ATR Procedures and Techniques

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TheAirlinePilots.com

APPROACH AND MANEUVERING SPEEDS

FINAL APPROACH SPEED

V_{APP} = VmHB + Wind FACTOR
or VMCL (whichever is higher)

WIND FACTOR = The highest of

- 1/3 of the head wind velocity,
- or the gust in full.

With a maximum wind factor of 15 kt.

Wind factor is added to give extra margin against turbulence, risk of wind shear etc...

CONSERVATIVE MANEUVERING SPEEDS

When performance consideration does not dictate use of minimum maneuver / operating speeds, the following conservative maneuvering speeds are recommended.

They cover all weight, for high bank operational maneuver, at all flight condition (normal and icing condition)

Flaps 0 : 175 kt.

Flaps 15 : 145 kt

Flaps 25 : 135 kt

Flaps 35 : 125 kt

MINIMUM SPEED FOR FLAPS RETRACTION

It is V_{mLB} of the next flap setting.

Example :

- Minimum speed to retract flaps from 15° to 0° : VmLB0.

COCKPIT COMMUNICATION HATCH

When door is closed after boarding (engine 1 not running = OVBD valve open), the extract fan suction will create a very noticeable pressurization change (more important when operating with GPU than in hotel mode due to absence of inlet air flow).

In order to avoid this uncomfortable situation, when cockpit preparation is performed and in any case before closing the passengers door, the cockpit communication hatch must be open.

It will be closed after engine 1 start.

Note : Before closing, the temperature selectors may be set to FULL COLD position in order to limit the packs air flow thus avoiding a pressure shock.

CABIN TEMPERATURE CONTROL

As soon as OAT exceeds 22° C and aircraft has remained exposed to direct sun, PRE-CONDITIONING becomes necessary for passengers comfort, prior to boarding.

Allow a reasonable period of time for pre-conditioning, and use up to MAXIMUM POWER AVAILABLE ON RH ENGINE (GUST LOCK STOP) together with Hi flow selection.

Note 1 : Hi flow is very effective when RH PL is advanced beyond GI.

Note 2 : Proper orientation of the aircraft on Parking area (wind blowing from 10 o'clock ideally) during Hotel Mode pre-conditioning is very favorable as it allows to continue pre-conditioning during AFT CARGO loading (hot air from RH engine exhaust blown away from service door).

If for any reasons, it has not been possible to bring cabin temperature down to comfortable values prior to boarding, the following considerations will apply :

- Packs operation during taxi should be performed with Hi flow selected.
- Switch Flow selection to NORM prior to take-off, but keep bleeds on, unless performance limited.
- As soon as CLB POWER is selected after take off, select Hi flow and maintain Hi flow until comfortable cabin temp is obtained.
- During cruise, monitor cabin temp when operating in NORM flow : if cabin temp. tends to increase again above comfortable values, use Hi FLOW as necessary.

— Do not use temperature selector in manual mode unless auto mode is inoperative.

— When in manual mode, monitor duct temperature and adjust rotary selector to maintain positive duct temp : this is essential to avoid pack freezing.

PRESSURIZATION AUTO TO MANUAL MODE OPERATION

AIR PRESSURIZATION

AUTO MODE OPERATION

Since the pressure control is fully automatic, the crew action is reduced to the setting of the LANDING ELEVATION.

Note : In order to avoid pressure transients :

- *To switch from AUTO to MAN operation :*
  1. *Turn the MAN RATE knob to MAN position.*
  2. *Select MAN mode by using the CAB PRESS MODE SEL pb.*
  3. *Operate the MAN RATE knob as required to set cabin rate.*
- *To switch from MAN to AUTO operation :*
  1. *Disengage MAN mode by using the CAB PRESS MODE SEL pb.*
  2. *Turn the MAN RATE knob smoothly to NORM position.*

