# AIRBUS X

Volume **2**

Normal Procedures

Version 02-01-001

**RECORD OF REVISIONS**

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## COCKPIT SAFETY INSPECTION (PNF DUTY)

**MASTER 1 and 2 .....OFF**
**MODE SELECTOR .....NORM**
**L/G LEVER .....DOWN**
**WIPERS .....OFF**
**BAT 1 and 2 .....CHECK OFF**
**BAT 1 and 2 VOLTAGE .....CHECK > 25 V**
**BAT 1 and 2 .....ON**

## PRELIMINARY COCKPIT PREPARATION (PNF DUTY)

**EXT PWR (when AVAIL illuminated) .....ON**

**APU (when rqrd) .....START**

**ECAM .....ON**

**APU MASTER SW.....ON**

- ON lt illuminates.
- APU page opens on ECAM.

**APU START .....ON**

- FLAP OPEN indication shows.
- N and EGT rise.

**AT 95%**

- ECAM APU pages shows AVAIL.
- On APU panel START ON lt extinguishes, AVAIL lt illuminates.
- After 10 seconds ECAM DOORS page shows.

**EXT PWR .....AS RQRD**

- May be kept on to reduce APU load.

**INT LT.....AS RQRD**

**DOCUMENTATION .....ABOARD & CHECK**

**PARKING BRAKE.....ON**

- Check BRAKE PRESS indicator. When required use HYD YELLOW PUMP to recharge.

**FLAPS .....CHECK POSITION**

- Confirm flap handle position and ECAM display in agreement.

**SPEED BRAKE .....CHECK RETRACTED**

- Confirm speed brake handle position and ECAM display in agreement.

**ECAM RCL.....DEPRESS**

- Depress recall button for 3 seconds to recall and clear all messages

**ECAM HYD.....CHECK**

- Check for abnormal indications

**ECAM ENG.....CHECK**

- Check for abnormal indications

**APU BLEED .....AS RQRD**

- Select on when needed for air conditioning

**X-BLEED.....AUTO**

**ZONE TEMP SELECTORS.....AS RQRD**

## COCKPIT PREPARATION

**PFD and ND .....ON PF/PNF**

**GPWS .....TEST PF/PNF**

- Press GPWS pb and check the GPWS FAULT light is on and aural warnings are heard

**PFD and ND .....CHECK PF/PNF**

- Check for abnormal indications

**BARO REFERENCE .....CHECK PF/PNF**

**Check barometer settings and compare altitude indications on PFD**

**FD .....CHECK ON PF/PNF**

**ILS .....AS RQRD PF/PNF**

**ND MODE and RANGE .....AS RQRD PF/PNF**

- It is recommended to display ARC on ND if take off direction is close to departure direction, otherwise ROSE NAV is recommended.

**VOR/ADF SELECTORS .....AS RQRD PF/PNF**

**FCU :**

- SPD MACH .....DASHED PNF
- HDG-V/S / TRK-FPA.....HDG-V/S PNF
- ALT.....SET PFN
- Set initial expected clearance altitude.

**ST BY ASI .....CHECK PNF**

**ST BY ALTI .....CHECK PNF**

**ST BY HORIZON .....CHECK PNF**

**CLOCK .....CHECK/ADJUST PNF**

**A/SKID & N/W STRG .....ON PNF**

**RADIO CONTROL PANEL .....ON PF/PNF**

**COMS FREQ.....SET PF/PNF**

**THRUST LEVERS.....CHECK IDLE PNF**

**ENG MASTER SWITCH .....OFF PNF**

**ENG MODE SELECTOR .....NORM PNF**

**XPNDR .....STB PNF**

**PARKING BRAKE.....ON PNF**

**EXTERNAL LIGHTS:**

- STROBE .....AUTO PNF
- BEACON .....OFF PNF
- WING, NAV, RWY TURN OFF, LAND NOSE.....AS RQRD PNF

**SEATBELT SIGN.....ON PNF**
**NO SMOKING .....AUTO PNF**
**EMER EXIT LT .....ARM**
**CABIN PRESS LDG ELEV.....AUTO PNF**
**FUEL PUMPS .....ALL ON PNF**
**TAKE OFF INFORMATION .....RECEIVE PNF**

