

WARNING!

This checklist has been created by Concorde enthusiast Ramón Cutanda. **I am not a real pilot and**, except from some volunteered and limited beta testing, **I have no professional relationship with FSLabs whatsoever. Therefore, this is not, by any means, an "official", "approved" or "real" checklist, either by FSLabs or British Airways.**

This checklist is **BASED ON**:

1. **FSLabs' checklists** included in their tutorials/manuals
2. **A real British Airways Concorde flying manual** (rev. 4th September 1978)

Using the aforementioned sources, **I have created this checklist according to the following criteria.**

- Making this checklist **as quick and simple to follow as possible** by excluding checks and actions:
 - **For systems and items not simulated** in Concorde-X by FSLabs, such as the oxygen system or weather radar, or not included in the list of possible fails, such as light bulbs.
 - **Performed by the VFE** (enabled by default)
 - **Only performed during emergencies or extended checks.**
- Because this checklist is performed with the limitations of interaction of a virtual cockpit and by only one pilot, instead of a crew of 3, I have done my best **reordering the sequence** of some items to **avoid** what I considered **unnecessary panel jumps** within Concorde-X while trying to respect an adequate and logical sequence.
- I have also reordered some sequences to follow a **left-to-right** and **up-to-bottom pattern** within a same panel (as when reading), trying to make the sequences more intuitive and logical.

I don't claim this checklist is better than any other, but I find it especially useful and I simply want to share in case it may be of interest for other Concorde-X pilots.

You can find an extended version of this checklist at
<http://simulaciondevuelo.com/concorde-x-checklists>

IMPORTANT

I have used this blue colour for steps that are not included either in FSLabs' or the real Concorde checklists, but that make sense for me and I like to follow.

PANEL STATE LOADED FSLabs Menu

If you saved the panel state at the end of your previous flight, this optional step will allow you to load Concorde-X with all the switches, knobs and other settings exactly in the same state as you left them, making this checklist more realistic and not as "boring" and predictable as the default states.

COCKPIT SAFETY CHECK**LIGHTS AS REQUIRED Aft Overhead (SHIFT+3)**

- Rotate the LIGHTNING STORM, LIGHTING GLARESHIELD and LIGHTING CENTRE CONSOLE PANEL rotary selector to the required position. Observe lighting as selected
- Set ROOF LIGHTS as required
- Set EMERG LIGHTS selector to ARM
- Verify ANTI-COLLISION LIGHTS switch at OFF
- Set NAV LIGHTS as required

PRESS STATIC HEATERS OFF**ADS/ENGINE PROBE HEATERS OFF**

- Verify ADS 1, and ADS 2, sels at OFF and STBY SW at OFF
- Observe all ADS/ENGINE PROBE HEATERS lts (yellow) on after Ground Power connection

ENGINE ANTI-ICING OFF

Verify ENGINE ANTI-ICING sws OFF and IGV PRESS lts off

WING INTAKE ANTI-ICING TEST OFF**TRANSPONDER STBY Lower Pedestal (SHIFT+7)****ALT RPTC OFF**

COCKPIT PRELIMINARY PREPARATION

AIRCRAFT FUEL AND AIRCRAFT LOAD. CHECKED FS Labs Menu

GROUND POWER REQUEST GROUND POWER Ground Services Menu

. ON (Ground power switch to close) . . . AC Electrics (CTRL+SHIFT+7)

Set ground power sw to CLOSE and release.

- **CANCEL THE CONTINUOUS AUDIO GONG OF THE MASTER WARNING SYSTEM WITH ANY OF THE FOLLOWING THREE METHODS:**

- Press CTRL+SHIFT+Z
- Push MWS CANCEL in DC Electrics panel (CTRL+SHIFT+8)
- Press the CANCEL push button on the right side of the MWS panel (above the glareshield)

VISOR/NOSE lever AS CONFIGURATION Main

Verify that VISOR/NOSE lever position coincides with visor/nose configuration. This check prevents any uncontrolled movement of the droop nose and visor when the green hydraulic system is pressurized.

LANDING GEAR NORMAL lever DOWN

- Confirm L/GEAR lever at DOWN.
- Observe LH SHORT, UPPER LOCKS and RH SHORT lts off, L/GEAR transit lts off and LH, NOSE, T and RH arrow lts (green) on.

Although no listed in either FS Labs' or BA's checklists, I find turning the Air Conditioning ON at this moment a common-sense step. Just imagine doing all the rest of the checklists in Alaska or in the Emirates inside a Concorde at ambient temperature!

AIR CONDITIONING. REQUEST GROUND AIR Ground Services Menu

BLEED VALVES (4) SHUT (GRND SUPPLY). Air Bleed (CTRL+SHIFT+3)

CROSS BLEED VALVES (4) OPEN

COND VALVES (4) ON

AIR DATA COMPUTERS ON Lower Pedestal (SHIFT+7)

- Set ADC 1 SW to ON and verify ADC 1 rty sel at NORM.
- Set ADC 2 sw to ON and verify ADC 2 rty sel at NORM.
- IF the ADC 1 and/or ADC 2 lts (amber) on, when the flight instruments stabilise press to reset.
- Observe the ADC 1 and ADC 2 lts off.

TEMPERATURE CHECK

Observe no failure flags visible on temperature indicator

DRAIN MAST HEATER CHECK/SET Aft Overhead (SHIFT+3)

- Verify DRAIN MAST HTRS sels off.
- Observe MAST 1 MAST 2 and MAST 3 lts. off.
- Observe total air temperature
 - IF total air temperature above 0°C. set DRAIN MAST HTRS sels to OFF.
 - IF total air temperature below 0°C set DRAIN MAST HTRS sels to ON.

INS 1, 2 & 3 ALIGN, TEST, PRESENT POS

INS 1, 2 & 3 OFF FWD Leg (CTRL+SHIFT+1)

- Make sure to set the mode rty sel on MSU 1, 2 and 3 to OFF
- Press CTRL+I for **auto align**. For **manual alignment**, follow the next steps in grey.

NOTE: In both cases, the airplane must not be towed or taxied during INS alignment.

- Set the mode rty sel on MSU 1, 2 and 3 to STBY
- Open CDUS 1, 2 & 3 (SHIFT+7/8/9)
- Test INS circuits status:
 - Press TEST switch
 - Check that all INS lamps (except keyboard and clear lamps) illuminate.
 - Figure eight (8) appears in all digit positions of both data displays
 - Directional letters (NS) appear in the left display
 - Directional letters (EW) appear in the right display
 - FROM-TO indicates 88.
 - Also check that INS READY NAV and BAT lights on their respective INS mode selector modules illuminate.

NOTE: Apart from checking the bulbs, this test will also clear INS errors when there is a difference between the coordinates of the last position registered by the INS and your current position. This is very frequent, for example, when you park the Concorde-X in one airport and then you load the simulator on a different one for your next flight; or even in the same airport if you don't reload in the exact same parking spot/gate.

- Repeat test on each module.

Check INS malfunctions:

- Warn light on each control display module and BAT light on each mode selector module should be extinguished.

Load INS Field Position Data:

- Position data selector switch to POS.
- Press keyboard switch for north (N2) or south (8S) latitude as required.
- Press keyboard switches in sequence for present position latitude and observe correct latitude in left data display
- NOTE: You can see your current position by pressing SHIFT+Z. Round up or down the last digit and use zeroes if necessary (For example, S27°9.59' should be typed as 2709.6)*
- Press INSERT switch once and observe loaded LAT +/- 0.1 in left data display
 - Observe INSERT light stays on
- Press keyboard switch for east (6E) or west (W4) longitude as required.
- Press keyboard switches in sequence for present position longitude and observe correct longitude in right data display.
- Press INSERT switch and observe insert light extinguish and new present position data
- Latitude and longitude +/- 0.1 appear in left and right data displays.
- Repeat for each INS module.
- Record INS 3 displayed present position on flight engineer's flight log.
- Cross check recorded position with listed ramp position in the Aerodrome Folder.

INS 1, 2&3 MSU ALIGN... FWD Leg (CTRL+SHIFT+1)

- Set rty sel at ALIGN, BAT It off and READY

NOTE: Illumination of the BAT light (amber) on the control display modules during align mode indicates that battery power is operating normally.

- Repeat for MSU 2 and 3
- Set Data Selector to DSRTK/STS position on CDU1, 2 & 3 to check the progress of the alignment

NOTE: With the CDU selectors at the DSRTK/STS position, the fifth digit in the right data indicator display the STATUS of the current INS alignment submode, known as the Accuracy Index (AI). The AI starts from 9 and decreases toward 0 as the alignment progresses. NAV It remains off unless status 5 reached. At 5 or lower, NAV mode is permitted In NAV mode the fifth digit represents the quality of the position data. This provides an indication of the accumulated position error. The sixth digit (Mode Index) stays fixed at 5 during alignment.