AIRCRAFT TRIMMING

LATERAL TRIM with auto-pilot engaged

- Trim on ROLL axis is inhibited when there is no RETRIM ROLL request set on ADU.
- As there is no auto-trim on both ROLL and YAW axis, it is the pilot duty to maintain lateral trimming when speed or power is substantially changed.
  This is primarily achieved by maintaining the slip indicator (ball) centered by use of rudder trim.
- The autopilot will indicate only roll out of trim.
- If "RETRIM ROLL L(R) WING DN" is displayed on ADU and if the roll trim position is at a normal setting (< ± 1 dot) :
  Check and trim first if necessary yaw axis using small input technique.
  Monitor the effect on ball for at least 10 seconds before any additional input.
  If ADU message is still active when the ball is centered : trim roll axis, monitoring carefully direction and duration of roll trim input. However, trim input in the incorrect direction is inhibited.
- If excessive lateral trim is required or AILERON MISTRIM message is displayed on ADU :
  - DISCONNECT AP, HOLDING FIRMLY THE CONTROLS.
  - FLY MANUALLY PRIOR TO ADJUSTING LATERAL TRIMS.
  - The auto pilot may be reengaged following adjustment of the lateral trims.

DISCONNECTING AUTO PILOT AND YAW DAMPER

- AUTO PILOT/YD DISCONNECT

Auto pilot may be disconnected by
- QUICK DISCONNECT on each control column,
- AP engage push-button on AFCS panel,
- GA mode activation,
- NORM or STBY pitch trim sw activation,
- Stall warning,
- Pilot's force on the control column (pitch axis) over 10 daN (22 lb).

Yaw Damper and consequently AP, may be disconnected by :
- YD engage push-button on AFCS panel,
- Pilot input on rudder of 30 daN/66 lbs or more,
- At touch down when landing.

CAUTION : Overriding the Autopilot on roll axis will not lead to A/P disconnect.

If AP is engaged without an ILS frequency tuned on the coupled side, the APP mode will not arm and the ADU will display a caution message : « CHECK NAV SOURCE ». In this case, clear message, tune ILS and reengage APP mode.

AP/FD behaviour must by permanently monitored by **PNF** . In case of anomaly (sustained input not justified by LOC and GS deviations, excessive attitude *), the **PNF** must immediately call « GUIDANCE ». This call must lead to :

- AP disconnection by **PF** .
- Go around decision if visual conditions are not sufficient.

* excessive attitude means bank angle > 10°

pitch attitude $\begin{cases} < -4° \\ > +4° \end{cases}$

GO AROUND

GO AROUND

When reaching decision height, or missed approach point after level off at MDA, if required references are not established, a go-around must be initiated.
The following procedure is recommended :

PF	PNF
(if no contact)	- Announce minimum
- Announce "GO AROUND"	
- Depress GA pbs on PLs	
- Advance PLs to ramp	
- Call "FLAPS one notch" and rotate to GO AROUND pitch attitude	- Retract FLAPS one notch - Check NP= 100 %, adjust if necessary
- Follow FD bars and cancel AP Disconnect Alarm	
- Accelerate to or maintain VGA (2-02-01 p4)	When positive rate of climb is achieved : - Announce "Positive climb"
- Command "gear up"	- Set gear up
When climb is stabilized :	
- Command "HDG/LO BANK/IAS"	- Engage HDG, BANK and IAS on AFCS panel (IAS will synchronize
- Engage AUTO PILOT on actual speed)	

<u>Note</u> : GO AROUND mode gives (as a FD mode only):

Some internal failures leading to either « DEVIATION » or « GUIDANCE » call out by **PNF**, may involve an attitude (AHRS) failure. In order to always perform a safe go around, **PF** must then systematically use standby horizon as a reference to set the standard missed approach attitude of 10°.

WEAK / UNDER RATED DC GPU

USE OF EXTERNAL DC ELECTRICAL SYSTEM

This unit must be able to provide a steady current of 300 A plus an additional starter current of 1000 A while keeping above 12V (16 KW instantaneous power). If not refer page 1 : Use of a weak DC GPU.

