Expanded Normal Procedures

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Checklist Usage

Tasks are executed in one of two ways:

- as a sequence that uses the layout of the cockpit controls and indicators as cues (i.e., “flow pattern”).
- as a sequence of tasks organized by event rather than panel location (e.g., After Takeoff, Gear – UP, Flaps – UP).

Placing items in a flow pattern or series provides organization and serves as a memory aid.

A challenge-response review of the checklist follows execution of the tasks; the pilot not flying (PM) calls the item, and the appropriate pilot responds by verifying its condition (e.g., “Propeller Anti-Ice” [challenge] –“ON” [response]).

Two elements are inherent in the execution of normal procedures:

- use of either the cockpit layout or event cues to prompt the correct switch and/or control positions followed by the normal checklist as a done list.
- use of normal checklists as “done” lists.

Normal Procedures

The following procedures are normally conducted in a flow pattern and followed by a “done” checklist upon completion.

Before Starting Engines

Exterior Condition . . . . . CHECKED

Instrument Emergency Lights (Nighttime) . . . . . ON

Instrument emergency lights may be used for initial illumination of the cockpit before turning on the battery.

Airstair Door. . . . . .LOCKED

Emergency Exits . . . . . UNLOCKED

Cabin Loading . . . . . SECURE

Passenger Briefing . . . . . COMPLETE

The pilot-in-command is responsible for ensuring that all passengers have been properly briefed on the following items prior to each flight:

- Smoking
- Use of Safety Belts
- Seat Positions
- Normal and Emergency Exit Operation
- Fire Extinguisher Location
- Oxygen Use
- Survival Equipment (if required)
- Overwater Equipment (if required)

Seats, Seatbelts/Shoulder Harnesses . . . . . SECURE

TOLD Cards. . . . . COMPLETE

Parking Brake . . . . . SET

While applying brakes, push parking brake knob completely in, depress button on end of parking knob, and pull completely out.

Control Locks. . . . . REMOVED/STOWED

Oxygen System Preflight . . . . . COMPLETE

See Preflight Checklist, page 2A-10.

Oxygen Control . . . . . PULL ON/SYS READY

Pilot's Instrument Panel . . . . . .CHECK

Pilot's Gyro . . . . . SLAVED

Standby Horizon (if installed) . . . . . TEST

Pilot Subpanel Switches . . . . . SET L/R

Battery Bus . . . . . .CONFIRM NORM

Engine Anti-Ice . . . . . ON

CAUTION: To minimize ingestion of ground debris, the engine anti-ice system should be ON for all ground operations.

Inverters . . . . . OFF

Avionics Master. . . . . OFF

EXT PWR Switch . . . . . OFF

Autofeather . . . . . OFF

Auto Ignition . . . . . OFF

Landing Gear Control . . . . . DOWN

Landing Gear Control Relay . . . . . CHECK IN

Clock (control wheel). . . . . CHECK & SET

External Lights . . . . . ON/AS REQUIRED

Ice Protection . . . . . OFF

Power Quadrant. . . . . SET
- Power Levers . . . . . GND IDLE
- Prop Levers. . . . . FULL FORWARD
- Condition Levers . . . . . FUEL CUTOFF

Pedestal Switches . . . . . SET
- EFIS Power (if installed) . . . . . OFF
- Cabin Pressure Switch . . . . . PRESS
- Pitch Trim . . . . . ON
- Rudder Boost Switch . . . . . RUDDER BOOST

FMS (Universal). . . . . ON/INITIALIZE

Oxygen Controls:
- Passenger Manual Dropout . . . . .CONFIRM PUSHED OFF
- System Ready. . . . . CONFIRM ON

Copilot's Subpanel Switches . . . . . SET L/R
- Window Defog. . . . . OFF
- Vent Blower. . . . . AUTO
- Cabin Temp Mode. . . . . OFF
- Environmental Bleed Air . . . . . LOW
- Bleed Air Valves . . . . . ENVIR OFF
- Aft Blower . . . . . OFF
- Electric Heat . . . . . OFF
- Aft Heat . . . . . AS REQUIRED

Copilot's Instrument Panel. . . . . CHECK
- Copilot's Gyro . . . . . SLAVED (OUT)
- Clock (control wheel) . . . . . CHECK & SET

Alternate Static Source . . . . . NORMAL

Right Circuit Breaker Panel . . . . . .CHECK
Battery . . . . . ON
Voltmeters . . . . . .CHECK (23V DC MIN)
Cockpit Lights . . . . . AS DESIRED
MIC Switches. . . . . NORMAL
Cabin Lights. . . . . OFF
Furnishing Switch . . . . . OFF
FSB Sign . . . . . ON
Annunciators . . . . . TEST
Fuel Panel . . . . . .CHECK
    Standby Pumps. . . . . OFF
    Crossfeed . . . . . OFF
    Auxiliary Transfer Switches. . . . . AUTO
    Circuit Breakers. . . . . IN
Fuel Quantity . . . . . .CHECK
    Check the main and auxiliary fuel quantity.
Before Starting Engines Checklist . . . . . COMPLETE

Engine Starting (Battery)

See Limitations chapter for starter/generator limitations.

