



N998DM – BE95 Travel Air PREFLIGHT

PREFLIGHT INSPECTION

Tasks Prior to Walkaround

- 1. FAR 91.103**
 - A All Pertinent Information*
 - D Delays*
 - W Weather*
 - A Alternatives*
 - R Runway Lengths*
 - F Fuel Requirements*
- 2. P.A.V.E.**
 - P Pilot / Personal – I.M.S.A.F.E.*
 - A Aircraft*
 - V EnVironment*
 - E External Pressures*
- 3. A.V.1.A.T.E. (MX Inspections)**
 - A Annual Inspection*
 - V VOR Check (30 Days)*
 - 1 100 Hour Inspection*
 - A Altimeter & Static Sys. (24m)*
 - T Transponder (24m)*
 - E ELT (12m or ½ batt. life)*
- 4. Weight & Balance Complete**
- 5. T.O.L.D. & SE Performance Calc**
 - Takeoff and Landing Calculations
 - Single Engine Performance Calc

KDWH Frequencies

ATIS	128.375
Ground.....	121.8
Tower	118.4
Unicom	122.95
West Practice	123.5
Hou App NW	119.7
Hou App SW.....	123.8

COCKPIT

- ARROW (rear bulkhead)..... CHECK
- A Airworthiness Certificate*
 - R Registration Certificate* *Radio Station License*
 - O Operating Limitations* *(if required)*
 - W Weight and Balance*
- APPROACHING AIRCRAFT CHECK FOR DAMAGE
- PITOT COVER..... REMOVE
- HOBBS.....RECORD
- CONTROL LOCK.....REMOVE
- COWL FLAPS..... OPEN
- FLIGHT CONTROLS FREE & CORRECT
- ELECTRICAL SWITCHES..... OFF
- MAGNETOS OFF
- ALTERNATOR SWITCHES OFF
- CIRCUIT BREAKERS..... CHECK
- ALTERNATE STATIC CHECK
- AIR CONDITIONER..... OFF
- TRIM TABS (ALL 3)..... SET TAKEOFF
- BATTERY MASTER ON
- FUEL COMPUTER..... SET
- FUEL QUANTITY VERIFY
- FLAPS..... DOWN
- NAV LIGHTS..... ON
- LANDING LIGHTS..... ON
- BEACON ON
- PITOT HEAT ON

WALK AROUND

(COCKPIT > TAIL > LEFT WING > FRONT > RIGHT WING > COCKPIT)

- BEACON LIGHT ILLUMINATES / WORKS
- ANTI COLLISION LIGHT ILLUMINATES / WORKS
- RED NAV LIGHT ILLUMINATES / WORKS
- STALL WARNING TEST / AUDIBLE SOUND
- PITOT HEAT VERY WARM
- NOSE LANDING LIGHT..... ILLUMINATES / WORKS
- FRONT STRUT LIGHT ILLUMINATES / WORKS
- GREEN NAV LIGHT..... ILLUMINATES / WORKS

COCKPIT CONTINUED

- LIGHTS / PITOT HEAT OFF
- BATTERY MASTER OFF
- ELECTRICAL SWITCHES..... OFF

RIGHT REAR FUSELAGE

- LOAD SECURED
- BAGGAGE DOOR SECURED
- STATIC PORT CHECK

HORIZONTAL & VERTICAL STABILIZERS

- ELEVATOR..... CHECK
- ELEVATOR TRIM TABS CHECK
- RUDDER.....CHECK
- RUDDER TRIM TABSCHECK

LEFT REAR FUSELAGE

- TAIL AIR INLET CHECK
- STATIC PORT..... CHECK
- ANTENNAS..... CHECK
- BEACON LIGHT CHECK

BELLY

- AIR CONDITIONER OUTLETS CHECK

LEFT WING

- FLAP.....CHECK
- AILERONCHECK
- WING TIP / RED NAV LIGHT.....CHECK
- STALL WARNING SENSOR.....CHECK
- PITOT TUBE.....CHECK
- AUX FUEL TANKVISUALLY CHECK LEVEL
- ENGINE COWLINGCHECK
- PROP / SPINNERCHECK
- ENGINE INLETSCHECK
- OIL QTY (8 QTS FULL).....CHECK
- MAIN FUEL TANK.....VISUALLY CHECK LEVEL
- FUEL SUMPS (3).....SUMP & INSPECT
- LANDING GEAR.....CHECK