- TAKE OFF DATA FORM.....START TO FILL PNF

**FMGS PREPARATION**

- INIT A .....DEPRESS INIT
    - Insert departure and arrival airport (FROM/TO)
    - Insert flight number (FLT NBR)
    - Press ALIGN to get location
    - Insert Cost Index (COST INDEX)
    - Insert Cruise Flight Level (CRZ FL

- F-PLN .....DEPRESS F_PLN
- RADNAV.....DEPRESS RADNAV
    - Insert all relevant Navigational Aids

- INIT B .....ARROW RIGHT
    - Insert TAXI, RTE RSV, FINAL/TIME (optional)
    - Enter Block Fuel (BLOCK)
    - Insert Zero Fuel Weight (ZFW)

- PERF.....DEPRESS PERF
    - Enter take off flaps (FLAPS/THS)
    - Enter V1, Vr, V2 (entering no data and depressing the LSKs will insert pre-calculated numbers
    - Insert take off flex (TO-FLEX)
    - Enter transition altitude(or leave at 18000)
- Check flight plan (assuming FSX flight plan is loaded)

**FUEL QTY.....CHECK PF/PNF**

**PREFLIGHT BRIEFING .....PERFORM PF/PNF**

**COCKPIT CREW CHECKLIST .....COMPLETE**

- Read by PNF and answered accordingly

1. Preflight Briefing ..... PERFORMED PF/PNF
2. Cabin Signs ..... .ON/AUTO PF
3. Fuel Quantity..... _____KG PF/PNF
4. Take Off Data ..... INSERTED PF/PNF
5. Altimeter ..... CHECKED PF

## BEFORE START/PUSHBACK

**ATC CLEARANCE .....OBTAIN PNF**

**WINDOWS and DOORS .....CLOSED PF/PNF**

- Check the red circle on handle is fully visible
- Check on ECAM lower display that all doors are closed

**START UP and PUSHBACK CLEARANCE .....OBTAIN PF/PNF**

**THR LEVERS.....IDLE PNF**

- Engine will start regardless of thrust lever position.
- if IDLE is not selected thrust will increase rapidly after start.

**PARKING BRAKE.....AS RQRD PF**

- If no pushback rqrd set ON, check ECAM "PARK BRK" memo displayed & BRAKE PRESS indication
- If pushback rqrd coordinate parking brakes with ground crew

**BEACON .....ON PNF**

**TRANSPONDER.....XNPDR PNF**

**APU BLEED .....ON PNF**

**BEFORE START CHECKLIST .....COMPLETE PF/PNF**

- Read by PNF and answered accordingly

1. Windows/Doors ..... CLOSED PNF/PF
2. Beacon..... .ON PF
3. Thrust Lever ..... IDLE PNF
4. Parking Brake ..... SET PF

## ENGINE START

**CREW COORDINATION**

| Condition | PF | PNF |
|---|---|---|
| Before start CKL completed | | Report " Before start CKL completed |
| Ready to start & Ground crew clearance obtained | ENG MODE to IGN START | |
| ENG MODE Sel - IGN START | Announce "Engine No #"<br>ENG MASTER to ON | |
| Engine stabilized | Check N1, N2, EGT and FF on normal ground idle | |

**ENG MODE sel.....IGN PF**

**"ENG 2 START".....ANNOUNCE PF**

**MASTER sw 2.....ON PF**

**ENGINE PARAMETERS.....MONITOR PF**

- Start valve open,
- Bleed pressure indicating green,
- Oil Pressure rise,
- N2 increase to 16%,
- Igniter A or B,
- N2 increase to 22%,
- Fuel flow increase,
- EGT rise,
- N1 increase,
- Start valve closing at 50% N2,
- Igniter off.