FLIGHT ENGINEER'S COCKPIT PREPARATION

COCKPIT DOOR NORM Aft Overhead (SHIFT+3)

GRND CALL push button OFF

SEAT BELT/NO SMOKING SIGN ON

THROTTLE MASTERS MAIN or ALTERN

- Verify *THROTTLE MASTER* sels at MAIN or ALTERN
- Observe sel Its off, *THROT* Its off.

*NOTE: An intake mounted T1 (engine probe) supplies temperature information to the Main throttle control system of its own engine and to the Alternate throttle control system of the adjacent engine. Therefore, **it is recommended that the Main throttle control system is used for engine starting whenever all the engine temperatures are not the same.***

AUTOTHROTTLE SWITCHES ON

HP VALVES SHUT

Verify HP VALVE sws at SHUT and MIs read SHUT

NO.1 AUTOSTABS CHECK

- Verify that the No. 1 Autostabs will latch at the engage position. This confirms that the *EMERGENCY CONTROLS* push button is not in the engaged position.
- Set back No. 1 Autostabs to the OFF position
- Cancel MWS STAB

T/O CG switch NORM .. Engine Controls (CTRL+SHIFT+2)

Verify that the Take-off GC switch is at NORMAL and is guarded

ENG 4 T/O N1 limiter switch NORM

GRD IDLE switches HI

ENGINE CONTROL SCHEDULE SET

- Set the rotary selector to *FLYOVER (F/O)* or *NORMAL*.

NOTE: FLYOVER (F/O) is selected for noise abatement take-off and NORM if noise abatement is not required.

- Set the *ENGINE CONTROL SCHEDULE* selector to *AUTO*
 - Observe the *ENGINE CONTROL SCHEDULE LO* lights (green) *ON*

SECONDARY NOZZLECHECK

Observe *SECONDARY NOZZLE* instruments for condition (21º)

FLIGHT REV ARM OFF

Observe *FLIGHT ARM OPEN* It off

NOZZLE ANGLE SCHEDULING UNIT TEST SELECTOR ... NORMAL

- Verify *NASU* test selector at *NORMAL*
- Observe *NOZZLE* light off

NOTE: On Concorde-X it is sometimes ON.

FLIGHT INSTRUMENTS CHECK Main

Observe for correct repetition of readings on pilots' panels.

HYDRAULIC MANAGEMENT PANEL CHECK/SET. Hydraulic management

- Set the green system pump selectors 1 and 2 and blue system pump selectors 3 and 4 to *OFF*

AC ELECTRICS PANEL CHECK/SET. AC Electrics (CTRL+SHIFT+7)

- Verify generator selectors (4) at *ON*

DC ELECTRICS PANEL CHECK/SET AC Electrics (CTRL+SHIFT+8)

- Verify *EMERG GEN* control selector at *AUTO*
- Verify *WATER HTRS* switch at *ON*
- Verify *GEN 1&3* and *GEN 2&4 GALLEYS* switches at *ON*

CAPTAIN'S COCKPIT PREPARATION

STEERING LIGHT ON Main

AUTOLAND light OFF

RAD/INS switch RAD

VHF/NAV controller CHECK/SET

AFCS panel CHECK

- Set initial climb altitude
- Verify AT1, AT2, FD1, AP1, AP2, and FD2 switches all at OFF
- Observe all warning lights off on both landing display indicators

AUTOTHROTTLE CHECK

- **NOTE: This test only works IF you either use the panel states provided by FSLabs (Cold and Dark or ConcordeX_Preliminary) OR if you load Concorde-X directly from the Scenario Startup Screen. If you load first a flight with the Trike/J3 Cub and engines running the test is inconsistent (does not always work)**
- Set AT1 switch to engage
 - Observe switch remains engaged, IAS HOLD pushbutton light (white) on and throttle levers move from the idle position.
- Set AT2 switch to engage
 - Observe switch remains engaged
- Manually disengage AT1 and AT2
 - Observe IAS HOLD pushbutton light off and AT1 light (red) flashing
- Press the AT instinctive disconnect pushbutton
 - Observe AT light (red) off
- Retard throttle levers to the idle position

PULL UP (TERRAIN light), M/CG and TYRE lights. OFF

INSTRUMENT TRANSFER SWITCHES SET

- Verify ATT switch set at ATT/INS 1, COMP 1/COMP 2 switch at COMP 1, DEV 1/DEV 2 switch at DEV 1 and NAV switch at INS 1

NOTE: The normal position of the captain's instrument transfer switches is to the left

ASI (Air Speed Indicator) CHECK/SET

- Verify ASI mode switch at N
- Observe mode flag reads ADC and no failure flags visible on ASI

ADI (Attitude Director Indicator) CHECK

- Observe no failure flags visible on ADI

VSI CHECK

- Observe no failure flags visible on VSI

RADIO ALTIMETER CHECK/SET

- Observe that red fail flag is out of view

STANDBY HORIZON CHECK/SET

- Observe no flag visible on standby horizon

NOTE: The failure warning flag disappears after power on. Allow at least 50 seconds after power on in order to have true indications

INCIDENCE INDICATOR CHECK

- Observe no failure flags visible on the incidence indicator

STANDBY ASI/MACHMETER CHECK

- Observe no failure flags visible on the Standby ASI/Machmeter indicator

MACHMETER CHECK

Observe no failure flags visible on the Machmeter indicator

HSI (Horizontal Situation Indicator) CHECK/SET

- Observe no failure flags visible on the HSI

FD1/FD2 switch FD1

Set FD1/FD2 switch to FD1 and observe FD1 visible on ADI (Attitude Director Indicator)

ALTIMETER CHECK/SET

- Verify, on altimeter, mode switch at N
- Observe mode flag reads ADC and no failure flags visible on altimeter
- Rotate static pressure knob to set the airfield QNH in the corresponding window and check the altimeter reads within plus or minus 35 feet of the airfield elevation
- Set bugs to airfield elevation and 3 engine acceleration height

ENGINE RATING LIGHTS CHECK

Observe T/O light on

DME DME

Observe sensible readings

VOR/RMI CHECK

Observe no flags visible on VOR/RMI if a VOR station in range

SIDE SLIP CHECK

Observe no failure flags visible on SIDE SLIP indicator

ADF/RMI CHECK

Observe no heading failure flag visible on ADF/RMI

INS MONITOR LIGHTS CHECK

While aligning, observe INS 1, INS 2 and INS 3 lights on and INS COMP light off

CLOCK SET

Verify correct GMT set

C.G INDICATOR CHECK

Observe no failure flag visible on C.G. indicator

AIR DATA COMPUTERS CHECK Lower Pedestal (SHIFT+7)

- *Observe ADC1 and ADC2 and TEST lights off and no failure flags visible on associated instruments*

FIRST OFFICER'S COCKPIT PREPARATION

STAB, FEEL AND TRIM PANEL CHECKED ... Fwd overhead panel (SHIFT+4)

- *Verify AUTO STAB No.1 PITCH, ROLL and YAW sws at OFF*
- *Verify AUTO STAB No.2 PITCH, ROLL and YAW at OFF.*
- *Verify ARTIFICIAL FEEL No. 1 PITCH, ROLL and YAW at OFF.*
- *Verify ARTIFICIAL FEEL No.2 PITCH, ROLL and YAW at OFF.*
- *Verify ELECTRIC TRIM No. 1 and No. 2 sws at OFF.*

FLIGHT CONTROL INVERTERS. ON

- *Set BLUE INVERTER sel to ON*
- *Repeat actions for GREEN INVERTER.*
- *Set green and blue Control Inverter Guards*
- *Cancel MWS PFC*

FLIGHT CONTROL SELECTION. GREEN

- *Verify OUTER AND MIDDLE ELEVONS sel and INNER ELEVONS sel at GREEN (you need to move the switches twice)*
- *Observe MECH JAM It (red) on*
NOTE: The MECH JAM light is on because, with no hydraulic pressure, the elevons droop, thus introducing loads into the mechanical linkage that are sensed as a jamming of the linkage.
- *Verify RUDDER sel at GREEN (you need to move the switch twice)*

ANTI-STALL ON

- *Verify ANTI STALL SYSTEM 1 SW at ON.*
- *Observe SYS 1 FAIL It (amber) on.*
NOTE: The FAIL light is on because the pitch auto-stab is off
- *Repeat the action for ANTI STALL SYSTEM 2*

LANDING LIGHTS RETRACT/OFF

W/SHIELD DE-ICE MI OFF

WINDSHIELD DE-ICE OFF

DV DE-MIST OFF

TAXI LIGHTS RETRACT/OFF

- *Verify LIGHTS LANDING TAXI sws at OFF and RETRACT.*
- *Observe EXTENDED It off.*
- *Verify LIGHTS TAXI TURN sws L and R at OFF.*

TAKE-OFF MONITOR..... DISARM Main

Pull T/O MONITOR control button.