NOTE: Better engine service life may be obtained by alternating engine battery starts.

During engine start, crew duties should be defined and organized. The pilot monitors ITT, N_1, and 10-second time limit for light off; the copilot is responsible for starter time limits and all other indications or abnormalities. The copilot provides verbal confirmation of oil pressure, ignition, and fuel pressure. This allows the pilot to concentrate on the two most important starting parameters: ITT and N_1. In addition, it prevents both pilots from looking at the same gauge at the same time and leaving other indicators unmonitored.

GEN TIES (Nighttime) . . . . . MAN CLOSE

Engine Anti-ice. . . . . ON

Propeller Area . . . . . CLEAR

Right Engine . . . . . START

Prop Area . . . . . CLEAR

Ignition and Engine Start Switch . . . . . IGN/ENG START

Observe N_1 rotation, IGNITION ON, FUEL PRES LO OFF, N_1 stabilized (12% minimum).

Condition Lever. . . . . LOW IDLE

Observe fuel flow 100 PPH and oil pressure increasing.

ITT. . . . . .MONITOR

CAUTION: If no ITT rise is observed within 10 seconds after moving the Condition lever to LOW IDLE, move the Condition lever to CUTOFF and release the Ignition and Engine Start Switch to OFF. Allow 5 minutes for fuel to drain and starter to cool, then follow Engine Clearing procedures.

ITT exceeding 820°C is abnormal; 820-1000°C is limited to 5 sec.

Oil Pressure . . . . . .CHECK

CAUTION: If ITT appears likely to exceed 1,000ºC, move condition lever to FUEL CUTOFF and Ignition OFF. Leave engine start switches in the STARTER ONLY position. Continue monitoring the engine to reduce ITT below 400ºC. Do not attempt another start until the cause of the hot start or hung start has been corrected.

NOTE: After aborting start attempt, allow 60 seconds delay for fuel draining, motor the engine for a minimum of 15 seconds, and allow the engine to stop completely before attempting another start.

Condition Lever (Battery Start) . . . . . HIGH IDLE

May be left in low idle for GPU start.

Ignition and Engine Start Switch . . . . . OFF

50% N_1 minimum.

Right Generator . . . . . RESET, THEN ON

Voltmeter . . . . . .L GEN (28V DC)

The R DC GEN, L GEN TIE OPEN, R GEN TIE OPEN extinguishes; loadmeter displays high load due to battery charging.

Battery . . . . . CHARGE

NOTE: Airplanes Prior To FL-215 and FM-10:
The BATTERY CHARGE annunciator will illuminate approximately 6 seconds after the generator is on-line.

Charge until loadmeter reads approximately 50% or less.

Left Engine. . . . . START

Start the left engine following the same procedure as for the right engine.

Voltmeter . . . . . .L GEN (28V DC)

Left Generator . . . . . RESET, THEN ON

Right Generator . . . . . RESET, THEN ON

NOTE: Hold the right generator switch in RESET and observe the left generator, maintaining sufficient voltage to hold the bus ties closed.

Propeller Levers. . . . . FULL FORWARD

Propeller RPM . . . . . 1050 (MIN)

PROP PITCH Annunciators. . . . . ILLUMINATED

Engine Starting (Battery) Checklist . . . . . COMPLETE

Engine Starting (GPU)

NOTE: Starting with environmental bleed air off will provide cooler engine starts.

See Limitations chapter for starter/generator limitations.

During engine start, crew duties should be defined and organized. The pilot monitors ITT, N_1, and 10-second time limit for light off; the copilot is responsible for starter time limits and all other indications or abnormalities. He provides verbal confirmation of oil pressure, ignition, and fuel pressure. This allows the pilot to concentrate on the two most important starting parameters: ITT and N_1. In addition, it prevents both pilots from looking at the same gauge at the same time and leaving other indicators unmonitored.

CAUTION: Never connect an external power source to the airplane unless a battery indicating a charge of at least 20 volts is in the airplane. If the battery voltage is less than 20 volts, the battery must be recharged, or replaced with a battery indicating at least 20 volts, before connecting external power.

GEN TIES (Nighttime) . . . . . MAN CLOSE

NOTE: When an external power source is used, ascertain that it is capable of generating a minimum of 1,000 amps momentarily and 300 amps continuously. The battery should be ON to absorb transients present in some external power units.

Voltmeter . . . . . EXT PWR (28V DC)

Voltmeter . . . . . CTR (20V DC MIN)

External Power Switch. . . . . ON

CAUTION: External power source output voltage – SET 28.0 - 28.4 volts.

Voltmeter . . . . . CTR (28V DC MIN)

EXT PWR Annunciator . . . . . ON, Steady

Engine Anti-ice. . . . . ON

Propeller Area . . . . . CLEAR

Left Engine. . . . . START

Prop Area . . . . . CLEAR

Ignition and Engine Start Switch . . . . . IGN/ENG START

Observe N_1 rotation, IGNITION ON, FUEL PRES LO OFF, N_1 stabilized (12% minimum).