NOSE

- WINDSCREEN.....CHECK
- LANDING GEAR & LIGHT ON STRUTCHECK
- HEATER EXHAUSTCHECK
- AIR INLETCHECK
- NOSE LANDING LIGHTCHECK
- BAGGAGE DOOR.....CHECK

RIGHT WING

- FUEL SUMPS (3).....CHECK
- LANDING GEAR.....CHECK
- MAIN FUEL TANK.....VISUALLY CHECK LEVEL
- PROP / SPINNERCHECK
- ENGINE INLETSCHECK
- OIL QTY (8 QTS FULL).....CHECK
- AUX FUEL TANKVISUALLY CHECK LEVEL
- WING TIP / GREEN NAV LIGHTCHECK
- LANDING LIGHTCHECK
- AILERONCHECK
- FLAP..... (BEFORE PASSANGERS BOARD) VERIFY UP

NORMAL OPERATIONS

BEFORE START

PREFLIGHT INSPECTION COMPLETE
 CHOCKS / TIE DOWNS REMOVED
 PASSENGER BRIEF S.A.F.E.T.Y.
 Seat & Seat Belts, Air, Fire, Exit/Emergencies,
 Traffic & Talking, Your Questions?
 PIC DESIGNATION / BRAKES COMPLETE
 SEATS & SEAT BELTS LOCKED / FASTENED
 AVIONICS MASTER OFF
 COWL FLAPS OPEN
 ALTERNATE AIR IN / NORMAL
 CIRCUIT BREAKERS CHECK
 BATTERY SWITCH ON
 ALTERNATORS (with GPU Alts Off) ON
 LANDING GEAR DOWN / **GREEN**
 FUEL SELECTORS MAINS
 BEACON ON
 FUEL QUANTITY CHECK
 LIGHTS AS REQUIRED
 BRAKES SET / HOLD
 PROP AREA CLEAR

--- FOR BOTH ENGINES ---

MODIFIED FLOODED START

RIGHT ENGINE THEN LEFT ENGINE

THROTTLE FULL
 PROP FORWARD
 MIXTURE RICH
 FUEL PUMP (PRIMING) ON (STABLE)
 FUEL PUMP OFF
 STARTER ENGAGE

AS ENGINE STARTS

THROTTLE IDLE
TRY NOT TO EXCEED 1200 RPMS
 OIL PRESSURE CHECK
 ALTERNATOR LOAD METERS CHECK
 MIXTURE LEAN

BEFORE TAXI

FLAPS VERIFY UP
 MIXTURES VERIFY LEAN FOR TAXI
 AVIONICS ON / SET
 LIGHTS AS REQUIRED
 EFD POWER ON
 FLIGHT INSTRUMENTS CHECK
 ENGINE INSTRUMENTS CHECK
 FUEL SELECTORS AUX TANKS FOR TAXI
 BACKUP ATTITUDE (*CFI SIDE*) PULL TO RESET
 ATIS / CLEARANCE COPY / OBTAIN
 ALTIMETERS (ALL 3) SET
 BRAKES CHECK

BEFORE TAKEOFF

BRAKES SET
 SEATS / SEAT BELTS CHECK
 FUEL PUMPS AS NECESSARY
ON IF OUTSIDE AIR TEMPARTURE > 90° F
 TRIMS (ALL 3) TAKEOFF
 FLIGHT CONTROLS CHECK
 FUEL SELECTORS BACK TO MAINS
 MIXTURE ENRICHEN / AS REQ (*DENSITY ALT*)

--- POWER 2200 RPM ---

PROPELLERS (3 EACH) CYCLE
RIGHT PROP / LEFT PROP / RIGHT PROP / LEFT PROP / RIGHT PROP / LEFT PROP
 ENGINE INSTRUMENTS CHECK
 ALTERNATOR LOAD METERS CHECK

--- POWER 2000 RPM ---

MAGNETOS (125 DROP / 50 DIFF) CHECK

--- POWER 1500 RPM ---

PROPELLERS (<500 RPM) FEATHER CHECK

--- POWER IDLE ---

FRICION LOCK ADJUST
 MIXTURE LEAN FOR TAXI
 FLAPS UP / 20°
 COMS / NAVS / GPS SET
 EFD / FLIGHT INSTRUMENTS CHECK / SET
 AUTOPILOT TEST
 TRIMS (ALL 3) TAKEOFF
 TRANSPONDER SET / ALTITUDE
 AIR CONDITIONER OFF
 TAKEOFF BRIEFING COMPLETE