AFCS LIGHTS AS REQUIRED

TOTAL FUEL CONTENTS INDICATOR CHECKED

Observe no failure flag showing on TOTAL CONTENTS indicator and sensible readings indicated

WHEEL O/HEAT LIGHT CHECKED.....

Observe the WHEEL O/HEAT light is OFF providing the wheel brake temperature is less than 200 degrees C.

FLIGHT CONTROL INDICATORS CHECKED

- Observe the flight control channel Mis (8) read M.
- Observe flight control position indicator warning lts (8) off.
 - IF any warning lts on press the RESET pb and observe all warning lts off.

AUDIO SELECTOR PANELS CHECKED Upper Pedestal Panel (SHIFT+6)

TRIM WHEELS SET

Verify YAW, PITCH and ROLL trims at neutral.

THROTTLES CHECKED

- Advance throttle levers (4) to fully forward and return to the idle stop.
- Observe no undue force is required

WINDSHIELD WIPERS CHECKED

- Verify W/S WIPERS rty sels (2) at OFF
- Observe wipers are parked.

CAUTION: W/S wipers must not be operated on a dry screen but may be ground tested on a wet screen.

REHEAT OFF

Verify REHEAT sels (4) at OFF.

VHF COM AS REQUIRED. ... Lower Pedestal Pane (SHIFT+7)

- Set VHF 1 frequencies as required.
- Verify TFR sw at desired position.
- Observe corresponding lt (green) on.
- Repeat these actions for VHF 2.

TRANSPONDER CHECK/STBY.....

- Verify ATC ALT RPTC SW set at 1.

ADF SET/TEST.....

- Select the required ADF frequencies for ADF1 and ADF 2 on the ADF control unit.
 - Observe sensible position of the ADF pointers on both ADF/RMI.

BEFORE START CHECKLIST

COCKPIT PREPARATION COMPLETE

DV WINDOWS CLOSED Virtual Cockpit only

Verify the sliding side windows are closed and secured

FLIGHT CONTROL INVERTERS ON . . Forward Overhead (SHIFT+4)

Confirm BLUE INVERTER and GREEN INVERTER sels at ON

ANTI-STALL SYSTEMS ON

RAD / INS switches AS REQUIRED Glareshield

- *Confirm both RAD/INS SWS to RAD*
- *Observe on both HSI that RAD and MAG displayed.*

NAV RADIOS SET

- *The ADF and VOR should be tuned and checked on the facilities.*
- *Required QDM set on VOR LOC selectors and heading or track set on the HDG/TRK selector if required*

INSTRUMENT TRANSFER switches SET Main

Confirm the Captain's instrument transfer switches to the left and First Officer's instrument transfer switches to the right

QNH / AA / ALTIMETERS SET/CROSS CHECKED

- *Confirm both main altimeters set to QNH & mode sws at "N"*
- *Check bugs set to airfield elevation and three engine acceleration height.*
- *Set Radio Altimeter bugs to 20' & check DH lts on.*

BRAKES PARK CHECKED Main&Upper Pedestal (SHIFT+6)

Confirm brakes are full scale and brake control lever at PARK.

THROTTLES IDLE Main&Upper Pedestal (SHIFT+7)

NAV LIGHTS AS REQUIRED Aft Overhead (SHIFT+3)

THROTTLE MASTER ON

Confirm THROTTLE MASTER sels are at MAIN or ALTERN

BATTERIES. ON / Normal . . DC Electrics (CTRL+SHIFT+8)

- *Set battery sels to BATT ON.*
- *Observe: BATT A and BATT B MIS show inline, BATT ISOLATE lts off and LH and RH ESS/MAIN SPLIT MIS show inline.*

NOTE: BATT ON is selected to prevent any interruption of the D.C. supply during engine start

INS 1, 2 and 3 PRESENT POSITION CHECK.CDU1, 2 and 3 (SHIFT+7/8/9)

- Set Data Selector to DSRTK/STS position on CDU1, 2 & 3
- Observe INS status on CDUs

NOTE: First digit is the NAV Mode status. The number 1 indicates the unit is in NAV mode. Fifth digit is the AI. The number will be 5 or less, depending on the accuracy of the alignment. 0 indicates most accurate alignment. The sixth digit is the MI. The number 4 indicates that DME Updating is currently active.

- Verify AUTO/MAN switch at AUTO.

INS 1, 2, and 3 ALIGMENT CHECKEDFwd leg panel (CTRL+SHIFT+1)

- CHECK READY/NAV green light on
- Rotate the MSU knobs to the NAV position

INS 1, 2 and 3 LOAD FLIGHT PLAN

- Press REMOTE switch light on each CDU (3). REMOTE light will illuminate.
- Rotate the CDU1 Data selectors to WAY PT.
- Confirm the WAYPOINT/DME Selector is at 0.
- Click the screw in the lower left corner of CDU 1 or CDU 2 to open the Route Reader.
- Use the + (plus) and - (minus) buttons to select the appropriate AWC route file.
- Click the Route Reader's "Load" button.
- The "Reading..." message displays in the window.
- When the file name shows again, the route file is active and loaded into the INS.
 - If the file (route) contains invalid data, the message "Route error..." displays.
- You can view individual waypoints (1-9) with the WAYPOINT/DME selector (CDU selector WAY PT).
- Click the screw in the lower left corner the CDU. The Route Reader utility will close.

INS 1, 2 & 3LOADING CHECKED NAV MODE / MIX FWD Leg (CTRL+SHIFT+1)

- Select POS on the data selector of INS 1, 2 and 3 respectively.
- Read the ramp position from the Aerodrome Folder.
- Verify that this position is displayed on their respective INS and circle the present position written on logs.
- Select data selector to WAY PT and waypoint/DME selector to 1.
- Read from flight log the number and name of the first waypoint.
- Number and check this waypoint on flight logs.
- Read the latitude and longitude of that waypoint.
- Verify that displays agree with this position and circle the waypoint number on flight logs.

NOTE: This procedure is carried out for a minimum of the first three waypoints.

- Observe INS MONITOR LIGHTS (Main panel) for INS 1, INS 2 and INS 3 lights off and INS COMP light off

ASI BUGS SET Main
 PITCH INDEX SET
 REHEAT PLACARD SET
 CLOCK SET

- *Preset noise abatement time.*
 - *Set the TIMER/CHRO switch to TIMER.*
 - *Rotate the GMT selector from RUN to the FAST/SLOW position. The countdown value will increase in the CHRONO display.*
 - *When the CHRONO display value reaches the required time, rotate the GMT selector to RUN.*

FUEL FLOW SET
 ENGINE (P7) SET Secondary Engine Panel
 TLA BUGS SET Throttle Pedestal (SHIFT+6)
 PFDIS SET Upper Pedestal (SHIFT+6)

NOTE: In the original checklist the PFDIS is set at the end of the taxi checklist. But instead of doing this step while burning valuable fuel I prefer to set it now.

- *Right-click the DTG SET switch to increase the numerical value (x 10) or left-click to decrease*
- *Right-click RESET MON/ENTER switch to convert the DTG numerical value from the set nautical miles to statute miles.*
- *The nautical miles value is replaced by the converted statute miles value.*
- *ENTER DTG light extinguishes.*

LOADSHEET CHECKED
 START CLEARANCE FROM ATC OBTAIN
 MASTER WARNING RECALL/CANCEL MWS Panel

- *Press the RECALL pb.*
 - *Observe the master warning lights indicate the accepted systems status.*
- *Press Cancel MWS*

ANTI-COLLISION LIGHTS ON Aft Overhead (SHIFT+3)
 CLEARANCE TO START FROM GROUND OBTAIN

PUSHBACK CHECKLIST

COND (Conditioning) VALVE OFF Air Bleed (CTRL+SHIFT+3)
 CROSS BLEED VALVES SHUT
 ENGINES START... Forward Leg (CTRL+SHIFT+1)

- Set DEBOW sws (4) to DEBOW.
 - Observe DEBOW sw lts (yellow) (4) on.
- For pushback departures starting order is 3 and 2 on the ramp, then 4 and 1 (cross bleed) when away from the ramp.
 - Starting order without pushback is 3, 4, 2, 1.

ENGINE NO. 3 START

- Set Ignition Selector to BOTH
- Set ENG 3 START/RELIGHT sel to START.
- Observe
 - START VALVE MI reads OPEN.
 - ENGINE DEBOW SW lt off
 - START PUMP lt (yellow) on - Engine Control Panel (CTRL+SHIFT+2)
 - N2 rises.
- When N2 is between 10-12% set HP VALVE sw to OPEN - Aft Overhead (SHIFT+3)
- When N2 is at 25% observe START/RELIGHT sel returns to OFF
- Set DEBOW SW to NORMAL

ENGINE NUMBER 2 START.....