GROUND OPERATION WITHOUT ENGINES RUNNING

If it becomes necessary to use an under-rated DC GPU, the following procedure is recommended :

- Select DC GPU ON and check DC EXT PWR voltage on maintenance panel : with a weak GPU, voltage will be significantly below 28 volts.
- Initiate LOAD SHEDDING of following equipments as needed, in order to recover as much voltage as possible :

		LOAD SAVING
PACKS valves (both)	select OFF	1 × 2 = 2 Amp
FUEL Pumps (both)	select OFF	10 × 2 = 20 Amp
RECIRC. FANS (both)	select OFF	24.5 × 2 = 49 Amp
UPR PASS lights switch (on cabin attendant panel)	select OFF	23 Amp

CAUTION : IF DC EXT PWR voltage on maintenance panel still shows less than 26 v despite the full load shedding, the GPU MUST BE CONSIDERED AS COMPLETELY UNUSABLE.

- If DC EXT PWR voltage on maintenance panel is above 26 v, the DC GPU may be used to maintain aircraft batteries charge whilst using all other ground services normally (cargo door, refueling, cabin lighting, etc...).

PRIOR TO START UP FIRST ENGINE

· DC GPU . . . . . select OFF.

– Start first engine on aircraft batteries after applying relevant normal check-list.

WEAK BATTERY

- Immediately after starting engine 2 with a weak battery, the 600 A/2 mn DC GEN load limitation may be exceeded due to the charge current which alone may reach 300 A. In that case, automatic protection engages which may lead to :
  - DC SVCE and UTLY BUS shedding.
  - DC BTC opening (and loss of DC BUS 1).
  - DC GEN 2 isolation (and loss of DC BUS 2).
- In order to avoid this succession of disconnections, following procedure is recommended after engine 2 start :
  - Monitor DC GEN 2 load on the CAPT maintenance panel.
  - As required to stay within limits (practically to maintain DC GEN 2 load below 450 A), switch off as appropriate :
    - . DC SVCE and UTLY BUS (including both recirc fans) : ≃ 100 A.
    - . LH FUEL PUMP : 10A.
    - . Both recirc fans : ≃ 50A.
  - Off loaded equipment may be turned ON again as charging current decreases and consequently DC GEN load reduces.

FUEL QUANTITY INDICATION

FUEL QUANTITY INDICATIONS

IN FLIGHT

Accurate readings require aircraft levelled without side slip and pitch attitude close to zero degree.

ON GROUND

Accurate readings should be made with aircraft static (not taxiing) and fuel pumps running for more than 4 minutes.

Fuel quantity indications are affected by the level of fuel in the feed tank. With pumps running, the feed tanks are filled within a few minutes. This is the normal flight case.

This procedure should be applied each time a comparative reading before and after flight is intended with correlation to fuel used.

ICING CONDITIONS AND PROCEDURE

▶ Atmospheric icing conditions.

Atmospheric icing conditions exist when OAT on ground and take-off is at or below 5°C or when TAT in flight is at or below 7°C and visible moisture in the air in any form is present (such as clouds, fog with visibility of one mile or less, rain, snow sleet and ice cristals).

▶ Ground icing conditions

Ground icing conditions exist when the OAT is at or below 5°C when operating on ramps, taxiways and runways where surface snow, standing water or slush is present.

Even small quantities of ice accretions, which may be difficult to detect visually, may be sufficient to affect the aerodynamic efficiency of an airfoil. For this reason, ALL ANTI ICING PROCEDURES and SPEED LIMITATIONS MUST BE COMPLIED WITH as soon as and as long as ICING CONDITIONS are met and <u>even before ice accretion actually takes place.</u>

▷ <u>SINGLE ENGINE ceiling is reduced</u> (see FCOM 3.09)
However, the performance loss may be minimized by using <u>FLAPS 15°</u>.
This is the reason why, <u>IF OBSTACLE LIMITATIONS EXISTS whenever MINIMUM ICING SPEEDS ARE IMPOSED</u> (ICING AOA light illuminated) SINGLE ENGINE CRITICAL PHASES (FINAL TAKE OFF CLIMB, EN ROUTE, DRIFT DOWN PROCEDURES) MUST BE PERFORMED WITH FLAPS 15 CONFIGURATION.

<u>Note</u> : If no obstacle limitation exist, Flaps 0 may be used for single engine cruise in order to benefit from a higher cruise speed but at a lower cruising altitude. Refer to 3.09.00 for the descent.