Condition Lever . . . . . LOW IDLE

Observe fuel flow 100 PPH and oil pressure increasing.

ITT. . . . . .MONITOR

CAUTION: If no ITT rise is observed within 10 seconds after moving the Condition lever to LOW IDLE, move the Condition lever to CUTOFF and release the Ignition and Engine Start Switch to OFF. Allow 5 minutes for fuel to drain and starter to cool, then follow Engine Clearing procedures.

ITT exceeding 820°C is abnormal; 820-1000°C is limited to 5 sec.

Oil Pressure . . . . . .CHECK

CAUTION: If ITT appears likely to exceed 1,000ºC, move condition lever to FUEL CUTOFF and Ignition OFF. Leave engine start switches in the ON position. Continue monitoring the engine to reduce ITT below 400ºC. Do not attempt another start until the cause of the hot start or hung start has been corrected.

NOTE: After aborting start attempt, allow 60 seconds delay for fuel draining, motor the engine for a minimum of 15 seconds, and allow the engine to stop completely before attempting another start.

Ignition and Engine Start Switch . . . . . OFF

@ 50% N_1 minimum.

External Power Switch. . . . . OFF

GPU. . . . . .DISCONNECT/REMOVED/LIGHT OFF

Left Generator . . . . . RESET, THEN ON

GPU . . . . . .DISCONNECT/REMOVED/LIGHT OFF

Left Generator . . . . . RESET, THEN ON

Voltmeter . . . . . R GEN (28V DC)

The R DC GEN, L GEN TIE OPEN, R GEN TIE OPEN extinguishes; loadmeter displays high load due to battery charging.

Battery. . . . . CHARGE (until loadmeter reads approximately 50% or less)
(Nicad only)

Right Engine . . . . . START

NOTE: Airplanes Prior To FL-215 and FM-10:
The BATTERY CHARGE annunciator will illuminate approximately 6 seconds after the generator is on-line.

Start the right engine following the same procedure as for the left engine.

Voltmeter . . . . . R GEN (28V DC)

Right Generator . . . . . RESET, THEN ON

Left Generator . . . . . RESET, THEN ON

NOTE: Hold the left generator switch in RESET and observe the right generator, maintaining sufficient voltage to hold the bus ties closed.

Propeller Levers. . . . . .FULL FORWARD

Propeller RPM . . . . . 1050 (MIN)

PROP PITCH Annunciators. . . . . ILLUMINATED

Engine Starting (GPU) Checklist . . . . . COMPLETE

NOTE: If, for any reason, a start is discontinued, allow the engine to come to a complete stop to permit gas generator fuel drain valve operation.

Hot Start or Hung Start

Condition Lever . . . . . .FUEL CUTOFF

Ignition and Engine Start . . . . . STARTER ONLY

ITT below 400ºC . . . . . Ignition/Start Switch OFF

Do not attempt another start until the cause of the hot start or hung start has been corrected.

No Light Start (ITT Rise Within 10 Seconds)

Condition Lever . . . . . .FUEL CUTOFF

Ignition and Engine Start . . . . . OFF (5 minutes)

Engine Clearing . . . . . ACCOMPLISH

Engine Clearing

The following procedure is used to clear an engine any time it is deemed necessary to remove internally trapped fuel and vapor, or if there is evidence of a fire within the engine. Air passing through the engine serves to purge fuel, vapor, or fire from the combustion section, gas generator turbine, power turbines and exhaust system.

Propeller Lever . . . . . .FEATHER

Condition Lever . . . . . .FUEL CUTOFF

Power Lever. . . . . IDLE

Ignition and Engine Start . . . . . STARTER ONLY (30 sec)

CAUTION: Do not exceed the starter time limits.

Ignition and Engine Start . . . . . OFF

Allow 5 minutes before attempting another start.

Engine Clearing Checklist . . . . . COMPLETE

Before Taxi

Electrical System . . . . . .CHECK

Gen Tie Switch . . . . . OPEN

Observe L GEN TIE, R GEN TIE annunciators illuminate.

Voltmeter . . . . . .CHECK

Observe CTR bus at battery voltage.

Gen Tie Switch . . . . . NORM

Observe CTR bus voltage normal.

Bus Sense Switch . . . . . .TEST (momentary)

Observe L GEN TIE, R GEN TIE, and BAT TIE annunciators illuminate.

Voltmeter . . . . . .CHECK

Observe CTR bus at zero voltage.

Bus Sense Switch . . . . . RESET

Observe L GEN TIE, R GEN TIE, and BAT TIE annunciators extinguish.

Voltmeter . . . . . .CHECK

Observe CTR bus voltage normal.

Bus Selector Switch . . . . . .TPL FED

Master Panel/Cockpit Lights . . . . . AS DESIRED

Environmental System . . . . . SET

Inverters (2) . . . . . ON/CHECK

No. 1 and 2 AC BUS annunciators extinguished.