BRAKE FANS ON Brake Panel

HYDRAULICS CHECKED Hydraulics

- Set the green hydraulic system pump sels 1 and 2 and the blue hydraulic system pump sel 3 and 4 to ON
 - Observe CSD lt off. (Electric Panel CTRL+SHIFT+7)
- Observe green, yellow and blue system contents gauges pointers indicate within green band.
 NOTE: After engine start there is a slight drop in level in each reservoir which is caused by the filling of the accumulators.
- Observe pumps L/PRESS lts for ENG 2 and 3 off.
- Observe green, yellow and blue system pressure gauges read normal.
- Cancel PFC MWS

BLEED VALVES 2 & 3 OPEN Air Bleed (CTRL+SHIFT+3)

CROSSBLEED VALVES 2&3 OPEN

Observe pressure gauge indicator approximately 20 psi.

GROUND EQUIPMENT CLEAR

DISCONNECT GROUND EQUIPMENT GRND CALL Aft Overhead (SHIFT+3)

Left-click on GRND CALL and wait for the orange light to go off to confirm Ground Power and Air have been disconnected.

----- PUSHBACK -----

CROSSBLEED VALVES 1 & 4 OPEN

Observe pressure gauge indicator approximately 20 psi.

Start 4 and 1 using Cross bleed start procedure.

NOTE: Satisfactory bleed pressure (25-30 psi) is normally obtained with engine at high idle.

NOs 4 & 1 ENGINES. START**IGNITION. OFF Forward Leg (CTRL+SHIFT+1)**

- Set ignition rty sel to OFF.

SECONDARY NOZZLE CHECKED ... Engine Controls (CTRL+SHIFT+2)

Observe SECONDARY NOZZLE instruments indicate 18-24 deg.

ENG 1-4 & ENG 2-3 IDLE switches LOW Engine Controls (CTRL+SHIFT+2)

NOTE: This helps reducing the fuel consumption during taxi

BLEED VALVES 1 & 4 OPEN Air Bleed (CTRL+SHIFT+3)**CROSSBLEED VALVES (4) SHUT****COND VALVES (4) ON**

Observe

- MI in line within 30 secs
- Mass flow satisfactory (Green arc) - *Temperature Panel*

AFTER START CHECKLIST

FLIGHT CONTROLS AFCS AND TRIMS. CHECKED. ... Forward Overhead (SHIFT+4)

- Observe on the flight control position indicator Main Panel:
 - elevons and rudders inline.
 - flight control channel MIs read M.
- Press to cancel the MECH JAM light (red)
 - Observe MECH JAM It off.
 - NOTE: The MECH JAM light has remained locked on, even though the elevons have moved to an aligned position.

TRIMS

- Set ELECTRIC TRIM 2 switch to engage
 - Observe sw remains engaged
 - NOTE: The ELECTRIC TRIM No. 2 is engaged first because the subsequent engagement of ELECTRIC TRIM No. 1 will check the priority of system 1 over system 2.
- Set ELECTRIC TRIM 1 switch to engage.
 - Observe sw remains engaged

FLIGHT CONTROLS ELECTRICAL CHANNELS AND AFCS

- Check the O & M ELEVONS selectors, the IN ELEVONS selector & RUDDER selector to GREEN.
 - Observe on the FCPI channel MIs (8) read M
- Press the RESET pbs for O & M ELEVONS, IN ELEVONS & RUDDER.
 - Observe the O & M ELEVONS, IN ELEVONS & RUDDER selector moving to BLUE
 - Observe the FCPI channel MIs (8) read B
- Check AUTO STAB No. 1 PITCH and ROLL SWS at OFF.
 - Observe ANTI STALL SYST 1 FAIL lt (amber) on.
- Verify the AUTOPILOT TURN knob is centred
- Set No. 1 AP sw to engage
 - Observe sw remains engaged AP lt (green), PITCH HOLD pb lt (white) and HDG HOLD pb lt (white) on.
- Set AP 2 sw to engage
 - Observe sw remains engaged, AP 2 lt (green) on, AP 1 sw drops to OFF and AP 1 lt off.
 - Manually disconnect AP 2
 - Observe warning sound (cavalry charge) and instinctive disconnect pushbutton light (red) flashing
 - Press instinctive disconnect pushbutton and observe light (red) off

STAB & FEELENGAGED .. Forward Overhead (SHIFT+4)

- Set AUTO STAB No. 1 PITCH, ROLL and YAW sws to engage.
 - Observe sws remain engaged.
- Set AUTO STAB No. 2 PITCH, ROLL and YAW sws to engage.
 - Observe sws remain engaged.
- Set ARTIFICIAL FEEL No. 1 PITCH ROLL and YAW sws to engage.
 - Observe sws remain engaged.
- Set ARTIFICIAL FEEL No. 2 PITCH, ROLL and YAW sws to engage.
 - Observe sws remain engaged.

ENG ANTI-ICE / ENG SCHEDULE AS REQUIREDAft Overhead (SHIFT+3)

Engine anti-ice must be selected ON after engine start and left on for taxi and take-off whenever the ambient temperature is below +3°C and visibility less than 1000 metres

BRAKE FANS ON Brake Control

HYDRAULICS CHECKED Hydraulics

- Observe green, yellow and blue system contents gauges pointers indicate within green band.

NOTE: After engine start there is a slight drop in level in each reservoir which is caused by the filling of the accumulators.
- Observe pumps L/PRESS lts off.
- Observe green, yellow and blue system pressure gauges read normal.

ELECTRICS CHECKED: GROUND BYPASS. ... AC Electrics (CTRL+SHIFT+8)

- Set EMERG GEN sel to GROUND BYPASS
 - Observe SELECTED lt off.

GROUND EQUIPMENTCLEAR

TAXI CHECKLIST

VISOR / NOSE DOWN / 5 DEG Main

BRAKES CHECKED / NORM Main

LANDING/TAXI/TAXI TURN LIGHTS AS REQUIRED .. Forward Overhead (SHIFT+4)

TRANSPARENCY DE-ICE, DEMIST ON .. Forward Overhead (SHIFT+4)

- Set W/SHIELD DE-ICE sels (2) to HI or LOW.
 - Observe O/HEAT lts (2) off.
- Set VISOR DE-ICE sws (2) to ON
 - Observe O/HEAT lts (2) off.

NOTE: The visor heater operates only when the visor is locked up.

- Set DV DE-MIST sws (2) to ON
- Observe O/HEAT lts (2) off.

FLIGHT INSTRUMENTS CHKD / NO FLAGS Main

FLIGHT CONTROLS / EFC CHECKED / LIGHT OFF Main

TRIMS SET Upper Pedestal (SHIFT+6)

- Set pitch to required take-off setting.
- Verify that roll and yaw trims are set at neutral.
- Confirm elevon and rudder positions on F.C.P.I.

THROTTLE MASTER CHECKED Main

- Set all Throttle Master sws to the other selection.
- Observe
 - all THROT lts off
 - all engines stable
- Set all Throttle Master sws back to original selection.

DRAIN MAST HEATER ON Main

PRESS STATIC HEATERS ON Main

ADS & STBY HEATERS Tt INHIB / ON Main

- Set ADS/ENGINE PROBE HEATERS sels (2) to TT INHIB. STBY SW ON.

NOTE: Tt INHIB is selected when the aircraft is on the ground to avoid an overheat condition that could cause false total temperature gauge readings or false TMO warnings.

- Observe ADS/ENGINE PROBE HEATERS lts (15) off.

NOTE: At Tt INHIB the Tt lights (2) will be on (yellow) if the temperature is below plus 15 deg c.

ENGINE CONTROL SCHEDULE CHECKED .. Engine Control (CTRL+SHIFT+2)

Confirm ENGINE CONTROL SCHEDULE sel at AUTO and rty sel at FLYOVER (F/O) or NORMAL

ENG. 4 T/O N1 Limiter 88% Main

AIR CONDITIONING CHECKED / SET Air Bleed (CTRL+SHIFT+3)

- Observe *BLEED VALVES* Mis (4) show inline, bleed pressure gauges (4) indicating approximately 20 psi.
- Observe *COND VALVE* Mis (4) show inline.
- Observe *JET PUMP* Mis (4) show inline.

Temperature Control CHECKED / SET Temp Control

- Observe on *TEMPERATURE CONTROL* panel *MASS FLOW* gauges (4) in the green band

TAKE-OFF CG switch AS REQD . . . Engine Ctrl (CTRL+SHIFT+2)

- Set the switch to *NORMAL* if the *T/O CG* is 53.5%.
- Set the switch to 54% if the *T/O CG* is 54% and check *AFT limit* moves 0.5% rearward.