**ENGINE IDLE PARAMETERS (ISA sea level).....CHECK PF/PNF**

- N1.....19.5 %
- EGT.....390° C
- N2.....58.5 %
- FF.....275 kg/h
- OIL.....steady green

**"*Parameters Stabilized*".....ANNOUNCE PNF**

**MASTER sw 1.....ON PF**

- as for Engine 2

**ENG MODE sel.....NORM PF**

- On lower ECAM the ENG page will be replaced with WHEEL page

## AFTER START

**APU BLEED .....OFF PNF**

**GROUND SPOILERS.....ARM PNF**

**RUDDER TRIM .....ZERO PNF**

- If not showing zero, press RESET.

**FLAPS LEVER.....SET PNF**

- Set FLAPS for take-off.
- Check ECAM upper display.

**PITCH TRIM .....SET PNF**

- Set TO CG on pitch trim wheel.

**ECAM STATUS .....CHECK PNF**

- Check for remaining reminders.

**APU MASTER sw.....OFF PNF**

**ENG ANTI ICE.....AS RQRD PF**

**WING ANTI ICE .....AR RQRD PF**

- On ground the anti-ice valves will operate for 30 seconds then close, they will open automatically when a/c is airborne.

**ECAM DOOR.....SELECT PF**

- Check all slides armed & deselect door page on ECAM.

**GROUND CREW CLEARANCE .....RECEIVE PF/PNF**

- Captain acknowledges the clear to move signal from ground crew, Copilot crosschecks.
- PF checks that NW STRG DICS memo message is NOT displayed.

**AFTER START CHECKLIST .....COMPLETE**

- Read by PNF and answered accordingly

1. APU..... AS RQRD PF
2. Anti-Ice ..... AS RQRD PF
3. ECAM Status..... CHECKED PNF
4. Flaps ..... FLAPS…. PF/PNF
5. SPOILER ..... ARMED PF
6. Pitch/Rudder Trim..... ____/ZERO PF
7. Hand Signal ..... RECEIVED CPT

## TAXIING

**TAXI CLEARANCE .....OBTAIN PNF**

- Always use VHF 1 because it is linked to the emergency bus.

**EXT LT .....AR RQRD PF**

**TAXI AREA .....CLEAR PF/PNF**

**CLOCK ET.....START PNF**

- To record block time move ET selector to Run to start Elapsed Time counter.

**PARKING BRAKE .....CK/OFF PF**

- Aircraft in motion:
    - PF calls “Brake Check”.
    - Gently apply brakes.
    - Check BRAKES pressure at zero.
    - PNF announces “No Pressure”.

**TRUST LEVERS .....AS RQRD PF**

- Little or no thrust above idle is needed to get in motion.
- Maximum speed in straight line below 30 knots and 10 knots in sharp turns.
- Do not ride brakes (brake wear is proportional to duration, not to applied pressure)

**FLIGHT CONTROLS.....CHECK PF/PNF**

- PF applies full deflection of the stick up, down, neutral, left, right, neutral.
  Note full deflection needs to be kept for a moment to reach full movement.
  PF/PNF checks on F/CTL page for full travel.
- PF presses PEDAL DISC PB on nosewheel tiller and applies full rudder and
  PF/PNF monitor F/CTL page for full motion.

**ATC CLEARANCE .....RECEIVE PF/PNF**

**TAKE OFF DATA/CONDITIONS .....REVIEW PF/PNF**

**FCU .....SET PNF**

- Insert cleared altitude.
- Preset heading if turn is needed after take off (NAV will be disarmed
  and after takeoff, RWY TRAK mode will keep centerline heading until
  HDG/TRK selection knob is pulled.

**ATC CODE.....CONFIRM/SET PNF**

**AUTO BRK .....MAX PNF**

- AUTO BRK can be 'on' while on parking brakes. MAX setting will help to stop the aircraft in case of an aborted takeoff by automatically applying maximum brake force when throttles are retarded to idle.

**TO CONFIG pb .....PRESS PNF**

- Check "T.O. CONFIG NORMAL" is shown on ECAM upper display.