Avionics Master Switch . . . . . ON

Standby Power . . . . . ON

NOTE: Place the standby power switch in the ON position. Allow the AI-804 gyro to spool-up prior to uncaging.

FMS . . . . . VERIFY/ACCEPT

EFIS Power Switches . . . . . ON

Flaps . . . . . UP

Exterior Lights . . . . . AS REQUIRED

Flight and Engine Instruments . . . . . CHECK

Cabin Lights . . . . . AS DESIRED

Furnishing Switch . . . . . AS DESIRED

Annunciators . . . . . TEST/NORMAL

Flight Controls . . . . . FREE/CORRECT

Flight Instruments . . . . . NO FLAGS

Brakes . . . . . RELEASE/TEST

Before Takeoff (Run-Up)

Nosewheel . . . . . CENTERED

Parking Brake . . . . . SET

Autopilot/Yaw Damp . . . . . CHECK

Pitch Trim . . . . . TAKEOFF POSITION

ELEV Trim Switch . . . . . ON

Yaw Damp Button . . . . . ENGAGE

Note rudder pedals respond to yaw damper engagement.

Rudder Boost Switch . . . YAW CONTROL TEST/RELEASE

Observe YD DISC flash momentarily on EFIS ADI, then extinguish.
Rudder pedals released.

Rudder Boost/Yaw Control Test Switch . . . . . RUDDER BOOST

Control Yoke . . . . . RELAX

Autopilot Button . . . . . ENGAGE

AP and YD illuminate steady on EFIS.

Electric Pitch Trim . . . . . .ACTUATE

Electric Pitch Trim switches should be tested in both directions with the autopilot engaged to verify the autopilot disconnects with all switch activations.

Repeat for both pilot and copilot.

Control Yoke . . . . . .CENTER

Autopilot Button. . . . . ENGAGE

Allow green AP and YD annunciators to illuminate steady on EFIS ADI.

Control Yoke . . . . . PUSH/PULL

Move the yoke in both the forward and aft directions to verify the autopilot attempts to trim-off the applied pressure.

Turn Knob . . . . . L/R

Confirm that the control wheel responds appropriately to control from the detent position.

Turn Knob . . . . . CENTER DETENT

HDG Control Knob . . . . . PUSH SYNC

HDG Mode . . . . . ENGAGE

HDG Control . . . . . L/R

Observe Control Yoke follows heading commands.

Yoke CWS/SYNC button. . . . . PUSH/RELEASE

Confirm roll response from previous step becomes inactive when button pressed.

Repeat previous four steps for both pilot and copilot.

GA Button . . . . . PUSH

Observe EFIS command bars pitch to +7 degrees.
Autopilot disconnects but yaw damp remains engaged.

Autopilot Button. . . . . ENGAGE

AP/Trim Disconnect . . . . . PUSH first level

AP DISC and YD DISC flash momentarily on EFIS, then extinguish.

Repeat for both pilot and copilot side.

A/P test button . . . . . PUSH

All annunciators illuminate, then extinguish. GA remains illuminated. Any other annunciator remaining illuminated indicates a malfunction.

A/P test button . . . . . PUSH

All annunciators illuminate, then extinguish. GA extinguishes. Any other annunciator remaining illuminated indicates a malfunction.

Electric Trim. . . . . CHECK/ON

ELEV Trim Switch . . . . . ON

Pilot's and Copilot's Trim Switches . . . CHECK OPERATION

Trim should be inoperable when each dual-element switch is moved individually.

Trim should operate only when both dual-element switches are moved simultaneously.

Ensure that pilot trim overrides copilot trim.

WARNING: Operation of the electric pitch trim system should occur only when both elements of the dual-element switch are activated. Any movement of the elevator trim wheel while activating only one element denotes a system malfunction. The electric pitch trim must then be turned off and the flight conducted only by manual operation of the elevator trim control.

AP/Trim Disconnect . . . . . PUSH second level

PITCH TRIM OFF annunciator illuminates, and any trim in motion ceases.

ELEV Trim Switch . . . . . CYCLE OFF, THEN ON

Trim Tabs . . . . . SET

Ice Protection . . . . . CHECK

Engine Anti-Ice:

Engine Anti-Ice Actuators . . . . . STANDBY

Engine Anti-Ice . . . . . OFF

L ENG ANTI-ICE, R ENG ANTI-ICE annunciators extinguish.

Engine Anti-Ice Actuators . . . . . MAIN

Engine Anti-Ice . . . . . ON

L ENG ANTI-ICE, R ENG ANTI-ICE annunciators illuminate.

Engine Auto Ignition:

Power Levers . . . . . IDLE

Auto-Ignition Switches . . . . . ARM

L IGNITION, R IGNITION annunciators illuminate.

Power Levers . . . . ADVANCE above approx 17% torque

L IGNITION, R IGNITION annunciators extinguish.