Clear ice accretion may be difficult to detect. If clear ice is suspected, temporary selection of airframe boots is recommended as the action of boots will shatter the ice and make its observation much more obvious.

5. Engines de-icing must be selected ON prior to airframe de-icing to take benefit of an immediate engines de-icing.
If not, engines de-icing will be effective 60 or 240 seconds later depending on MOD SEL selection.

CONDITIONS		SYSTEMS		SPEEDS	
		1-PERMANENT 2-ANTI-ICING 3-DE ICING		A. NORMAL B. ICING	
	ICING LIGHT		NP (%)	ICING AOA LIGHT	
IN FLIGHT					
– NON ICING CONDITIONS	OFF	1	any	OFF	A
– ICING CONDITIONS	OFF	1 + 2	≥ 82	ON	B
– ICE ACCRETION	ON	1 + 2 + 3	≥ 82	ON	B
– END OF ICE ACCRETION	OFF	1 + 2 + 3	≥ 82	ON	B
– END OF ICING CONDITIONS	OFF	1	any	ON	B
– NO MORE RESIDUAL ICE	OFF	1	any	OFF	A
ON GROUND					
– NON ICING CONDITIONS	OFF	1	–	OFF	A
– ICING CONDITIONS	–	1 + 2	–	ON	B

ENTERING ICING CONDITIONS

ANTI-ICING (PROP - HORNS - SIDE WINDOWS).....ON

MODE SEL.....AUTO

MINIMUM MANEUVER/OPERATING ICING SPEEDS .....BUGGED AND OBSERVED

ICE ACCRETION .....MONITOR

AT FIRST VISUAL INDICATION OF ICE ACCRETION AND AS LONG AS ICING CONDITIONS EXIST

ANTI-ICING (PROP - HORNS - SIDE WINDOWS).....CONFIRM ON

MODE SEL.....CONFIRM AUTO
ENG DE-ICING .....ON
AIRFRAME DE-ICING .....ON

MINIMUM MANEUVER/OPERATING ICING SPEEDS .....BUGGED AND OBSERVED

BE ALERT TO SEVERE ICING DETECTION
In case of severe icing, refer to 1.09

■ **If significant vibrations occur**
BOTH CL ..... 100 OVRD for not less than 5 minutes

LEAVING ICING CONDITIONS

DE-ICING AND ANTI-ICING MAY BE SWITCHED OFF

WHEN THE AIRCRAFT IS VISUALLY VERIFIED CLEAR OF ICE

ICING AOA CAPTION MAY BE CANCELLED AND NORMAL SPEEDS MAY BE USED

F) TAKE OFF IN GROUND ICING CONDITIONS BUT WITHOUT ATMOSPHERIC ICING CONDITIONS

A GENERAL

1 - Contaminant may adhere to wheels brakes when taxiing on contaminated ramps, taxiways and runways.

2 - During take off, there is no contamination on wings or engines nacelles but contaminant might affect the propellers.

B PROCEDURE

For take off in ground icing conditions but without atmospheric icing conditions, the following procedure must be applied.

BEFORE TAKE OFF
PROPELLERS ANTI ICING ONLY . . . . . ON

AFTER TAKE OFF
LANDING GEAR (if possible) . . . . . CYCLE
PROP ANTI ICING . . . . . AS RQD

Notes :

1. *Take off may be scheduled using normal minimum V2 = 1.13 VSR.*
2. *Horns anti icing must not be selected ON to avoid lowering the AOA of stall warning threshold.*
3. *Landing gear cycling after take-off with a significant layer of contaminant on the runway (slush, snow) is highly recommended to avoid brakes freezing especially if the procedure described page 19 as "special case" (brakes heating before take-off) has not been followed for any reason.*

SEVERE ICING

Severe icing may result from environmental conditions outside of those for which the airplane is certificated. Flight in freezing rain, freezing drizzle or mixed icing conditions (supercooled liquid water and ice crystals) may result in ice build-up on protected surfaces exceeding the capability of the ice protection system, or