**FLIGHT INSTRUMENTS.....CHECK PF/PNF**

- Check for any abnormal indication during the whole taxi period.

**TAKE OFF BRIEFING .....COMPLETE PF**

- Take off briefing is an abbreviated version of the preflight briefing done earlier. It should include runway to be used, runway condition, and configuration of aircraft, departure and weather. V1, VR, V2 should be memorized so they are available in case of any problem.

## BEFORE TAKE OFF

**TAKE OFF LINE UP CLEARANCE .....OBTAIN PF/PNF**

**APPROACH PATH CLEAR OF TRAFFIC .....CHECK PF/PNF**

**TRANSPONDER.....TA/TR**

**TAKEOFF IMMINENT .....ANNOUNCE PNF**

- When take-off clearance has been obtained PNF will announce through PA system “Cabin crew, prepare for take off.”

**ENG MODE sel.....AS RQRD PNF**

- Select IGN when runway has standing water, in heavy rain or when heavy turbulence is expected directly after takeoff.
- PACKS / APU BLEED .....AS RQRD PNF
- Deactivating packs and/or activating APU bleed ON can improve performance (only in TOGA thrust mode) and can reduce maintenance costs (only at lower power settings). APU BLEED is not possible when WING ANTI ICE is used.

**EXTERNAL LIGHTS .....SET PF**

**SLIDING TABLE .....STOWED PF/PNF**

**BEFORE TAKE OFF CHECKLIST .....COMPLETE PF/PNF**

- Read by PNF and answered accordingly

1. Engine Mode Selector..... AS RQRD PF
2. Packs ..... ON PF
3. TO Memo ..... ALL GREEN

***“READY FOR TAKE OFF”*** **.....ANNOUNCE PF/PNF**

## TAKE OFF

Rolling and static take offs are possible and permitted. Do not apply brakes over 50% N1 on start.

**THRUST LEVERS.....FLX or TO/GA PF**

- PF advanced throttles from idle to 50% N1.
- PF releases brakes (in case of static take off).
- PF advances throttle to take off power.
- Stick half forward till 80 knots to prevent nose up effect
  (full forward stick in case of +10 crosswind of aft located CG).
- PF announces "Take-off thrust time".
- C/M 1 keeps hand on throttle until V1 is reached.
- C/M2 starts chrono timing.

**PFD/ND.....SCAN PF/PNF**

- PF and PNF will check FMA on PFD and abnormal indication.

**TAKE OFF N1 .....CHECK PNF**

- Check that N1 is reached before 80 knots and announce "Take off trust set".

**DIRECTIONAL DISPLAY .....BY RUDDER PF**

- Do not use steering hand wheel above 30 knots.
- At 130 knots connection between nosewheel steering and
  rudders is removed, beware of this in case of strong crosswinds.

**PFD and ENG indications.....SCAN PNF**

- Scan airspeed and engine parameters during whole procedure.

**V SPEEDS.....ANNOUNCE PF/PNF**

- PNF will announce 100 knots, V1 and VR
- PF will cross check and reply 'checked" at 100 knots

**ROTATION.....PERFORM PF**

- At VR rotate smoothly to a pitch attitude of 15° with centralized stick,
  after takeoff follow SRS pitch command bar.

**GEAR.....RETRACT PF/PNF**

- PNF ensures that the aircraft is climbing and calls "*Positive climb*".
- PF cross checks and calls "*Gear up*".
- PNF confirms with a '*Gear up*" call and moves the gear lever to the UP position.
- PNF calls "*Gear up, lights out*" when gear is stowed.