Power Levers . . . . . IDLE

L IGNITION, R IGNITION annunciators illuminate.

Auto-Ignition Switches . . . . . OFF

L IGNITION, R IGNITION annunciators extinguish.

Windshield Anti-Ice:

Windshield Anti-Ice Switches . . . . . HI

Observe loadmeter increase and magnetic compass swing.

Windshield Anti-Ice Switches . . . . . OFF, then NORMAL

Observe loadmeter increase and magnetic compass swing.

Windshield Anti-Ice Switches . . . . . OFF

Observe loadmeter decrease and magnetic compass swing.

Electrothermal Prop Deice:

Automatic Prop Deice Switch . . . . . ON

Deice Ammeter . . . . . 26-32 AMPS

Monitor for 90 seconds to confirm timer operation.

Manual Prop Deice . . . . . HOLD in Manual Position

Observe slight loadmeter deflection.

Deice Ammeter . . . . . 0 AMPS

Manual Prop Deice . . . . . RELEASE

Deice Ammeter . . . . . 26-32 AMPS

Automatic Prop Deice Switch . . . . . OFF

Surface Deice:

Condition Levers . . . . . HIGH IDLE (if required)

Pneumatic Pressure . . . . . CHECK

Surface Deice Switch . . . . . SINGLE CYCLE and release

Observe Pneumatic/Vacuum gauge fluctuations. WING DEICE annunciator illumination followed by TAIL DEICE annunciator illumination. 6 seconds for WING DEICE, 4 seconds for TAIL DEICE.

Boots . . . . . CHECK VISUALLY

Surface Deice Switch . . . . . HOLD MANUAL

Observe Pneumatic/Vacuum gauge fluctuation. WING DEICE and TAIL DEICE annunciators illuminate steady.

Boots . . . . . CHECK VISUALLY

Surface Deice Switch . . . . . RELEASE

Observe Pneumatic/Vacuum gauge fluctuation. WING DEICE and TAIL DEICE annunciators extinguish.

Boots . . . . . CHECK visually for vacuum hold-down

Condition Levers . . . . . LOW IDLE

Overspeed Gov/Rudder Boost . . . . . .CHECK

Rudder Boost Switch . . . . . RUDDER BOOST

Prop Levers . . . . . .FULL FORWARD

Prop Governor Test Switch. . . . . HOLD to GOV

Power Lever (individually) . . . . . .INCREASE

Each power lever should be advanced until propeller RPM has stabilized between 1520-1610 RPM. Continue to advance lever until proper rudder movement is evident.

AP/Trim Disconnect Switch . . . . . PRESS 1st Level

Rudder Boost is interrupted.

Rudder Boost Switch . . . . . OFF/ON

Rudder Boost is interrupted.

Power Lever . . . . . IDLE

Repeat for opposite engine.

Prop Governor Test Switch. . . . . .RELEASE

Low Pitch Stops/Primary Governors . . . . . .CHECK

Prop Levers . . . . . .FULL FORWARD

Low Pitch Stop Switch . . . . . .HOLD to GND IDLE STOP

L PROP PITCH, R PROP PITCH annunciators illuminated.

Power Levers . . . . . SET 1500 RPM

Prop Levers . . . . . CYCLE

Levers are cycled to low, then back to high RPM. Observe proper RPM response.

Low Pitch Stop Switch . . . . . .RELEASE

L PROP PITCH, R PROP PITCH annunciators remain extinguished.

Prop RPM . . . . . 1150 to 1250 RPM

Autofeather . . . . . CHECK

NOTE: Autofeather annunciators cycle on and off with each fluctuation of torque as the prop feathers.

Autofeather Switch . . . . . HOLD to TEST

Power Levers . . . . . SET 22% Torque

Power Lever (individually) . . . . . IDLE

Observe opposite AFX annunciator extinguished. Appropriate propeller begins feathering at approximately 10% torque and continues to cycle.

Power Lever . . . . . SET 22% Torque

Observe feathering sequence terminated and both AFX annunciators illuminated.

Power Levers . . . . . IDLE

Observe AFX annunciators simultaneously extinguishing and no associated prop feathering.

Autofeather Switch . . . . . ARM

Pressurization . . . . . CHECK

Environmental Bleed Air Switch . . . . . NORMAL

Bleed Air Valves . . . . . OPEN

Pressurization Controller . . . . . SET

Set approximately 1,000 feet below field pressure altitude. Set rate knob to 12 o'clock.

Cabin Pressure Switch . . . . . HOLD to TEST

Cabin Altimeter/VSI . . . . . CHECK

Observe cabin descent, cabin altitude decreasing, and differential increasing.

Cabin Pressure Switch . . . . . .RELEASE

Pressurization Controller . . . . . SET to Takeoff

Set controller to the greater of 1,000 feet above planned cruise altitude (inner scale) or 500 feet above takeoff field pressure altitude (outer scale).

Environmental Bleed Air Switch . . . . . .AS REQUIRED

Pressurization Controller . . . . . SET

CAUTION: Environmental bleed air must be in the LOW position at ambient temperatures above 10°C.