CONSEQUENCES OF SEVERE ICE ACCRETION

The consequences of severe ice accretions are ice location dependent.
If the pollution extension occurs on the lower surface of the wing, it increases the drag and the airplane speed decreases. It may lead to stall if no action is taken to recover a correct speed.
If the pollution occurs first on the upper part of the wing, the drag is not affected noticeably but controllability anomalies may be encountered.
Severe roll anomalies may be encountered with "flaps 15" accretions flown with flaps 0 setting. It should be emphasized that it is not the flaps 15 configuration itself that is detrimental, but the low angle of attack that may result from such a setting, especially close to VFE. This low or negative AOA increases the wing upper side exposure to large droplet impingement. This is why holding with any flaps extended is prohibited in icing conditions (except for single engine operations).

Severe icing is characterized by ice covering all or a substantial part of the unheated portion of either side window,
Note : This cue is visible after a very short exposure (about 30 seconds).

and / or

Unexpected decrease in speed or rate of climb,

and / or

The following secondary indications :

- Water splashing and streaming on the windshield.
- Unusually extensive ice accreted on the airframe in areas not normally observed to collect ice.
- Accumulation of ice on the lower surface of the wing aft of the protected areas.
- Accumulation of ice on the propeller spinner farther aft than normally observed.

The following weather conditions may be conducive to severe in-flight icing :

- Visible rain at temperatures close to 0°C ambient air temperature (SAT).
- Droplets that splash or splatter on impact at temperatures close to 0°C ambient air temperature (SAT).

EXIT THE SEVERE ICING ENVIRONMENT

However, in case of inadvertent encounter with such conditions "severe icing" procedure must be applied (refer to 2.04.05).

SEVERE ICING

MINIMUM ICING SPEED	INCREASE by 10 kt
PWR MGT	MCT
CL 1 + 2	100% OVRD
PL 1 + 2	NOTCH
AP (if engaged)	FIRMLY HOLD CONTROL WHEEL and DISENGAGE
SEVERE ICING CONDITIONS	ESCAPE
ATC	NOTIFY

Marginal freezing temperatures and icing conditions should create a heightened state of awareness. Remember, severe ice can still be incurred at temperatures down to approximately - 18° C, at high altitude.

COLD WEATHER OPERATION → 2.2.08

WINDSHEAR

Procedure at take off :

- Delay the take off. If a low level windshear is reported calculate VR, V2 at the maximum take off weight available for the day.
- When clear of obstacles accelerate as much as possible and clean up the aircraft.
- Climb at the normal climb speed.

Procedure during an approach : If a windshear is encountered,

- Initiate a normal go around procedure with **10° pitch**.
- When positively climbing at a safe altitude, retract the gear and complete the normal go around procedure.

VOLCANIC ASH

- Acrid odor, similar to electrical smell, burned dust or sulfur.
- Smoke or dust appearing in the cabin and cockpit, leaving a coating on cabin and cockpit surfaces.
- Multiple engine malfunctions, such as stall, increase ITT, flameout.
- Airspeed fluctuating erratically.
- At night, static electric discharges (St. Elmo's fire) visible around the cockpit windshields.
- At night, landing lights cast sharp, distinct shadows on the volcanic ash clouds as opposed to the normally fuzzy, indistinct shadows cast on water / ice clouds.

RUNWAY CONTAMINATION STATUS AND BRAKING ACTION

		EQUIVALENT RUNWAY STATUS	
BRAKING ACTION	**FRICTION COEFFICIENT**	**TAKE-OFF**	**LANDING**
GOOD	0,40 and above	1	1
GOOD/MEDIUM	0,39 to 0,36	2	2
MEDIUM	0,35 to 0,30	3/6	5/6
MEDIUM/POOR	0,29 to 0,26	4	5
POOR	0,25 and below	7	7
UNRELIABLE	UNRELIABLE	8	8

EQUIVALENT RUNWAY STATUS :

1 : Dry runway
2 : Wet up to 3 mm depth
3 : Slush or water for depths between 3 and 6 mm
4 : Slush or water for depths between 6 and 13 mm
5 : Slush or water for depths between 3 and 13 mm
6 : Compact snow
7 : Ice
8 : Runway with high risk of hydroplaning