ONLY THE PILOT HAS BREAKS | ABORT ANY REASON ON GROUND
 ABORT WITH RUNWAY FOR ENGINE FAIL/FIRE
 AFTER GEAR UP, ABNORMALITY RETURN TO AIRPORT

LINE UP

HEADING / RUNWAY BUG / CONFIRM
 TIME OFF CAPTURE TIME / START TIMER

--- G.U.M.P.S.C. ---

GAS FUEL SELECTORS MAIN / PUMPS?
 UNDER CARRIAGE GEAR DOWN
 MIXTURES RICH (*DENSITY ALT*)
 PROPS FULL FORWARD
 SWITCHES LIGHTS / PITOT HEAT
 COWL FLAPS OPEN

NORMAL TAKEOFF

TRIMS (ALL 3) TAKEOFF
 FLAPS 0° / UP
 MIXTURES *MAX POWER (DENSITY ALT)* RICH
 POWER FULL & VERIFIED
 V_R 70 KIAS
 LANDING GEAR NO USABLE RUNWAY / UP
 V_Y CLIMB 90 KIAS
 AFTER 1000' AGL 121 KIAS

MAX PERFORMANCE TAKEOFF

FLAPS 20°
 MIXTURES *MAX POWER (DENSITY ALT)* RICH
 POWER FULL & VERIFIED
 V_R 70 KIAS
 LANDING GEAR POSITIVE RATE / UP
 CLIMB 78 KIAS
 FLAPS (*CLEAR OBSTACLE*) RETRACT
 V_Y CLIMB 90 KIAS
 AFTER 1000' AGL 121 KIAS

ENGINE FAILURE (MEMORY LIST)

CONTROL > POWER > DRAG > IDENTIFY > VERIFY > RECTIFY
 MIXTURE FULL RICH
 PROPS FULL FORWARD
 THROTTLE FULL FORWARD
 FLAPS UP
 GEAR UP
 FUEL PUMPS ON
 IDENTIFY DEAD FOOT / DEAD ENGINE
 VERIFY RETARD THROTTLE FOR DEAD ENGINE
 RECTIFY FEATHER or ATTEMPT RESTART

Revised 12-31-19

This checklist is for reference. It is not intended to replace the POH / AFM.

CRUISE CLIMB

POWER..... 25" / 2500 RPMs
 MIXTURE CLIMB PWR / DENSITY ALT
 COWL FLAPS..... AS REQUIRED
 CLIMB..... 121 KIAS
 LIGHTS..... AS REQUIRED
 AIR CONDITIONER..... AS REQUIRED
 FUEL TANK (IF POSSIBLE) AUX TANKS FIRST
MAIN TANKS MUST HAVE FUEL FOR LANDING

CRUISE

POWER..... 23" / 2400 RPMs
 MIXTURE LEAN AS NECESSARY
 COWL FLAPS..... AS NECESSARY
 FUEL PUMPS OFF
 FUEL TANKS MANAGE PROPER USE

DESCENT

WEATHER / ALTIMETER CHECK SET
 COWL FLAPS..... CLOSED
 MIXTURE ENRICHEN AS REQUIRED
 POWER..... AS REQUIRED
 FUEL SELECTOR AS REQUIRED

BEFORE LANDING

AIR CONDITIONER..... OFF
 SEATS / SEAT BELTS CHECK
 FUEL SELECTOR MAINS
 COWL FLAPS..... AS REQUIRED
 MIXTURES ENRICHEN
 LANDING GEAR DOWN / **CHECK GREEN**
 LANDING GEAR CHECK MIRROR
 LANDING GEAR CHECK FLOOR INDICATOR
 FLAPS AS REQUIRED / DOWN
 PROPS FULL FORWARD
 V_{REF} 79 KIAS

--- G.U.M.P.S. C. ---

GAS FUEL SELECTORS MAIN / PUMPS?
UNDER CARRIAGE GEAR DOWN
MIXTURES RICH (*DENSITY ALT*)
PROPS FULL FORWARD
SWITCHES LIGHTS / PITOT HEAT
COWL FLAPS..... OPEN

GO AROUND

PROPS FULL FORWARD
 POWER..... MAX
 ACCELERATE..... LEVEL FLIGHT
 FLAPS RETRACT
 LANDING GEAR UP
 COWL FLAPS..... OPEN
 CLIMB..... 90 KIAS