Environmental Bleed Air . . . . . AS REQUIRED

Bleed Air Valves. . . . . TEST

Bleed Air Valves . . . . . OPEN

Left Bleed Air Valve. . . . . PNEU/ENVIR OFF

Observe no change in Vacuum/Pneumatic gauges.

Right Bleed Air Valve . . . . . PNEU/ENVIR OFF

Observe ZERO Vacuum/Pneumatic pressure. L BL AIR FAIL, R BL AIR FAIL annunciators illuminate.

Left Bleed Air Valve. . . . . OPEN

Vacuum/Pneumatic gauges recover to normal positions.

Right Bleed Air Valve . . . . . OPEN

Pneumatics and Vacuum Gauges . . . . . NORMAL

Manual Prop Feathering . . . . . .CHECK

Autofeather Switch. . . . . ARM

Prop Sync . . . . . ON

Flaps . . . . . .AS REQUIRED

Friction Locks. . . . . SET

Fuel Quantity . . . . . CHECK

Flight Instruments . . . . . SET

Avionics/Radar/FMS . . . . . SET/PROGRAMMED

ADC . . . . . TEST

ADC Test:

ADC Test Switch . . . . . PUSH

Observe air data instruments flag and revert to loss-of-data mode.
Altitude pointer slews to 250-foot mark.
VSI pointer slews to 6000-ft/min descent rate.
Airspeed indicator and M_{MO} pointers slew to zero.

ADC Test Switch . . . . . RELEASE

Observe air data transmissions to the instruments restored.
Instrument flags pull from view.

VSI Test (Non TDI-920):

VSI Test Button . . . . . PUSH

Observe the warning flag in view. Pointer slews to 6000-ft/min descent rate.

VSI Test Button . . . . . RELEASE

Observe normal indications.

Airspeed Indicator Test:

Airspeed Indicator Test Button . . . . . PUSH

Observe warning flag in view and both pointers slew to 160 knots for 1 second before slewing to zero.

Airspeed Indicator Test Button . . . . . RELEASE

Ensure barber pole returns to 260 knots.

Altimeter Test:

Altimeter Test Button . . . . . PUSH

Observe warning flag in view for approx ½ second.
Altitude pointer slews to 750-foot mark.

Altimeter Test Button . . . . . .RELEASE

Observe normal indications.

Baro Knob . . . . . ADJUST/SET

Observe baroset digits responding appropriately.

Baro Knob . . . . . .PUSH/PULL/AS DESIRED

PUSH for barosettings in inches of mercury.
PULL for barosettings in millibars.

Altitude Alerter Test:

ALT ALERT Annunciator/Switch . . . . . PUSH/HOLD

Observe warning flag in view.
ALT ALERT annunciator illuminates.
Remote ALT ALERT annunciators illuminate.

ALT ALERT Annunciator/Switch . . . . . .RELEASE

Observe warning flag out of view.
ALT ALERT annunciator extinguishes.
Remote ALT ALERT annunciators extinguish.

EFIS . . . . . TEST

EFIS Test Button . . . . . PUSH/HOLD (>4 seconds)

Observe pilot instruments Pitch UP and Roll RIGHT 10 degrees, Copilot instruments Pitch DOWN and Roll LEFT 10 degrees.
Observe red “TEST” on both EADIs and MFD.

After 4 seconds, pitch, roll, and heading increments are removed from view, and all active flags are brought into view.

Comparator Warning Lights . . . . . PUSH to Cancel

TCAS (CLT 92T AND TVI-920D) . . . . . TEST

CTL 92 Test Button . . . . . PUSH

Allow 10 seconds to complete.
Observe four TCAS test traffic targets displayed on the TVI-920D and MFD.
Note “TCAS SYSTEMS TEST OK” audio alert.

TVI-920 Test Button . . . . . PUSH and HOLD

Hold for 10 seconds.
Observe display of part number, and list of TCAS-related systems that either pass or fail.

EGPWS . . . . . TEST

Terrain Inhibit Switch . . . . . ENSURE NOT ENGAGED

WXR Radar Display . . . . . ON (or TEST)

Terrain Display . . . . . ENSURE NOT SELECTED

EGPWS Test Button . . . . . PUSH less than 2 seconds

Observe:

GPWS INOP, TERRAIN INOP,
WINDSHEAR INOP Annunciators . . . . . ILLUMINATED

BELOW GLIDESLOPE (or
amber GPWS) Annunciator . . . . . ILLUMINATED

“GLIDESLOPE” audio message is enunciated.

BELOW GLIDESLOPE (or
amber GPWS) Annunciator . . . . . EXTINGUISHED

GLIDESLOPE CANCELED
Annunciator . . . . . ILLUMINATED
(IF INSTALLED)

GLIDESLOPE CANCELED
Annunciator . . . . . EXTINGUISHED
(IF INSTALLED)

PULL UP (or red
GPWS) Annunciator . . . . . ILLUMINATED

"PULL UP" audio message is enunciated.