C.G. POSITION. CHECKED Main or Lower Fuel

- Check that the CG position is correct for take-off
- Observe the *MWS M/CG* It off
- CAUTION: TAKE-OFF MUST NOT BE ATTEMPTED WITH A M/CG LIGHT (RED) ON.

ANTI-SKID 'R' lights / TYRE lights OFF Main

- When taxiing above 10 kts, observe all *R lights* remain off during gentle braking and when rolling freely

PFDIS SET Upper Pedestal (SHIFT+6)

- Right-click the *DTG SET* switch to increase the numerical value (x 10)
- Right-click *RESET MON/ENTER* switch to convert the *DTG* numerical value from the set nautical miles to statute miles.
- The nautical miles value is replaced by the converted statute miles value.
- *ENTER DTG* light extinguishes.

BEFORE TAKE-OFF

CABIN CREW (STEWARD) CALL 3 PRESSES Aft Overhead (SHIFT+3)

LANDING LIGHTS AS REQUIRED .. Forward Overhead (SHIFT+4)

- For every take-off, set the TAXI-TURN lts sws to ON.
 - IF ... main landing lights required, set LIGHTS MAIN LANDING SWS to EXTEND and ON and observe EXTENDED lts is on.

NOTE: The main landing lights provide sufficient illumination but if more light is required the LAND TAXI lights may be used. Some buffet may be experienced with these lights extended in flight.

TRANSPONDER. SET Lower Pedestal (SHIFT+7)

WHEEL O/HEAT LIGHTS OFF Main

- Observe the WHEEL O/HEAT lts is off.

CAUTION: TAKE OFF MUST NOT BE ATTEMPTED WITH WHEEL O/HEAT LIGHT ON.

BRAKES OVERLOAD MI BLACK

CAUTION: IF THE OVERLOAD MI IS SHOWING A CLOVERLEAF PATTERN THE ANTI-SKID R LIGHTS MUST BE CAREFULLY MONITORED DURING THE TAKE OFF ROLL. IF AT 10 KNOTS THE R LIGHT (WHITE) IS ON, THE TAKE-OFF MUST BE ABANDONED

GROUND IDLE switches HI Engine Controls (CTRL+SHIFT+2)

MASTER WARNING RECALL / INHIBIT MWS Panel

- Press the RECALL pb.
 - Observe the master warning lights indicate the accepted system status.
- Press the INHIBIT pb.
 - Observe the INHIBIT lts (2) (amber) on.
 - IF INHIBIT lts off Brief for take-off with inhibit function inoperative.

T/O MONITOR. ARMED Main

REHEAT ON Upper Pedestal (SHIFT+6)

- Set REHEAT sels (4) to RHT using the gang bar (SHIFT+F4)
- Observe REHEAT selected lts (4) (white) on

PITCH INDEX CHECKED Main

FLIGHT DIRECTORS CHECKED

----- TAKE-OFF -----

On "3," the ELAPS timer is set to RUN. Release brakes.

- On "NOW," the CHRO button on is pressed to start the countdown timer and the throttles are slammed forward.

AFTER TAKE-OFF CHECKLIST

LANDING GEARUP, LIGHTS OFF, NEUTRAL Main (G)

- Set L/GEAR lever to UP
 - Observe landing gear position indication Its go off at the end of the retraction sequence.
- Set L/GEAR lever to NEUTRAL
 - Observe landing gear position indication Its off.

LANDING LIGHTS..... OFF / RETRACT Fwd Overhead (SHIFT+4)

- Confirm
 - landing lights off and retracted and Extended light off
 - landing taxi lights off and retracted and Extended light off

MASTER WARNINGRECALL.....MWS Panel

- Press the RECALL pb.
 - Observe the INHIBIT Its (2) off; the master warning lights indicate the accepted system status.

NOTE: This will indicate any faults that occurred while the system was inhibited and which still exist.

ADS & STBY HEATERS ONAft Overhead (SHIFT+3)

- Set ADS 1 and ADS 2 sels (2) ON and Observe ADS/ENGINE PROBE HEATERS Its (15) off.

CAUTION: THE ADS 1 AND ADS 2 SELECTORS MUST NOT BE SELECTED TO OFF DURING FLIGHT

NO SMOKING SIGNS OFF

NOSE / VISOR UP / LOCKED Main

- Set VISOR/NOSE lever to UP.
 - Observe NOSE MI reads UP, VISOR MI reads UP and unlock It off.

ALTIMETERS SET ALL

Set subscale to required setting.

CLIMB POWER**If Noise Abatement is required, at the end of the countdown:**

- Set REHEAT sels (4) to OFF using the gang bar (SHIFT+F4)
- Set TLA as required for noise abatement

Altitude	N2
3000	93%
4000	95%
5000	97%
6000	99%
7000	101%
8000	CLB PWR

At M 0.7 CLIMB CHECKLIST**TAKE-OFF CG switch NORMAL . . . Engine Ctrl (CTRL+SHIFT+2)***Verify that the switch is at NORMAL and set the guard.***BRAKE FANS OFF Brake Control****ENGINE CONTROL SCHEDULE AS REQUIRED**

- Set or leave it at Flyover during full subsonic flights or subsonic steps. Set to NORMAL for transonic acceleration.

*NOTE: Make sure HI schedule lights are on and correct response on N1 and Area gauges.***FLIGHT DECK DOOR NORMAL Aft Overhead (SHIFT+3)****SEAT BELT SIGNS AS REQUIRED****TAXI TURN LTS OFF . . . Forward Overhead (SHIFT+4)**

SUBSONIC CLIMB

- Set the desired altitude
- Climb at VMO if the climb is to be continued to supersonic speeds or climb at VMO and then 0.93 if the climb is to a subsonic flight level.
- *Rearward trim transfer should begin at Mach 0.70. When climbing to Subsonic Cruise, rearward trim transfer should be stopped at 55% CG or if the acceleration is interrupted below Mach 1.00.

SUBSONIC CRUISE

- If subsonic cruise is required, set VMO and engage AT1 and AT2 to level off and engage ATs at the selected altitude.
- The subsonic cruise is carried out at Mach 0.95.
- The optimum flight level for subsonic cruise varies considerably with the aircraft weight. The recommended procedure is to fly with a CG position of 55% which may give an elevon deflection of 2 to 2.5° down. This deflection is acceptable because the CG position is considered more important than the elevon deflection.
 - At heavy weights, as for example following a maximum weight take-off, the optimum subsonic flight level for specific range is initially FL250
 - At maximum landing weight the optimum level is about FL370.
 - Any increase in subsonic cruise flight level above the optimum will have an adverse effect on specific range. As height is increased above the optimum, the IAS at Mach 0.95 can fall progressively below the minimum drag speed for the weight. Drag can thus become more penalising until height cannot be maintained at subsonic speeds.
- Regardless of weight it can be seen from the Flight Envelope that above 41,000 feet the IAS equivalent to Mach 0.95 is prohibited by VLA (Lowest Authorised Speed).
CAUTION: At heavy weight a large power increase may be required to regain speed following inadvertent deceleration to speeds below about 300 knots. If climb power is insufficient, reheat should be used and if necessary, the aircraft should be descended to increase the speed to the lesser of VMO or $M = 0.95$. The desired level should then be regained by climbing at VMO
- Engine control schedule should be selected to 'flyover' above Mach 0.8 for optimum performance.
- For INS DME UPDATE check SUPERSONIC CRUISE

TRANSONIC CHECKLIST

ENGINE CONTROL SCHEDULE **NORM** Engine Ctrl (CTRL+SHIFT+2)

SECONDARY NOZZLES **<15 DEG**

- Observe the SECONDARY NOZZLE instrument indicates less than 15 deg.
- NOTES: Supersonic flight is permitted with bucket angles of up to 21°. See Cruise Control Manual for penalty.
Reheat must not be selected on any engine indicating a Secondary Nozzle angle greater than 15 degrees.

TRANSONIC ACCELERATION **SET**

- If engaged, disengage AT1 and AT2 (SHIFT+R X2). The AT light (W & L Display) will flash. Press to extinguish.
- Select PITCH HOLD on the AFCS.
- Pitch the aircraft up to 7° to 10°. You can use the AP DATUM adjustment or the keys on the numeric keypad (NUM LOCK OFF) to pitch the nose of the aircraft to 7 to 10°.
- Make sure you keep the aircraft at VMO (400kts) during the whole acceleration period. Adjust PITCH as required.