**TAXIWAY and TURNOFF LIGHTS.....OFF PF/PNF**

**A/P.....AS RQRD PF**

**AT THRUST REDUCTION ALTITUDE**

**THRUST LEVERS.....CL PF**

- The levers should be moved to the CL detent at thrust reduction altitude

**AT ACCELERATION ALTITUDE**

- Check FMA changes from SRS to CLB green & ALT blue
- Check target speed changes from V2+10 to CLB speed

**PACK 1 & 2 (if applicable).....ON PNF**

- Check/Set PACK 1 ON after CLB trust reduction
- Check/Set PACK 2 ON after flap retraction

**FLAPS .....RETRACT PF/PNF**

- Retract flaps directly after acceleration altitude is reached
- Check acceleration to CLB speed
    - At F: PF order "*FLAPS 1*", PNF checks conditions, confirms with "*FLAPS 1*" and moves the flaps lever to 1
    - AT S: PF order "*FLAPS ZERO*", PNF checks conditions, confirms with "*FLAPS ZERO*" and moves the flaps lever to 0

**GROUND SPOILERS.....DISARM PNF**

## AFTER TAKE OFF

**APU BLEED .....OFF PNF**

- If the APU has been used to supply air conditioning during takeoff select APU BLEED to OFF. APU BLEED is not usable over 15,000 ft maximum.

**APU MASTER.....AS RQRD PNF**

**ENG MODE SELECTOR .....AS RQRD PNF**

- Set IGN in heavy rain or heavy turbulence.

**ANTI ICE PROTECTION .....AS RQRD PF**

- When ice conditions are expected or ICE DETECTED is shown on ECAM PF needs to activate the anti ice systems. Please note that ENG ANTI ICE will force the FADEC to switch ENG MODE to continuous ignition.

**SEAT BELTS.....AR RQRD PF**

**BARO REF .....SET/X-CK PF/PNF**

- At transition altitude (indicated by baro setting flashing on PFD) the PNF calls "*Transition altitude*".
- PF calls "*SET STD, cross check at FL****"
- PF will call "*Top*" at FL*** and PNF will crosscheck and confirms with "*Checked*"

**AFTER TAKE OFF CHECKLIST .....COMPLETE PNF**

- Checked by PNF silently and without cross check from PF with the Altimeter line. PF will respond with altimeter setting on PFD.

1. Engine Mode Selector..... AS RQRD PNF
2. Spoilers..... DISARMED PNF
3. Flaps ..... RETRACTED PNF
4. Landing Gear ..... UP/LTS OUT PNF
5. Exterior Lights ..... RET/OUT PNF
6. Packs ..... ON PNF
7. Altimeter ..... STD PF/PNF

## CLIMB

**MCDU .....PF to PERF CLB PF**

**CLIMB SPEED MODIFICATION.....ENTER PF**

- When a speed change is required, select new speed with FCU SPD selector and pull, Speed target will show in Cyan.

**AT 10.000 FEET (OR 18.000 FEET)**

**LANDING LIGHT.....OFF and RETRACT PF**

**CRZ FL .....SET PF**

- When direct climb to CRZ FL set in INIT A page is not possible, set CRZ FL manually

**ANTI ICE .....AS RQRD PF**

## CRUISE

**ECAM SYS PAGES.....REVIEW PNF**

- Periodically review system pages
  (ENG, BLEED, ELEC, HYD, FUEL, COND, FLT CTL)

**CABIN TEMP.....MONITOR PNF**

- Adjust when needed during climb.

**FLIGHT PROGRESS.....MONITOR PF/PNF**

- At any waypoint check ATO and ETO, track and distance and compare to printed flight plan.

**NAV ACCY.....CHECK PF/PNF**

- Periodically check accuracy of navigation systems by tuning a VOR, VOR/DME or ADF, select correct needles on ND and check that needles are in same position as blue navaid symbol.

## DESCENT PREPARATION

**LANDING INFORMATION.....RECEIVED PF/PNF**

**ALTIMETERS.....PRESET/SET PF/PFN**

**FMGS.....SET FOR LANDING PF**

**RAD NAV.....SET (ILS) PF/PNF**

**MIN SAFE ALTITUDES.....CHECK PF/PNF**

- Determine and cross-check from documents.

**APPROACH and LANDING BRIEFING.....PERFORM PF**

- During a low work load phase (but before start of descent) the captain will outline the planned procedures, weather, relevant NOTAMs and missed approach procedures.

