - PFD ALTIMETER

ADC / AHRS CB CHECK IN (ESS BUS and AVN BUS 1)
If open, reset (close) CB. If CB opens again, do NOT reset.
STANDBY ALTIMETER .. SET BARO / USE FOR ALTITUDE INFO

AHRS FAILURE

RED X - PFD ATTITUDE INDICATOR

ADC / AHRS CB CHECK IN (ESS BUS and AVN BUS 1)
If open, reset (close) CB. If CB opens again, do NOT reset.
STANDBY ATTITUDE INDICATOR USE FOR ATTITUDE INFO

RED X - HSI

ADC / AHRS CB CHECK IN (ESS BUS and AVN BUS 1)
If open, reset (close) CB. If CB opens again, do NOT reset.
MAGNETIC COMPASS USE FOR HEADING INFO

PFD 1 COOLING OR MFD 1 COOLING ANNUNCIATORS COME ON

CABIN HEAT OFF
FORWARD AVIONICS FAN . CHECK (for airflow from glare shield)

IF FORWARD AVIONICS FAN HAS FAILED:

STBY BATT OFF (unless needed for emergency power)

IF PFD 1 COOLING OR MFD 1 COOLING ANNUNCIATOR DOES NOT GO OFF WITHIN 3 MINUTES OR IF BOTH PFD 1 COOLING AND MFD 1 COOLING ANNUNCIATORS COME ON:

STBY BATT OFF
LAND AS SOON AS PRACTICAL

LANDING WITH A FLAT MAIN TIRE

APPROACH NORMAL
FLAPS FULL
TOUCHDOWN GOOD MAIN TIRE FIRST
AILERONS AS REQUIRED
(to hold airplane off flat tire as long as possible)
DIRECTIONAL CONTROL MAINTAIN
(using brake on good wheel as required)

LANDING WITH A FLAT NOSE TIRE

APPROACH NORMAL
FLAPS FULL
TOUCHDOWN ON MAINS
(hold nosewheel off ground as long as possible)
ELEVATOR FULL UP
(when nosewheel touches down)