EEC OFF OPERATION

	ENGINE FLAME OUT(*)	EEC FAULT
POWER EVOLUTION	Immediate power loss	Moderate variation (either way)
EEC FAULT LIGHT	Not lit	Immediate flashing
NH	Rapidly below 74 %	Always above 74 %
ITT	rapidly below 350° C	Always above 350° C
POWER LEVER	Totally inefficient	Generally inefficient refer to FCOM 1.16.
ASSOCIATED DC GEN LT	DC GEN Fault illuminates rapidly	Normal
BLEED/PACK	FAULT illuminates rapidly	Normal
OIL LOW PRESS	ENG OIL illuminates on CAP	Normal

(*) If automatic relight has not operated

Landing with both EEC OFF will lead to a big propeller speed decay as the speed decreases, so that ACW power may be lost at the end of the landing run.
Be ready to use nose wheel steering and emergency braking as required.
Engine response during taxi will be slower .

Reverse power is reduced. Moreover a one second stop must be observed at FI before setting PLs below.

TAXI WITH EEC OFF.

- ONE EEC OFF

  For Taxi and prolonged ground operations near idle feather the affected engine to avoid prolonged use within prohibited NP range;

  Keep operative EEC selected ON for Taxi.

- BOTH EEC OFF

  On ground engines response is somewhat degraded. Nevertheless, as long as at least one engine is maintained at or below GI, the corresponding NP should remain high enough to keep associated ACW GEN available and thus to maintain both HYD PUMPS.

CAUTION : Avoid pushing both PLs above GI to avoid transient loss of ACW and then MAIN HYD PUMPS.

Note : NOSE WHEEL STEERING remains available in all cases together with STBY braking, through DC AUX PUMP.

CONTINUOUS IGNITION

If one or both EEC (s) has (have) been deselected, the use of MAN IGN is required when the aircraft enters precpitation or severe turbulence areas, when ice accretion develops or when using contaminated runways for take off landing

ENGINE PARAMETERS FLUCTUATION

ENGINE PARAMETERS FLUCTUATION (STABILIZED FLIGHT)

PARAMETERS	TQ	NH	ITT	NP
FLUCTUATION AMPLITUDE	+/- 2 %	+/- 0.25 %	+/- 10°C	+/- 2.5 %

In case of engine parameters fluctuation it can be helpful to select the corresponding EEC OFF before shutting the engine OFF.

EMERGENCY BRAKES

CAUTION : Use of EMER BRAKE beyond the EMER BRAKE NOTCH ABOVE 60 Kts MUST BE AVOIDED TO PREVENT WHEELS LOCK UP AND DAMAGES TO WHEELS AND TIRES.
BELOW 60 Kts, a SMALL further travel (~ 1 cm) IS AVAILABLE WITHOUT RISKS OF DAMAGE WHEN MAXIMUM STOPPING PERFORMANCE IS REQUIRED.

– A deflated tire is not easily noticeable from the cockpit : NO TAKE OFF should be started after EMER BRAKE has been used at speeds in excess of a maximum taxiing speed of 20 Kt without prior visual inspection of the main landing gear tires.

NAC OVHT

PUSH BACK AND POWER BACK OPERATIONS

Push-back (with towbar)