**COMPANY MESSAGES.....AS REQUIRED PNF**

- Inform dispatcher of flight progress, aircraft status and services required.

**DESCENT CHECKLIST.....COMPLETE PF/PNF**

- Read by PNF and answered accordingly.

1. Approach and Landing Briefing..... PERFORMED PF
2. Minimum Safe Altitude..... CKD PF/PNF
3. LDG Elevation..... _____FT PF
4. Altimeters..... _____STD PF/PNF

**DESCENT CLEARANCE.....OBTAIN PNF**

- On PF request the PNF will obtain descent clearance from ATC. PF will set FL on FCU.

## DESCENT / APPROACH

**MCDU .....SET PF/PNF**

**ANTI ICE .....AS RQRD PF**

- With ANTI ICE set to ON the FADEC will increase idle rpm to provide better protection against flame out. This will reduce the descent path angle, something that can be compensated for with half speed brakes.

**SPEED BRAKES.....AS RQRD PF**

- In idle descent the speed brakes can be used to increase the rate of descent. Avoid use above FL250 for passenger comfort.

**NAV ACCY .....CHECK PF/PNF**

- Before reaching the terminal area perform a check of accuracy of the navigation systems by comparing positioning of FMGC and VOR, VOR/DME, ADF.

**POSITIONING:**

- When not under ATC control (or following standard procedures) attempt to be at 9,000 ft and 250 kts at 30 NM from touchdown

**BARO REF .....SET QNH/X-CK**

- At transition altitude PNF will announce “Transition level” and PF will call for QNH setting and will announce “QNH, cross check at xxx ft.” When passing xxx ft PNF will announce “Top”. When the altimeters show. The same altitude the PF will reply “Checked”.

**AT 10.000 FEET (INITIAL APPROACH)**

**LANDING LIGHTS.....ON PF**

**CABIN SIGNS .....ON/AUTO PF**

- Place SEAT BELTS switch to ON and check NO SMOKING is on AUTO.

**CABIN.....SECURE FOR LANDING**

- Inform cabin crew of landing and obtain confirmation. Cabin crew should not enter cockpit during the descent except for emergencies.

**ENG MODE SEL.....AS RQRD PF**

- Select IGN in case of standing water on runway, severe rain or severe turbulence.
- ECAM STATUS.....CHECK PNF
- Check for remaining status messages in upper ECAM.

**LANDING DATA .....REVIEW PF/PNF**

- Revise landing weight, landing configuration, landing speeds.

**ND.....SEL ARC or ROSE NAV**

**RAD NAVAIDS .....CHECK PF/PNF**

- Ensure the correct radio navaids are tuned and identified.
- ILS pb sw.....PRESS PF/PNF
- When LOC and Glide Scales are shown on PFD a valid ILS signal is received. Confirm identification, course, frequency and deviation.

**APPROACH PHASE.....MONITOR PF**

- In NAV check that APPR phase activates automatically.
- In HDG/TRK mode activate APPR phase 15 nm from touchdown.
- Set speed required by ATC when required.

**APPROACH CHECKLIST .....COMPLETE PF/PNF**

- Read by PNF and answered accordingly.

1. ECAM Status..... CKD PNF
2. Cabin SIGNS..... ON/AUTO PF
3. DH/MDA..... SET PNF
4. Altimeters..... _____STD PF/PNF
5. V Bugs..... SET PNF
6. Engine Mode Selector..... AS RQRD PF

## FINAL

**APP PB .....PRESS PF**

- Press the APP pb (for ILS) only when ATC clears the aircraft for approach. Check FMA for LOC and G/S indications. Note the LOC and/or G/S capture modes will engage at the earliest 3 sec after arming.

**AP .....BOTH ENGAGED PF**

- After selection of ILS APP mode, both AP should be engaged.

**FLAPS 1 .....SELECT PF/PNF**

- PF calls "*Flaps 1*" and PNF checks flap extension conditions, answer "*Flaps 1*" and move flaps lever to 1. When flaps indication shows the flaps are extended PNF will announce "*Flaps 1 green*". To reduce flaps wear it is advised to extend flaps at VFE-15 kt.