REHEAT **ON** Upper Pedestal (SHIFT+6)

- Advance throttle levers fully.
- Select Reheats in symmetric pairs - selected lights on (CTRL+F4 twice)
- Observe fuel flow increase, FT flags appear and area increase: Con lights off, MID schedule lights on.

NOTE: Two reheats are the minimum required for transonic acceleration, however due note must be taken of additional fuel usage with one or two reheats failed.

- If the total temperature exceeds approx. 80°C before reheat is selected off, the engine will automatically return to the dry climb values of N2 N1 and EGT but the reheat system will continue to function normally.

CHRONO **START** Main

At M 1.0

PRESS STATIC HEATERS **OFF** Aft Overhead (SHIFT+3)

NOTE: The pressurisation static vent heaters should not be operated in supersonic flight as there is a risk of heater damage.

ENGINE ANTI-ICE **OFF**

Observe IGV PRESS lights off.

WING & INTAKE ANTI-ICING **OFF**

TRANSPARENCY DE-ICE, DEMIST **OFF** .. Forward Overhead (SHIFT+4)

Verify W/SHIELD DE-ICE sels OFF, VISOR DE-ICE sws OFF, DV DE-MIST sws OFF

MAX CLIMB **SET** Glareshield

Once you're through Mach 1 (M1.03), select MAX CLIMB on the AFCS.

At M 1.1

SECONDARY NOZZLES **0-5** ... **Engine Ctrl (CTRL+SHIFT+2)**

Observe **SECONDARY NOZZLE** instruments indicate 0-5 deg. For continued supersonic flight with bucket angles between 0° and 27° see *Cruise Control Manual* section 5 for fuel penalty.

At M 1.3

INTAKES **CHECKED** **Air Intakes (CTRL+SHIFT+4)**

Observe ramp position moves to approximately 10% to 20%

At M 1.7 or 15 min since reheat

***REHEAT** **CHECKED/OFF** **Upper Pedestal (SHIFT+6)**

Confirm that the *VFE* has set reheats *OFF*

CHRONO **STOP/RESET** **Main**

AFCS **SET** **Glareshield**

- Dial 60000 feet
- Select ALT ACQ
- Engage AT1

Confirm that the same system *AP*, *AT* and *FD* are selected i.e. No.1 *AP*, No.1 *AT* and No.1 *FD*.

At FL500 / Mach 2.0

AT1 & MAX CLIMB/MAX CRUISE/MACH HOLD **CHECKED** **Glareshield**

SUPERSONIC CRUISE

INS DME UPDATE AS REQUIRED.

No. 1 DME provides data to No.1 INS and No.2 DME provides data to No.2 INS.

- Rotate the Data Selector to WAY PT.
- Right-click the keypad 7 then right-click the keypad 9. This puts the INS into DME updating mode.
- Select a waypoint number to store the DME station using the waypoint selector wheel.
- Enter the Lat and Long for the DME station and click INSERT.
- Right-click the keypad 3 then right-click the keypad 9. This shows the altitude of the DME station.
- Press the keypad 2 (N). Round up or down the DME station altitude in thousands of feet up to 9,000. For example, for an altitude of 2,600 ft, press keypad 3.
- Press the WY PT CHG button.
- Select the waypoint number on the keypad used to store the DME station and press INSERT.
- Rotate Data Selector switch to POS. The orange RNAV light will come on within a couple of seconds.

NOTE: The RNAV light will be on only while DME up-dating is taking place. When INS 1 or INS 2 is receiving DME data it will pass the data to the other two systems. If these systems are in Mix mode (MI=4), they will independently perform the DME update function.

NOTE: Tuning both VHF NAV on the same frequency will not improve the single DME updating both in efficiency and velocity. The most efficient method being to dual DME update with one DME on your track and the other at least 15nm off track.

TEMPERATURE REFERENCE TABLES

TEMPERATURE **Warmer** than ISA -10°C

FLIGHT LEVEL	FUEL (KG)	TIME (MIN)	DISTANCE COVERED NM		
			40 KT TAIL	ZERO WIND	40 KT HEAD
600	2.10	20.3	233	220	206
590	2.04	19.9	227	213	200
570	1.94	19.2	215	202	189
550	1.88	18.7	207	194	182
530	1.85	18.3	199	187	175
510	1.82	17.9	193	181	169
490	1.76	17.2	183	171	160
470	1.67	16.4	170	159	148
The highlighted area includes deceleration from cruise to 350 knots					
550	1.38	15.6	152	141	131
530	1.33	15.0	144	134	124
510	1.27	14.5	136	126	117
490	1.21	14.0	129	119	110
470	1.15	13.4	121	113	104
450	1.09	12.9	115	106	97
430	1.02	12.3	108	100	91
410	0.97	11.7	101	94	86
390	0.91	11.2	95	88	80
370	0.85	10.7	89	82	75
350	0.80	10.1	84	77	70
330	0.76	9.7	79	73	66
310	0.72	9.2	73	67	61
290	0.67	8.5	67	62	56
270	0.62	7.9	62	56	51
250	0.57	7.2	56	51	46
230	0.52	6.6	50	46	42
210	0.47	6.0	45	41	37
190	0.42	5.4	40	36	32
170	0.37	4.8	35	31	28
150	0.33	4.1	30	27	24
130	0.28	3.6	25	23	20
110	0.23	3.0	21	19	17
90	0.19	2.4	16	15	13
70	0.14	1.8	12	12	10
50	0.10	1.3	8	8	7
30	0.05	0.7	4	4	3

TEMPERATURE **Colder** than ISA -10°C

FLIGHT LEVEL	FUEL (KG)	TIME (MIN)	DISTANCE COVERED NM		
			40 KT TAIL	ZERO WIND	40 KT HEAD
600	1.99	20.0	216	203	189
590	1.97	19.9	214	200	187
570	1.97	19.6	210	197	183
550	1.97	19.3	205	192	179
530	1.98	19.0	200	188	175
510	1.99	18.7	196	183	171
The highlighted area includes deceleration from cruise to 350 knots					
490	2.02	18.3	190	178	165
470	2.00	17.7	180	169	157
The highlighted area includes deceleration from cruise to 350 knots					
550	1.41	15.8	147	137	126
530	1.35	15.2	139	129	119
510	1.28	14.6	131	121	111
490	1.22	14.0	123	114	104
470	1.15	13.4	116	107	98
450	1.09	12.8	109	101	92
430	1.03	12.2	103	94	86
410	0.97	11.7	96	88	81
390	0.90	11.1	90	82	75
370	0.84	10.5	84	77	70
350	0.79	10.0	79	72	65
330	0.75	9.5	74	68	62
310	0.70	8.9	69	63	57
290	0.66	8.3	63	58	52
270	0.61	7.7	58	53	48
250	0.56	7.1	53	48	43
230	0.51	6.5	47	43	39
210	0.46	5.9	42	38	34
190	0.41	5.3	37	34	30
170	0.37	4.7	32	29	26
150	0.32	4.1	28	25	22
130	0.27	3.5	23	21	19
110	0.23	2.9	19	17	15
90	0.18	2.3	15	14	12
70	0.14	1.8	12	10	9
50	0.10	1.2	8	7	6
30	0.05	0.7	4	4	3

DECELERATION & DESCENT CHECKLIST

SAFETY HEIGHT CHECKED

Check the safety height for each leg of the descent and ensure that adequate terrain clearance is maintained at all times.

ASI BUGS SET Main

ALT HOLD SET..... Glareshield

DESCEND ALTITUDE SET.....

----- AT DECELERATION POINT -----

WARNING & LANDING DISPLAY..... CHECKED Main

- Press and hold the Captains Warning & Landing Display TEST push button.
 - **VERY IMPORTANT: If this test is not performed, the VFE *WILL NOT* set the TLA as required.**
 - While at supersonic cruise **you can manually set the desired TLA** using the mouse scroll wheel at the sides of the Throttle in the 2D panel (SHIFT+6) and then activate using CTRL+F5
 - Observe AP light (red), AT light (red), ILS boundaries exceedance warnings (white), aircraft symbol (amber) and LAND 2 and LAND 3 lts (green) and DH lt (amber) on.
 - Observe brief audio warning (cavalry charge) and AUTOLAND lt (red) on
 - Release TEST pb
- Within 10 minutes Press F2 key command at the deceleration point. AT1 disengages and the VFE will slowly close the throttles to 18°TLA (75%)
- At 360 knots engage ALT ACQ and at 350 knots select IAS HOLD
- After engaging IAS HOLD remember to select ALT ACQ again

THROTTLES (TLA)..... 18°/24° Upper Pedestal (SHIFT+6)

- Observe the temperature deviation from ISA
 - IF temperature warmer than ISA -10 degrees C retard the throttles (4) to 18 degrees
 - IF temperature colder than ISA -11 degrees C retard the throttles (4) to 24 degrees

NOTE: The throttle lever position of 18 deg. or 24 deg. depending on temperature, is necessary to ensure adequate surge margins at speeds greater than $M = 1.6$.