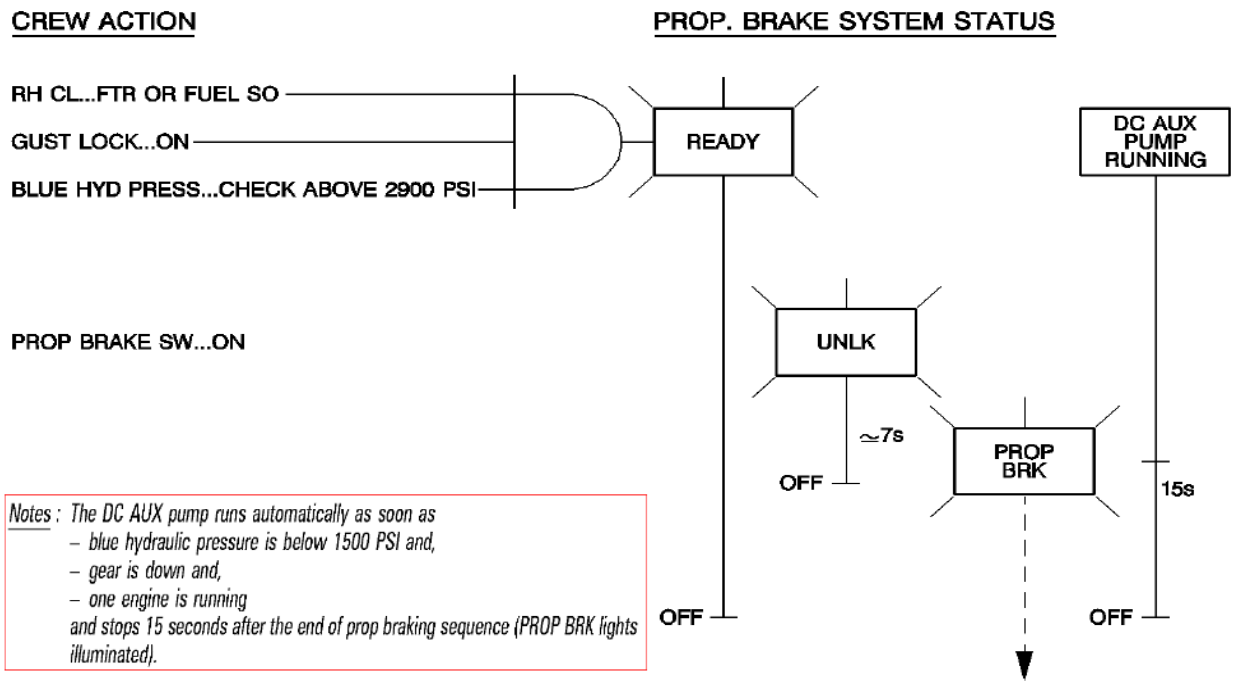
Note: NAC OVHT and ENG FIRE can be triggered during push-back in hotel mode, with a tail wind greater than 10kts, including aircraft direction changes throughout the procedure.
If the tail wind is above this limit, the push--back has to be done, with the propeller(s) running and unfeathered, and respecting ground safety rules and airport local rules.

PROPELLER BRAKE USAGE

PROPELLER BRAKE USE

Propeller brake must be used only when READY light on propeller brake control panel is illuminated.

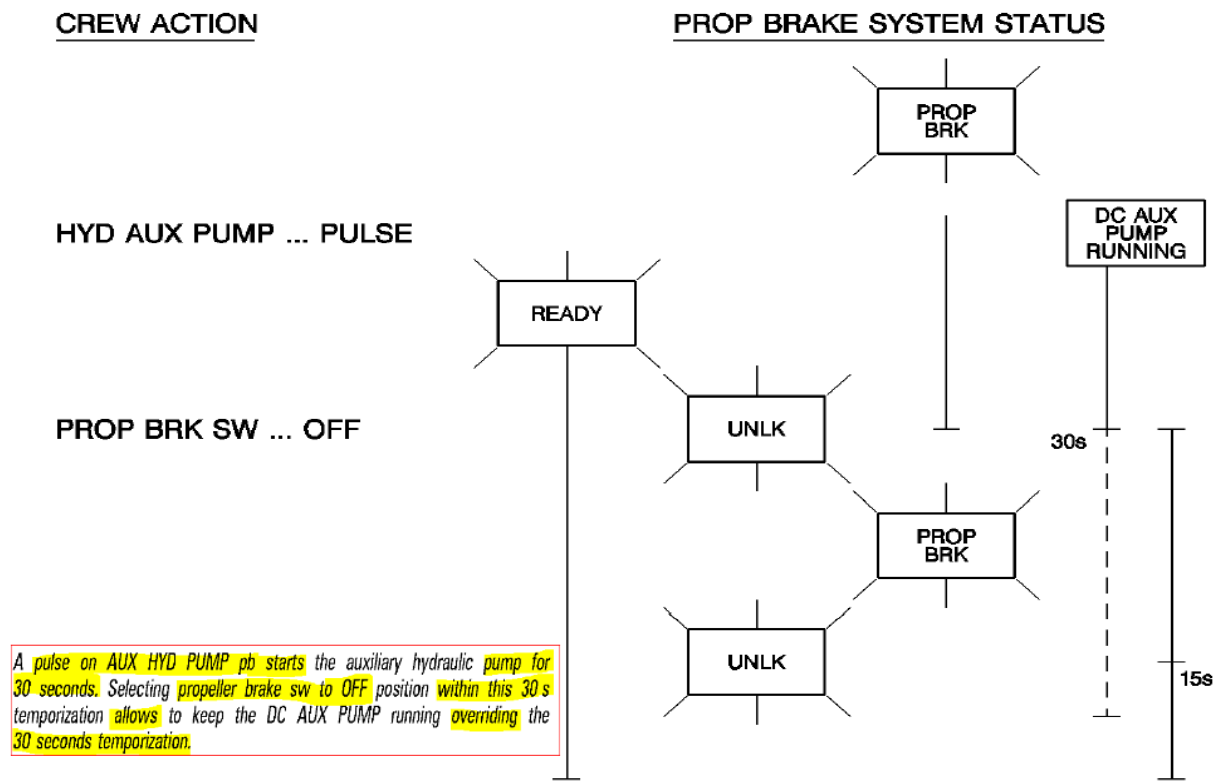
BRAKING SEQUENCE (ENG 2 Running)