**ILS CAPTURE.....MONITOR PF/PNF**

- X-check VOR/DME and ADF for proper ILS intercept. PNF will call "LOC alive" and "Glide slope alive" when the indicators start to move.

**FLAPS 2 .....SELECT PF/PNF**

- PF calls "*Flaps 2*" and PNF checks flap extension conditions, answer "*Flaps 2*" and move flaps lever to 2. When flaps indication shows the flaps are extended PNF will announce "*Flaps 2 green*". Monitor deceleration towards F speed.

**LANDING GEAR .....EXTEND PF/PNF**

- PF calls "Gear down". PNF will ensure conditions are correct, move the gear lever down and will acknowledge "Gear down". When 3 green lights are on PNF will announce "Gear down, three green".

**ECAM WHEEL PAGE.....CHECK PNF**

- The ECAM WHEEL page will show automatically when gear is extended (or below 800 ft AGL). PNF checks this page for irregularities.
- AUTO BRAKE .....AS RQRD PN/PNF
- When required the PF will call for autobrake mode. PNF selects the mode, checks green light and correct indication on the ECAM WHEEL page. Use of autobrake is recommended.

**TAXI LIGHTS and TURN OFF LIGHTS .....CHECK ON PF/PNF**

**FLAPS 3 /FULL .....SELECT PF/PNF**

- PF call "*Flaps 3*" (or "Flaps full). PNF checks flap extension conditions, answers "*Flaps 3(full)*" and moves flaps lever to 3 (full). When flaps indication shows the flaps are extended PNF will announces "*Flaps 3 (full) green*". Monitor deceleration towards VAPP. Speed brakes should be retracted before flaps 3 or flaps full extension. FLAPS FULL must be used in possible wind shear conditions or turbulence.

**GROUND SPOILERS.....ARM PF**

**A/THR .....CHECK PF**

- Verify that A/THR mode (SPEED or OFF) and TARGET SPEED are in agreements with intentions.

**GO AROUND ALT.....SET PF**

- The GA altitude is set on FCU when G/S or FINAL APP is green or aircraft altitude is lower than Go Around altitude

**FINAL CHECKLIST .....COMPLETE PF/PNF**

**AT "*RETARD RETARD*" CALL**

**THROTTLE .....TO IDLE PF**

**FLARE .....PERFORM PF**

**LANDING ROLL**

**DIRECTIONAL CONTROL .....MAINTAIN PF**

- Use rudder pedals down to 30 kts.

**BRAKES .....AS RQRD PF**

- When autobrake is used monitor deceleration.

**THRUST LEVERS.....REVERSE PF**

- PF applies reverse thrust to decelerate to 70 knots. PNF calls "*70 knots*".

**THRUST LEVERS.....REV IDLE PF**

- PF smoothly reduces reverse thrust to reverse idle.

**THRUST LEVERS.....FWD IDLE PF**

- PF sets thrust levers to forward idle when taxi speed is reached. PNF will call "*Reverse out*" when REV indication disappears.

## AFTER LANDING

**GROUND SPOILERS**.....**DISARM PNF**

**FLAPS** .....**FULL RETRACT PNF**

**ENG MODE SELECTORS**.....**NORM PNF**

**LANDING LIGHTS**.....**RETRACT PF/PNF**

- On PF request PNF switches off/retracts landing lights .TAXI and RUNWAY TURN OFF LIGHTS remain on.

**ANTI ICE** .....**AS RQRD PNF**

**APU**.....**START IF RQRD PNF**

**BRAKE TEMPERATURE**.....**CHECK PF/PNF**

- Check brake temperature for high or irregular temperatures.

**CLOCK CHRONO** .....**STOP PNF**

**AFTER LANDING CHECKLIST**.....**COMPLETE PF/PNF**

- Read silently by PNF, upon completion PNF will inform PF.