NORMAL CLIMB AFTER 500' AGL

AFTER LANDING

AIR CONDITIONER..... FAN ONLY
 LIGHTS..... AS REQUIRED
 FLAPS RETRACT
 COWL FLAPS..... OPEN
 FUEL PUMPS AS NECESSARY
 MIXTURES LEAN / TAXI

SHUT DOWN / SECURE

PARKING BRAKE SET
 PROPS FULL FORWARD
 THROTTLES..... 1000 RPMs
 TRIMS (ALL 3) ZERO
 TRANSPONDER..... VFR / STANDBY
 TACH (*BOTH ENGINES*)..... RECORD / COPY
 FUEL PUMPS OFF
 ALL ELECTRICAL EQUIP / AVIONICS..... OFF
 AIR CONDITIONER..... OFF
 MIXTURES CUTOFF
 MAGNETOS..... OFF
 ALTERNATORS..... OFF
 BATTERY OFF
 CONTROL LOCK INSTALL
 HOBBS..... RECORD

Secure Aircraft, Tiedown and Walk Around

Note and Record Squawks

ENGINE FAILURE PRIOR TO V_R

ABORT THE TAKEOFF IMMEDIATELY

CHOP BOTH THROTTLES IDLE
 BRAKES APPLY FIRMLY
 FLAPS UP

IF OVERRUNNING END OF RUNWAY

MIXTURES CUTOFF
 DOOR OPEN
 BATTERY SWITCH..... OFF

THIS IS A PART 23 CERTIFIED TWIN – DECISION TO CONTINUE TO CLIMB IS MADE WITH THE CHOICE TO RAISE THE LANDING GEAR.

GEAR DOWN – LAND!

GEAR UP – FLY THE AIRCRAFT!

PREFLIGHT SINGLE ENGINE PERFORMANCE MUST BE COMPUTED. HIGH TAKEOFF WEIGHT AND DENSITY ALTITUDES RESULT IN LOSS OF ALTITUDE DURING RETRACTION OF LANDING GEAR AND PROP FEATHERING. CONTINUED FLIGHT REQUIRES

IMMEDIATE PILOT RESPONSE:

CONTROL > POWER > DRAG > IDENTIFY > VERIFY > FEATHER

TROUBLESHOOT ONLY WITH ALTITUDE AND POSITIVE AIRCRAFT PERFORMANCE.

ENGINE FAILURE DURING CLIMB – GEAR DOWN

ABORT CLIMB IMMEDIATELY

CONTROL THE AIRCRAFT PITCH DOWN
 CONTROL YAW
 THROTTLES REDUCE

RE-LAND / AVOID OBSTACLES

MIXTURES CUTOFF
 DOOR OPEN
 BATTERY SWITCH..... OFF

ENGINE FAILURE DURING CLIMB – GEAR UP

CONTROL MAINTAIN **BLUE LINE – 94 KIAS**
 POWER..... FULL
 DRAG..... GEAR UP / FLAPS UP

ID DEAD FOOT / DEAD ENGINE

THROTTLE (INOP SIDE)..... IDLE
 PROPELLER (INOP SIDE) FEATHER
 AIRSPEED 94 KIAS

UNTIL OBSTACLES CLEARED

ENGINE FAILURE IN CRUISE

CONTROL MAINTAIN
(RUDDER & PITCH 94 KIAS BLUE LINE AIRSPEED)
POWER FULL POWER
DRAG GEAR UP & FLAPS UP
FUEL PUMPS ON
IDENTIFY ENGINE VERIFY
(THROTTLE TO IDLE – INOP ENGINE)

TROUBLESHOOTING ENGINE FAILURES

ONLY WITH ALTITUDE AND ADEQUATE SINGLE ENGINE PERFORMANCE

FUEL SELECTOR VERIFY
(SELECT TANK WITH FUEL)
ALTERNATE AIR ON
MIXTURE ENRICHEN
FUEL PUMP ON
MAGNETO SWITCH CYCLE
(SELECT POSITION FOR SMOOTH OPERATION)
SECURE INOPERATIVE ENGINE
if unable to reinstate engine
GO TO the SECURING ENGINE CHECK LIST

SECURING AN INOPERATIVE ENGINE (VERIFIED)

PROP FEATHER
FUEL SELECTOR OFF
MIXTURE CUTOFF
FUEL PUMP OFF
MAGNETO SWITCH OFF
ALTERNATOR SWITCH OFF
ALTERNATE AIR NORMAL
COWL FLAP CLOSED
ELECTRICAL LOAD MONITOR

AIR STARTING A FEATHERED ENGINE

PILOT MUST DETERMINE A REASON FOR FAILURE OF AN ENGINE BEFORE ATTEMPTING AN AIR START.