At M 1.6

THROTTLES (TLA)..... CHECKED 34° Upper Pedestal (SHIFT+6)

NOTE: The throttle lever position of 34 deg (34%) ensures adequate air conditioning flows at speeds greater than M = 1.0.

NOTE: The VFE, if enabled, will move back the throttle at M1.5 instead of M1.6

NOTE: You can manually set the desired TLA using the mouse scroll wheel at the sides of the Throttle in the 2D panel (SHIFT+6)

At M 1.3

INTAKES CHECKED ... Air Intakes (CTRL+SHIFT+4)

Ramp position should go back to 0°

At M 1.0

THROTTLES IDLE. Upper Pedestal (SHIFT+6)

NOTE: During the latter stages of the descent and subsequent approach it is possible that rapid movement of the throttles may cause transient operation of the auto ignition system. This will cause the RH IGN and LH IGN lights and the associated START PUMP light to come on momentarily.

PRESS STATIC HEATERS ON Aft Overhead (SHIFT+3)

THROTTLE MASTER switch OTHER SELECTION

Observe all THROT lights off in the Upper Pedestal (CTRL+6)

TRANSPARENCY DE-ICE, DEMIST ON .. Forward Overhead (SHIFT+4)

- Set W/SHIELD DE-ICE sels (2) to LOW.
 - Observe O/HEAT lts (2) off.
- Set VISOR DE-ICE sws (2) to ON
 - Observe O/HEAT lts (2) off.

NOTE: The visor heater operates only when the visor is locked up.

- Set DV DE-MIST sws (2) to ON
- Observe O/HEAT lts (2) off.

ENGINE CONTROL SCHEDULE CHECK ... Engine Ctrl (CTRL+SHIFT+2)

- *[If a subsonic leg is to be flown](#), rotate ENGINE CONTROL SCHEDULE sel. to FLYOVER (F/O)*
- *Observe correct response on N1 and Area gauges and the four F/O lights are on.*

APPROACH CHECKLIST

FLIGHT DECK DOOR SW **OPEN** **Aft Overhead (SHIFT+3)**

CABIN CREW (STEWARD) CALL **"15 MINUTES"**

EMERGENCY LIGHTS **CHECKED ARM**

CABIN SIGNS **ON**

Set FASTEN SEAT BELT SW and the NO SMOKING SW to ON.

TAXI TURN LTS. **ON** .. **Forward Overhead (SHIFT+4)**

ENGINE CONTROL SCHEDULE **APPROACH** ... **Engine Ctrl (CTRL+SHIFT+2)**

- *Rotate ENGINE CONTROL SCHEDULE sel to APPROACH*
 - *Observe correct response on N1 and Area gauges and MID lts on.*

NOTE: The MID engine control schedule is used for noise abatement during approach to touchdown.

BRAKE FANS **OFF** **Brake Controls**

SSB **AS REQUIRED** **AC Electrics (SHIFT+7)**

BATTERIES / D.C. SPLIT switch. **AS REQUIRED** **DC Electrics (SHIFT+8)**

The Battery selectors must be set to ESS/MAIN SPLIT for cat 3 landings

FUEL / WEIGHT / CG **CHECKED** **Main**

- *Update landing data card fuel and weight figures as required.*
- *Verify CG within the landing limits*

LANDING VREF SPEEDS

ZFW + Fuel Rem. = Landing Weight

When calculating the RELAND reference speed for the data card, use a landing weight equal to take-off weight minus 3,500 kg

LANDING WEIGHT (x1000 kg)	VREF Knots
96	150
98	152
100	154
102	155
104	157
106	158
108	160
110	161
111	162
115	165
120	168
125	172
130	175
135	179
140	182
145	185
150	188
155	191
160	194
165	197
170	201
175	204
180	207

DISTANCE TO TOUCHDOWN	RECOMMENDED SPEED	MAXIMUM SPEED
15-20 miles	250 knots	300 knots
12-14 miles	210 knots	250 knots
8 - 11 miles	VREF + 30 knots (minimum 190 knots)	210 knots
5 - 7 miles	VREF + 15 knots	VREF + 30
0 - 4 miles	VREF	VREF MAX
Visual traffic pattern	VREF + 50	Speeds up to 250 knots may be used in a visual traffic pattern in order to reduce noise and fuel consumption.
ILS beam interception	VREF + 30 (minimum 190 knots)	

CONFIGURATION	ABNORMAL INCREMENT	VT MAX
3 ENGINE	5	10
2 ENGINE	7	17
NO AUTOTHROTTLE	7	17
TOTAL LOSS OF: <ul style="list-style-type: none"> ELECTRIC TRIM OR PITCH AUTOSTAB OR ELECT. FLIGHT CONTROL 	10	10

ASI BUGS UPDATE

VISOR / NOSE DOWN / 5 DEG

- Set the Visor/Nose lever to VIS/O
- Observe
 - Visor moves downwards
 - Unlock light on then off
 - Visor MI reads DOWN
 - 5 deg Lock light is off
- CAUTION: THE SIMULTANEOUS SELECTION FROM VISOR UP TO NOSE 5° IS PROHIBITED IN FLIGHT UNLESS THE LIMITATION FOR NOSE AT DOWN IS OBSERVED.
- Set the Visor/Nose lever to 5 DEG
- Observe
 - Nose moves downwards
 - Unlock light on then off
 - Nose MI reads 5 DEG
 - 5 deg Lock light remains off

ALTIMETERS SET.....

RADIO ALTS SET.....

QNH SET / UPDATE

RAD / INS switch. AS REQUIRED Glareshield

Observe on both HSI that RAD and MAG displayed

AUTOPILOT CHANGE OVER CHECKED

- With both autopilots engaged, disengage AP1 sw and observe AP1 It off and AP2 remains engaged and operating.
 - Observe on both Warning and Landing displays LAND 3 It off and LAND 2 It (green) on.
- Set AP1 sw to engage and observe AP1 It (green) on and sw remains at engaged position.
 - Observe on both Warning and Landing displays LAND 3 It (green) on, if electrics split.
- NOTE: On re-engagement of AP1 it will engage in the LAND mode provided at least one flight director is engaged.

LANDING CHECKLIST

LANDING GEARDOWN 4 GREENS Main

- Move the guard to the left and set the L/GEAR lever to DOWN.
- Observe LH, NOSE, T and RH arrow lts (green) (4) on and LH SHORT, RH SHORT, UPPER LOCKS and transit lts off at end of the lowering sequence.

NOSE DOWN & GREEN

- Set VISOR/NOSE lever to DOWN
- Observe 5 DEG L lt on then off, unlock lt on then off, down lt (green arrow) on, NOSE MI reads DOWN

CABIN CREW (STEWARD) CALL 3 PRESSESAft Overhead (SHIFT+3)

LANDING/TAXI/TAXI TURN LTS. AS REQUIRED. ... Forward Overhead (SHIFT+4)

- If lights required set LIGHTS MAIN LANDING sws (2) to ON and EXTEND (2).
 - Observe EXTENDED lt (blue) on.
- If additional lighting required set LIGHTS LANDING TAXI sws (2) to ON and EXTEND (2)
 - Observe EXTENDED lt (blue) on.
- NOTE: Some buffeting may be experienced with the landing/taxi lights extended in flight

BRAKESCHECKED / NORMAL Upper Pedestal (SHIFT+6)

- Verify the brakes lever is at NORM.
- Press and release brake pedals.
 - Observe BRAKES FAIL lt off.

NOTE: This test will confirm that normal brake pressure is available.

ANTI-SKID..... CHECKED Main

- Observe brakes ANTI-SKID R lts (white) on

NOTE: The anti-skid system allows brake applications before touchdown if all eight release (R) lights are on.

- If one R lt off on any one landing gear apply brakes only after touchdown and use with care to prevent burst tyres.

NOTE: NORMAL brake system can still be used with three R lights off.

- If four or more R lts off, apply procedure USE OF EMERG BRAKES

YELLOW SYSTEM CHECKED Hydraulic Panel

- Observe
 - YELLOW hydraulic system PUMPS MIs (2) read ON
 - YELLOW system contents and pressure normal.

ELECTRIC TRIM AS REQUIRED

Note: I find much easier to hand-fly Concorde when I manually control the trim, so I like to disable the electric trim on manual landings. Of course, when disengaging the electric trim the autopilot goes off.

AFTER LANDING CHECKLIST

MASTER WARNING **INHIBIT** **MWS Panel**

GRD IDLE sws **LOW** . **Engine Control (CTRL+SHIFT+2)**

Set ENG 1-4 and ENG 2-3 GRD IDLE sws to LO

INBOARD ENGINES. **SHUT** **Aft Overhead (SHIFT+3)**

When clear of runway and at taxiing speed shut down inboard engines to reduce thrust, if system status permits.