Notes : The DC AUX pump runs automatically as soon as
- *blue hydraulic pressure is below 1500 PSI and,*
- *gear is down and,*
- *one engine is running*

and stops 15 seconds after the end of prop braking sequence (PROP BRK lights illuminated).

RELEASING SEQUENCE (ENG2 in hotel mode)



A pulse on AUX HYD PUMP pb starts the auxiliary hydraulic pump for 30 seconds. Selecting propeller brake sw to OFF position within this 30 s temporization allows to keep the DC AUX PUMP running overriding the 30 seconds temporization.

RESOLUTION ADVISORY

Sense of Resolution Advisory asking to maneuver

DESCEND		CLIMB	
CPT	- Confirm "We descend.".	CPT	- Confirm "We climb.".
PF	- Disconnect Auto Pilot - Descent at a rate in the green (fly to) arc on TCAS VSI. - Ask for eventual configuration changes.	PNF	- Select proper rating on PWR MGT rotary selector (MCT en route or TO in other phases e.g. take off, approach and landing) and adjust CL if required
PNF	- Advise ATC - Monitor IAS compared to VLE, VFE, VMO pointer - Monitor Aircraft altitude compared to minimum safety altitude.	PF	- Disconnect Auto Pilot - Apply roughly the bugged power - Climb at a rate in the green (fly to) arc on TCAS VSI. - Ask for eventual configuration changes.
		PNF	- Adjust power to TQ objectives - Advise ATC - Monitor IAS compared VS.

Note : When a climb or increase climb RA occurs with the airplane in the landing configuration or in the go-around phase, a normal procedure of go-around should be followed including the appropriate power increase configuration

GPWS

"WHOOP WHOOP PULL UP" (OR "PULL UP"*) – "TERRAIN TERRAIN" – "TOO LOW TERRAIN"

- POWER . . . . . GO AROUND

- AP . . . . . OFF

- **When flight path is safe and GPWS warning ceases :**
  Decrease pitch attitude and accelerate.
- **When speed above minimum required and V/S positive :**
  Clean up aircraft as necessary.

APM FAULT ON GROUND

APM FAULT ON GROUND

Following procedure is recommended in case of APM fault occurring on ground (gear down and flap not in 0 deg position).

After taxi and both engines stopped (Means the aircraft is at the parking with both engines turned off).

OR

Left engine stopped and the right in hotel mode (Means the aircraft is at the parking in hotel mode).

Reset MPC C/Bs (159TU and 4TU).

If APM fault is still present after reset, it means that a true failure occurs and usual trouble shooting is necessary.

If APM fault disappears no further action is necessary.

Note: for all other APM fault occurring in flight apply current Check List procedure.