FUEL SELECTOR SELECT PROPER TANK
THROTTLE ¼ THROTTLE POSITION
MAGNETOS BOTH ON
MIXTURE ENRICHEN
FUEL PUMP ON
PROP FULL FORWARD

ALLOW PROP ACCUMULATOR TO UNFEATHER THE PROP

IF NECESSARY

STARTER ENGAGE
TO BEGIN UNFEATHERING
STARTER DISENGAGE
WHEN PROP WINDMILLS

IF ENGINE FAILS TO START DURING WINDMILL

MIXTURE CUTOFF
TO CLEAR THE ENGINE
MIXTURE RE-ENRICHEN
TO CREATE ENGINE IGNITION
AFTER THE ENGINE STARTS
THROTTLE 15" UNTIL WARM > AS REQ
PROP ADJUST FOR POWER REQ
MIXTURE ADJUST FOR POWER REQ
FUEL PUMP OFF
ALTERNATOR ON

SINGLE ENGINE LANDING

- FULL FLAPS SHOULD BE UTILIZED ONLY WHEN LANDING ASSURED!
- SINGLE ENGINE GO-AROUND IN LANDING CONFIGURATION / WINDMILLING PROP **IS IMPOSSIBLE!**
- UTILIZE **NORMAL LANDING CHECKLIST**, CONSIDER PARTIAL OR NO FLAP LANDING.
- $V_{REF} = 94$ KIAS **"BLUE LINE"**

SINGLE ENGINE GO AROUND/BALKED LANDING

DECISION TO GO AROUND ON SINGLE ENGINE MUST BE GUIDED BY KNOWLEDGE OF DENSITY ALTITUDE, AIRCRAFT WEIGHT, SINGLE ENGINE CLIMB PERFORMANCE...DECISION MUST BE MADE AT AN ALTITUDE THAT IS HIGH ENOUGH TO DESCEND IN THE TRANSITION FROM FULL LANDING CONFIGURATION TO CLEAN CONFIGURATION AT 94 KIAS "BLUE LINE"
SINGLE ENGINE GO-AROUND IN LANDING CONFIGURATION IS IMPOSSIBLE!!!

CONTROL MAINTAIN
(RUDDER & PITCH 94 KIAS BLUE LINE AIRSPEED)
POWER FULL POWER
DRAG GEAR UP & FLAPS UP
IDENTIFY ENGINE VERIFY
DEAD PROP CONFIRM FEATHER
AIRSPEED 94 KIAS
(UNTIL OBSTACLES CLEARED)

LANDING GEAR FAILS TO EXTEND

GEAR CIRCUIT BREAKER PULL OUT
GEAR HANDLE DOWN
EMERGENCY HAND CRANK IS BEHIND AND BELOW PILOT'S SEAT
HANDCRANK HANDLE EXTEND
HANDCRANK ROTATE CCW
AS FAR AS POSSIBLE
LANDING GEAR DOWN / **CHECK GREEN**
LANDING GEAR CHECK MIRROR
LANDING GEAR CHECK FLOOR INDICATOR
HANDCRANK HANDLE STOWED

GEAR UP LANDING

V_{REF} 94 KIAS

CHOOSE A GOOD LANDING SURFACE

FLAPS AS DESIRED

LANDING ASSURED

MIXTURES CUT OFF
BATTERY SWITCH OFF
MAGNETOS OFF
DOOR OPEN

ENGINE FIRE IN FLIGHT

REQUIRES SHUT DOWN OF AFFECTED ENGINE

MIXTURE CUT OFF
FUEL PUMP OFF
FUEL SELECTOR OFF
PROP FEATHER
MAGNETO SWITCH OFF

LAND IMMEDIATELY

DUAL ENGINE FAILURE / MAX GLIDE

ENGINE RESTARTS HAVE FAILED

PROPS FEATHERED
LANDING GEAR UP
FLAPS UP
 V_G 110 KIAS

LOCATED LANDING ZONE

FLY TOWARD IT
DECLARE EMERGENCY
ACTIVATE ELT
LANDING ASSURED

MIXTURES CUT OFF
DOOR OPEN
LANDING GEAR DOWN
BATTER MASTER OFF

EMERGENCY DESCENT

POWER IDLE
PROPS FORWARD
LANDING GEAR DOWN
FLAPS AS REQUIRED
PITCH DOWN / DESCEND 140 KIAS (or below V_A)