PULL UP (or red
GPWS) Annunciator . . . . . EXTINGUISHED

WINDSHEAR WARNING
Annunciator. . . . . ILLUMINATED

Siren and "WINDSHEAR, WINDSHEAR, WINDSHEAR" audio message is enunciated.

Pilot or Copilot WINDSHEAR
ALERT Annunciator . . . . . ILLUMINATED

PULL UP (or red
GPWS) Annunciator . . . . . ILLUMINATED

"TERRAIN, TERRAIN, PULL UP" audio message is enunciated. Terrain display self-test pattern is displayed for 12 seconds.

PULL UP (or red
GPWS Annunciator. . . . . EXTINGUISHED

GPWS INOP, TERRAIN INOP,
WINDSHEAR INOP Annunciators . . . . . EXTINGUISHED

Before Takeoff (Final Items)

Bleed Air Valves . . . . . OPEN
Environmental Bleed Air . . . . . AS REQUIRED
Electric Heat . . . . . OFF
Aft Heat . . . . . AS DESIRED
Aft Blower . . . . . AS DESIRED
Generator Loads . . . . . CHECK
Battery Ammeter . . . . . CHECK (0-10A)
Exterior Lights . . . . . SET
Ice Protection . . . . . AS REQUIRED
Auto Ignition . . . . . ARM (If Required)
Autofeather . . . . . CHECK/ARM
Annunciators . . . . . CONSIDERED
Headings/Flight Directors . . . . . SET
Standby Gyro . . . . . UNCAGED/SET
Prop Levers . . . . . FULL FORWARD
Crew Briefing . . . . . COMPLETE
Transponder . . . . . ON
Brakes . . . . . RELEASED
Engine Anti-ice . . . . . OFF or AS REQUIRED

Takeoff

Brakes . . . . . HOLD
Power Levers . . . . . SET STATIC POWER
Brakes . . . . . RELEASE
V_R . . . . . PITCH 10 DEGREES
Landing Gear . . . . . UP

Landing/Taxi Lights . . . . . OFF

Yaw Damp . . . . . ON

Airspeed. . . . . V_{35} (until clear of obstacles)

Flaps . . . . . UP (125 kt minimum)

Rolling Takeoff

Power Levers. . . . . SET STATIC POWER (within 10 sec)

Autofeather (L+R) . . . . . ILLUMINATED

V_R . . . . . PITCH 10 DEGREES

Landing Gear. . . . . UP

Landing/Taxi Lights . . . . . OFF

Yaw Damp . . . . . ON

Airspeed. . . . . V_{35} (until clear of obstacles)

Flaps . . . . . UP (125 kt minimum)

Climb

Yaw Damp . . . . . VERIFY/ON

Attitudes. . . . . COMPARE

Climb Power . . . . . SET

Props . . . . . SET (1600, or AS DESIRED)

Engine Instruments . . . . . CHECK

Ice Protection. . . . . AS REQUIRED

Windshield Heat. . . . . NORMAL

Bleed Air Valves. . . . . OPEN

Environmental Bleed Air . . . . . AS REQUIRED

Pressurization . . . . . CLIMB/DIFFERENTIAL

Outside Check . . . . . CONFIRM

Exterior Lights . . . . . AS REQUIRED

10,000 Feet

Cabin Sign . . . . . AS REQUIRED

Exterior Lights . . . . . AS REQUIRED

Pressurization . . . . . NORMAL

Oxygen Control . . . . . CHECK

Transition (18,000)

Altimeters 29.92

Pressurization . . . . . NORMAL

Cruise

Cruise Power . . . . . SET

Autofeather . . . . . OFF

Systems Check . . . . . COMPLETE

NOTE: Engines, fuel consumption, electrical, pneumatic, environmental, pressurization, oxygen and anti-ice systems should be monitored.

Aft Blower . . . . . AS REQUIRED

COMM/NAV Radios . . . . . SET

Destination Weather . . . . . CHECK

Approach Procedure . . . . . CONSIDER

Crew Briefing . . . . . CONSIDER

Landing Data . . . . . CHECK

Descent/Transition

Pressurization . . . . . SET

Pressurization Controller Setting for Landing	
Closest Altimeter Setting	**Add to Airport Elevation**
28.00	+2,400
28.10	+2,300
28.20	+2,200
28.30	+2,100
28.40	+2,000
28.50	+1,900
28.60	+1,800
28.70	+1,700
28.80	+1,600
28.90	+1,500
29.00	+1,400
29.10	+1,300
29.20	+1,200
29.30	+1,100
29.40	+1,000
29.50	+900
29.60	+800
29.70	+700
29.80	+600
29.90	+500
30.00	+400

Pressurization Controller Setting for Landing	
Closest Altimeter Setting	**Add to Airport Elevation**
30.10	+300
30.20	+200
30.30	+100
30.40	0
30.50	-100
30.60	-200
30.70	-300
30.80	-400
30.90	-500