1. Spoilers..... DISARMED
2. Flaps ..... RETRACTED
3. Engine Mode Selector ..... NORM
4. Radar ..... OFF
5. APU..... AS RQRD

## SINGLE ENGINE TAXI

**APU .....ON**

- Wait 3 minutes and check APU running

**ENGINE MASTER 2.....OFF**

**YELLOW ELEC HYD PUMP .....ON**

## PARKING

**PARKING BRAKE .....SET PF**

- PARKING BRAKE handle to ON, check BRAKES PRESS indication before releasing brake pedals.

**GROUND CONTACT .....ESTABLISH PF**

**ELECTRICAL POWER.....ESTABLISH PNF**

- When possible use GPU or centralized distribution. When passenger on board use APU to provide air conditioning.

**ENG MASTER 1 and 2 .....OFF PF**

- When APU is OFF, set EXT PWR to ON before ENG MASTERS OFF
- Check engine parameters wind down
- DOORS page will show on lower ECAM

**SEAT BELTS.....OFF PF**

**SLIDE DISARMING / DOORS OPENING.....INSTRUCT CABIN PF**

**BEACON .....OFF PF**

- When N2 drops below 20% switch off BEACON.

**PARKING BRAKES .....OFF PF**

- When chocks are in place release parking brakes to allow cooling.

**CLOCK .....STOP PF/PNF**

- Captain determines on block time, co-pilot notes it in the operational documents.

**ANTI ICE .....OFF PNF**

**APU BLEED .....AS RQRD PNF**

- Do not start APU BLEED before engines are shutdown to avoid exhaust fumes being sucked in.

**FUEL PUMPS .....OFF PNF**

## LEAVING THE AIRCRAFT

To be done when aircraft is left unattended or in the hands of the ground crew.

**APU BLEED .....OFF PNF**

**NO SMOKING .....OFF PNF**

- When switched off the NO SMOKING allows the emergency batteries to be charged.

**APU MASTER SW.....OFF PNF**

**EXT PWR .....AS RQRD PNF**

**BAT 1 and 2 .....AS RQRD PNF**

- When no external power is available wait until APU intake is fully closed before switching off batteries.

**BEFORE LEAVING CHECKLIST .....COMPLETE PF/PNF**

- Read by PNF

1. No Smoking ..... OFF
2. Lights ..... OFF
3. APU..... AS RQRD
4. Batteries ..... AS RQRD
5. Beer ..... COLD & DSRV

## STEEP APPROACH

For specially equipped A318 aircraft a STEEP APPR(OACH) operation is permitted. This allows the aircraft to descend along -4.5° to -5.5° glide paths using:

- CAT1 approaches (LOC+G/S)
- LOC without G/S (LOC + FPA or V/S)
- Visual approaches (with PAPI or HUD)

In order to increase the descent capability and to cope with the -5.5° angle, the following aerodynamic configuration has been chosen:

- Gear down
- Flaps/Slats fully extended (CONF FULL)
- Speed Brake lever FULL (but only spoilers 3 and 4 are extended to 30°

### BEFORE DESCENT

**8 KNOTS ADDED TO VAPP in PERF APPR PAGE .....DONE**

**STEEP APP PB .....PRESSED**

**STEEP APP indicated in green memo .....CHECKED**

**BRIEVING STEEP APPROACH.....DONE**

- Landing configuration (STEEP APPR P/B pushed + Gear Down + CONF
- FULL + SPD BRKS lever position FULL)
- VLSPFD=VREF+8Kt in steep approach configuration
- Automatic call-outs “Standby / Standby / Flare”
- PNF call-out “Flare” at 60ft RA for redundancy with automatic “Flare” call-out at 63ft
- Retard thrust levers to IDLE at flare initiation

### INTERMEDIATE APPROACH

**AEODYNAMIC CONFIGURATION.....SET**

- STEEPAPPR P/B pushed
- Gear Down
- CONF FULL
- SPD BRKS lever FULL

**LANDING CHECKLIST .....DONE**

### LANDING

- Flare initiated at 55 ft (automatic call-out at 63 ft)
- Retard thrust levers to IDLE at flare initiation