PRESS STATIC HEATERS **OFF**

ADS AND STBY HEATERS. **OFF**

DRAIN MAST HEATERS. **AS REQUIRED**

Check the total air temperature gauge Upper Pedestal (SHIFT+6).

If TAT is above 0 degrees Celsius, set DRAIN MAST HTRS to OFF.

If TAT is below 0 degrees Celsius, set DRAIN MAST HTRS to ON.

WING & INTAKE ANTI-ICING **OFF**

FLIGHT CONTROL INVERTERS.. **OFF INV** .. **Forward Overhead (SHIFT+4)**

- *Set BLUE INVERTER sel to OFF INV and observe flight control channel MIS (8) read G.*
- *Set GREEN INVERTER sel to OFF INV and observe flight control channel Mis (8) read M.*

LANDING/TAXI/TAXI TURN LTS. **AS REQUIRED.**

NOSE **5 DEG** **Main**

Observe 5 deg It on then off, NOSE MI reads 5 deg, unlock It on then off, down It off.

TRANSPONDER. **STBY** **Lower Pedestal (SHIFT+7)**

SSB **CLOSED** . . **AC Electrics (CTRL+SHIFT+7)**

BATTERY / D.C. SPLIT switches **ON / NORMAL** **DC Electrics (SHIFT+8)**

BRAKE TEMP lights **CHECKED** **Brake Controls**

- *Observe the BRAKES TEMP FWD and REAR lts (red) (4) are on.*
- *Press each BRAKES TEMP FWD and REAR It in turn.*
 - *Observe temperature when It pressed.*

NOTES If any reading differs significantly from the others (either above or below) the affected brake must be inspected in accordance with the Maintenance Manual instructions before the next flight. The non-illumination of a BRAKES TEMP light and an abnormally low brake temperature indicate lack of braking on that wheel.

BRAKE FANS **AS REQUIRED**

FLIGHT DIRECTORS **OFF**

PARKING CHECKLIST

BRAKES **PARK** Lower Pedestal (SHIFT+7)

Observe dual BRAKES pressure gauge indicating full scale and BRAKES EMERG It (amber) on.

LANDING LIGHTS **OFF / RETRACT: OFF** .. Forward Overhead (SHIFT+4)

EMERG GENERATOR selector **AUTO** ..DC Electrics (CTRL+SHIFT+8)

Set the Emergency Generator selector to AUTO to prevent the generator attempting to run as Engine No.1 is-shut down.

NOSE / VISOR **AS REQUIRED** Main

Observe nose then visor move upwards, unlock It on then off, NOSE MI reads UP, VISOR MI reads UP

BATTERIES (G-BOAG ONLY) **ON** ..DC Electrics (CTRL+SHIFT+8)

HP VALVES **SHUT**Aft Overhead (SHIFT+3)

- Retard THROTTLE LEVERS (4) to idle.
- Set HP VALVE 1, 2 and 3 to SHUT
- **IMPORTANT: Make sure ONLY ENGINE 4 IS RUNNING before requesting Ground Power**
- Observe HP MIs SHUT, engine(s) run down.

GROUND POWER **ON**AC Electrics (CTRL+SHIFT+7)

- Request Ground Power (FSLabs Menu)
- Observe GRND PWR AVAILABLE It (white) on.
- Set ground power sw to CLOSE and release and generator sels of live generator(s) to off

HP VALVE ENGINE 4 **SHUT**Aft Overhead (SHIFT+3)

THROTTLE MASTERS **OFF**

ANTI-COLLISION lights **OFF**

FASTEN SEAT BELTS **OFF**

DRAIN MAST HEATER **CHECK/SET**

ENGINE ANTI-ICING **OFF**

GROUND CONDITIONING **SHUT (GRND SUPPLY)** Air Bleed (CTRL+SHIFT+3)

- Observe BLEED VALVES MIs (4) show crossline.
- Set BLEED VALVES sws (4) to shut.
- Observe COND VALVE MIS (4) show Crossline.
- Set COND VALVE sws (4) to OFF.
- Request ground staff connect pre-conditioned air truck

TRANSPARENCY DE-ICE, DEMIST **OFF** ... Forward Overhead (SHIFT+4)

DC Panel **CHECKED** ...DC Electrics (CTRL+SHIFT+8)

- Set both BATERIES to OFF
- Observe BATT ISOLATE Its (2) (amber) on, battery MIS (4) show crossline and MWS ELECT It (amber) operates.

BRAKE FANS **AS REQUIRED** Brake Control

- Observe WHEELS O/HEAT It

- IF WHEELS O/HEAT It off set BRAKE FANS SW to OFF.

ELAPS CLOCK **STOP/RESET** **Main**

STOPOVER CHECKLIST

This check must be performed whenever the planned turn round time is greater than 4 hours.

AIR DATA COMPUTERS **OFF** **Lower Pedestal (SHIFT+7)**

- *Observe:*
 - *AUTO STAB No.1 PITCH, ROLL and YAW sws at OFF*
 - *AUTO STAB No.2 PITCH, ROLL and YAW at OFF.*
 - *ARTIFICIAL FEEL No. 1 PITCH, ROLL and YAW at OFF.*
 - *ARTIFICIAL FEEL No,2 PITCH, ROLL and YAW at OFF.*
 - *ELECTRIC TRIM No. 1 and No. 2 sws at OFF.*
- *Observe flags visible on associated instruments*
- *Cancel MWS ADS*

INS **OFF** **FWD Leg (CTRL+SHIFT+1)**

FLIGHT CONTROL INVERTERS **PWR OFF** .. **Forward Overhead (SHIFT+4)**

NOTE: Unlock the blue and green guards

EMERGENCY LIGHTS **OFF** **Aft Overhead (SHIFT+3)**

NOTE: The OFF position is selected before normal shutdown of electrical power. This isolates the battery supplies in the lighting units and prevents the emergency lights from coming on when ground power is removed thus preventing discharge of the lighting unit batteries.

ROOF AND PANEL LIGHTS **AS REQUIRED** **Aft Overhead (SHIFT+3)**

NAV LIGHT **OFF**

TRANSPONDER ALT RPG SWITCH **OFF** **Lower Pedestal (SHIFT+7)**

BRAKE FANS **AS REQUIRED** **Brake Control**

GROUND POWER **TRIP** **AC Electrics (CTRL+SHIFT+7)**

- *Set ground power sw to TRIP and release.*
- *Observe GRND PWR AVAILABLE It on and cockpit panels are electrically dead.*

PANEL STATE SAVED FSLabs Menu

This optional step will allow you to load Concorde-X in your next flight with all the switches, knobs and other settings exactly in the same state as you left them. This is way more realistic than always loading the predictable default states.

TIP: Use a new name for this panel state such as "LastFlight" or similar.

PIPER J-3 Cub /Trike LOADED Vehicle Select Menu

If you want to return to your Concorde in the exact parking position or gate where you parked, then you need to save your flight.

However, NEVER use a complex aircraft, such as Concorde-X, as your default flight; EVEN IF YOU DON'T LOAD THE SCENERY. Instead, before saving the scenery, load a simple aircraft such as the Piper J-3 Cub/Trike.

PIPER J-3 Cub /Trike START ENGINE CTRL+E

This is a safety step to make sure Concorde load in the default state with started engines in the first place.

DEFAULT FLIGHT SAVED Scenario -> Save

This will make your current airport and parking position/gate as the default Scenario, so that you can continue your next flight exactly from where you left it.

VERSION HISTORY

v2.0.5 - 27/May/2020

- Revised ADS/ENGINE PROBE HEATERS check during COCKPIT SAFETY CHECK
- Some minor typos fixed

v2.0.4 - 25/May/2020

- Added bookmarks on PDF for easier navigation
- Added an ENGINE CONTROL SCHEDULE check after supersonic deceleration in case a subsonic leg is to be flown
- Correction of CROSSBLEED VALVES 1&4 and ENGINES 4&1 START sequence order
- Improved notes in AUTOTHROTTLE test

v2.0.3 - 30/Dec/2019

INS DME UPDATE procedure improved by adding the altitude of the DME stations

v2.0.2 - 30/Dec/2018

AIR DATA COMPUTERS OFF during STOPOVER CHECKLIST revised

v2.0.1 - 30/Dec/2018

Minor typos corrected.

v2.0 - 30/Dec/2018

As with every .0 version, it is very likely that this v2.0 checklist will contain some errors and/or typos that will need to be fixed during following revisions. Your feedback will be greatly appreciated. Thank you.

<http://simulaciondevuelo.com/concorde-x-checklists>