Fuel Balance . . . . . CHECK

Autofeather . . . . . ARM

Ice Protection. . . . . AS REQUIRED

Window Defog . . . . . AS REQUIRED

Windshield Defrost. . . . . AS REQUIRED

Destination Weather . . . . . RECHECK

Approach Procedures . . . . . RECHECK/BRIEF

Cabin Sign . . . . . CONSIDER

Exterior Lights . . . . . AS REQUIRED

Altimeters. . . . . SET

Approach

Surface Deice . . . . . .AS REQUIRED
Autofeather . . . . . CHECK/ARM
Fuel Balance . . . . . .CHECK
Pressurization . . . . . .CHECK
Environmental Bleed Air . . . . . LOW
Cabin Sign . . . . . ON
Cabin Condition . . . . . SECURE
Exterior Lights . . . . . .AS REQUIRED
Landing Data . . . . . REVIEW

Refer to the AFM section V, for Landing Data Distances.

Approach Briefing . . . . . COMPLETE
Altitude Alerter/Radar Altimeters . . . . . SET
Flaps . . . . . APPROACH

Before Landing

Landing Gear . . . . . .DOWN (3 GREEN)
Approach Speeds . . . . . .CONFIRM
Exterior Lights . . . . . .AS REQUIRED
Radar . . . . . STBY/AS REQUIRED
Surface Deice . . . . . .AS REQUIRED
Engine Anti-Ice . . . . . CONSIDER

Normal Landing (Final Items)

Landing Gear . . . . . CONFIRM (3 GREEN)
Pressurization Differential . . . . . CHECK ZERO
Flaps . . . . . DOWN
Yaw Damp . . . . . OFF
Power Levers . . . . . IDLE
Prop Levers . . . . . FULL FORWARD

After Touchdown

Power Levers . . . . . LIFT GROUND FINE
Brakes . . . . . AS REQUIRED

Maximum Reverse Landing

Condition Levers . . . . . HIGH IDLE
Prop Levers . . . . . FULL FORWARD
Landing Gear . . . . . CONFIRM (3 GREEN)
Flaps . . . . . DOWN
Engine Anti-Ice . . . . . ON
Airspeed . . . . . V_{REF}
Yaw Damp . . . . . OFF

Landing Steep Approach

TAWS (If installed) . . . . . ACTIVATE STEEP APPROACH
Prop Levers . . . . . FULL FORWARD
Flaps . . . . . FULL DOWN
Airspeed . . . . . V_{REF}

Prior to Landing

Yaw Damp . . . . . OFF
Power Levers . . . . . IDLE

After Touchdown

Power Levers . . . . . LIFT GROUND FINE

Brakes . . . . . .AS REQUIRED

Balked Landing/Missed Approach

Power Levers . . . . . .MAX ALLOWABLE

Propellers . . . . . .FULL FORWARD

Airspeed . . . . . V_{REF}

NOTE: When clear of obstacles, establish normal climb.

Flaps (V_{REF} plus 10 kt) . . . . . .APPROACH

Landing Gear . . . . . UP

Flaps (125 kt, min) . . . . . UP

After Landing

Engine Anti-Ice . . . . . CONFIRM/ON

Auto Ignition . . . . . OFF

Exterior Lights . . . . . .AS REQUIRED

Ice Protection . . . . . OFF

Brake Deice . . . . . .CYCLE

Flaps . . . . . UP

Trim . . . . . SET

Transponder . . . . . STBY/OFF

Radar . . . . . STBY/OFF

Bleed Air Valves . . . . . ENVIR OFF

Pressurization Differential . . . . . .VERIFY ZERO

Shutdown/Securing

Parking Brake . . . . . SET

Electric Heat . . . . . OFF

Autofeather . . . . . OFF

Exterior Lights . . . . . AS REQUIRED

FMS . . . . . OFF

EFIS Power Switches . . . . . OFF

Oxygen Control Handles . . . . . OFF

Instrument Emergency Lights (Nighttime) . . . . . ON

Battery . . . . . CHARGED

Standby Gyro . . . . . CAGED

NOTE: DO NOT cage the gyro while the aircraft is in motion.

Avionics Master . . . . . OFF

Inverters . . . . . OFF

Aft Heat . . . . . OFF

Vent Blowers . . . . . AUTO/OFF

Cabin Temp Mode . . . . . OFF

ITT . . . . . STABILIZED

Power Levers . . . . . FLIGHT IDLE

Condition Levers . . . . . FUEL CUTOFF

Prop Levers . . . . . FEATHER

Pilot's Subpanel Switches . . . . . L/R OFF

Gang Bar . . . . . OFF (<15% N_1)

Overhead Panel Light Switches . . . . . OFF

Parking Brake . . . . . .AS REQUIRED
Instrument Emergency Lights (Nighttime) . . . . . OFF
Baggage Compartment Lights . . . . . OFF
Cabin Entry Lights . . . . . OFF
Tiedowns/Chocks. . . . . .INSTALL
Restraints/Covers . . . . . .INSTALL