Pilot Initial

CRJ-550 Instructor Whiteboard

Session 3

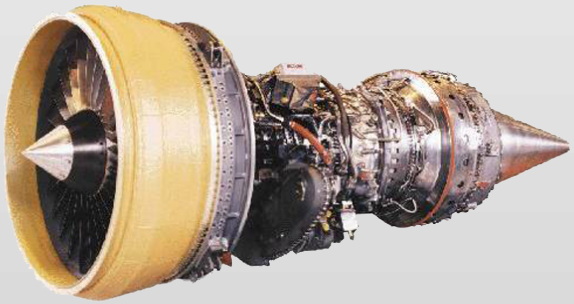
Flight Number 4503

Briefing Items

- Progress Discussion, Review and Questions! ☺
- Abnormal Starts
- Flight Instrument Abnormalities
- VOR Approach
- Balked Landing
- Diversion Procedures
- V1 Cuts
- Landings
  - Night with Tailwind
  - Hand Flown Single Engine ILS and Landing

Abnormal Starts

A Normal Start occurs when the APU is supplying electrical and bleed air with the Anti-Ice Off and is complete when the engine reaches idle values.



Supplementary Procedures

- Cross Bleed (Blue Checklist)
- External Air (QRH 1)
- Battery / External Air (QRH 1)

Normal Start

Usually, the right engine is started first. On the first flight of the day, however, the left engine is started first to verify the fuel check valve.

The following engine instrument verification is required (silent):

Oil pressure : Verify increasing

ITT : Verify below 120C

N_2 20%: L or R thrust lever to IDLE

L or R AUTO IGNITION msg: Appears

Fuel flow: Verify increasing

Light-off : Verify increase in ITT

N_2 50%: Verify L or R ENGINE START status message disappears
(if not call for QRH 2 **NO STRTR CUTOUT**)

L or R AUTO IGNITION msg: Disappears

The following parameters indicate a stable engine at ISA:

N_2 : 55 – 65% rpm

Fuel flow : Approximately 480 lbs/hr

Oil pressure: Greater than 25 psi

Abnormal Starts

What checklists do we call for the following?

L START VALVE or R START VALVE

L START ABORT or R START ABORT

NO STRTR CUTOUT

Engine Hot Start

L or R ENG OIL PRESS

L ENG FIRE or R ENG FIRE

Post-Start Engine Limitations

- The engine must remain at IDLE until oil pressure reaches normal operating range.
- During all starts, do not exceed 75% N_1 for two (2) minutes after start, or until all operating indications are in the normal range, whichever is longer.

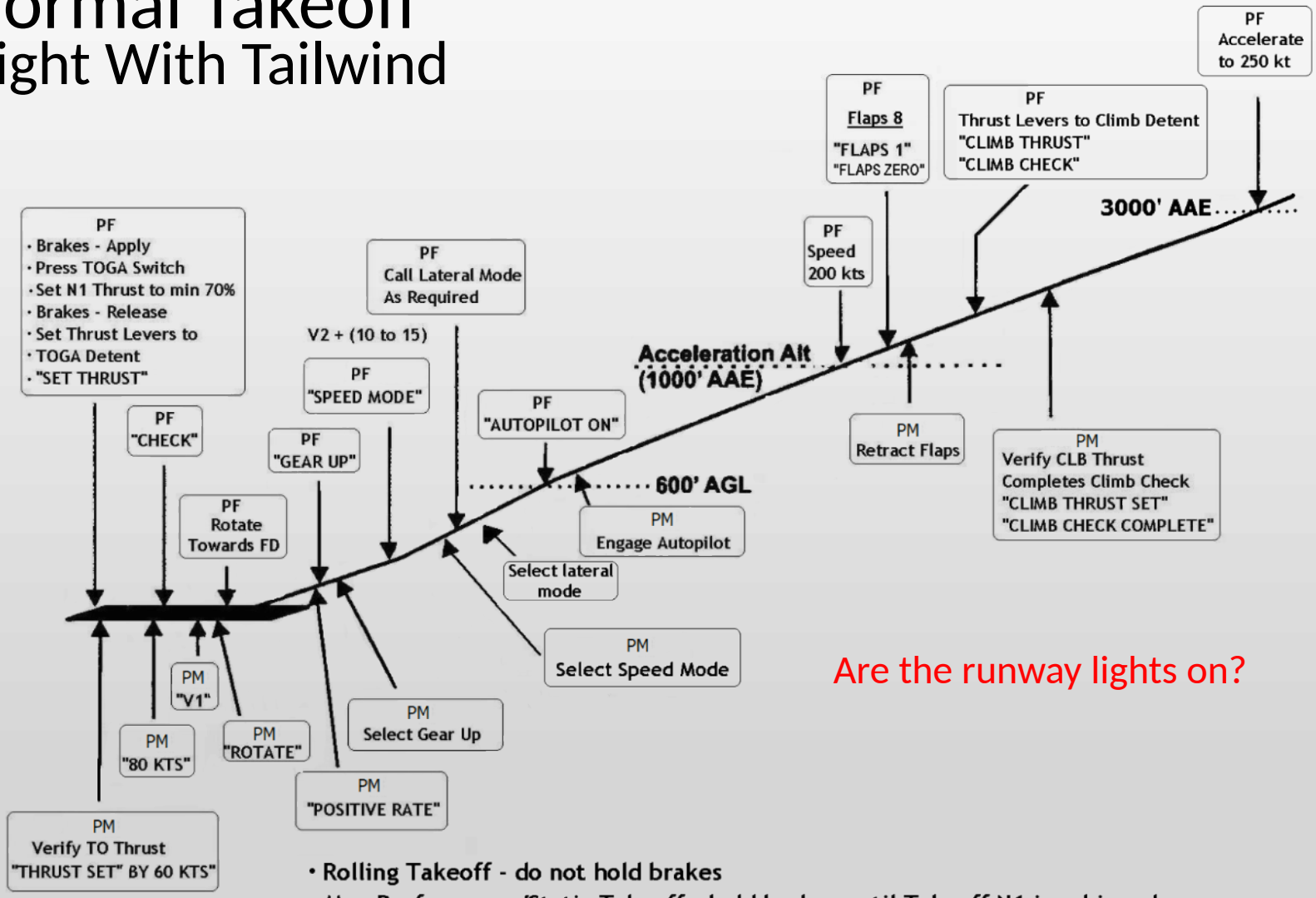
Night Operations

- Ground Pushback and Docking
  - Lighted wands must be used during all night operations.
  - 2 wing walkers, 1 aft of each wingtip is required
  - In an emergency, common flashlights may be used when, due to conditions beyond the control of the certificate holder, wands are not available.
  - The aircraft position and anti-collision lights will be turned on during night towing (sunset to sunrise)
- Crews must utilize the Terrain Awareness Display (TAD) at night or when the aircraft is in IMC below FL180.
- No LAHSO at night will be accepted unless the LAHSO runway has runway hold short lighting and approved vertical guidance.

Tailwind Takeoffs

- The maximum tailwind component approved for takeoff is 10 knots.
- The tailwind performance penalty shown on performance charts must be applied before accepting a tail wind takeoff.
- Tailwind takeoffs should not be performed on contaminated runways, when visibility is below standard takeoff minimums or when aircraft stopping ability is degraded.

Normal Takeoff
Night With Tailwind



Are the runway lights on?

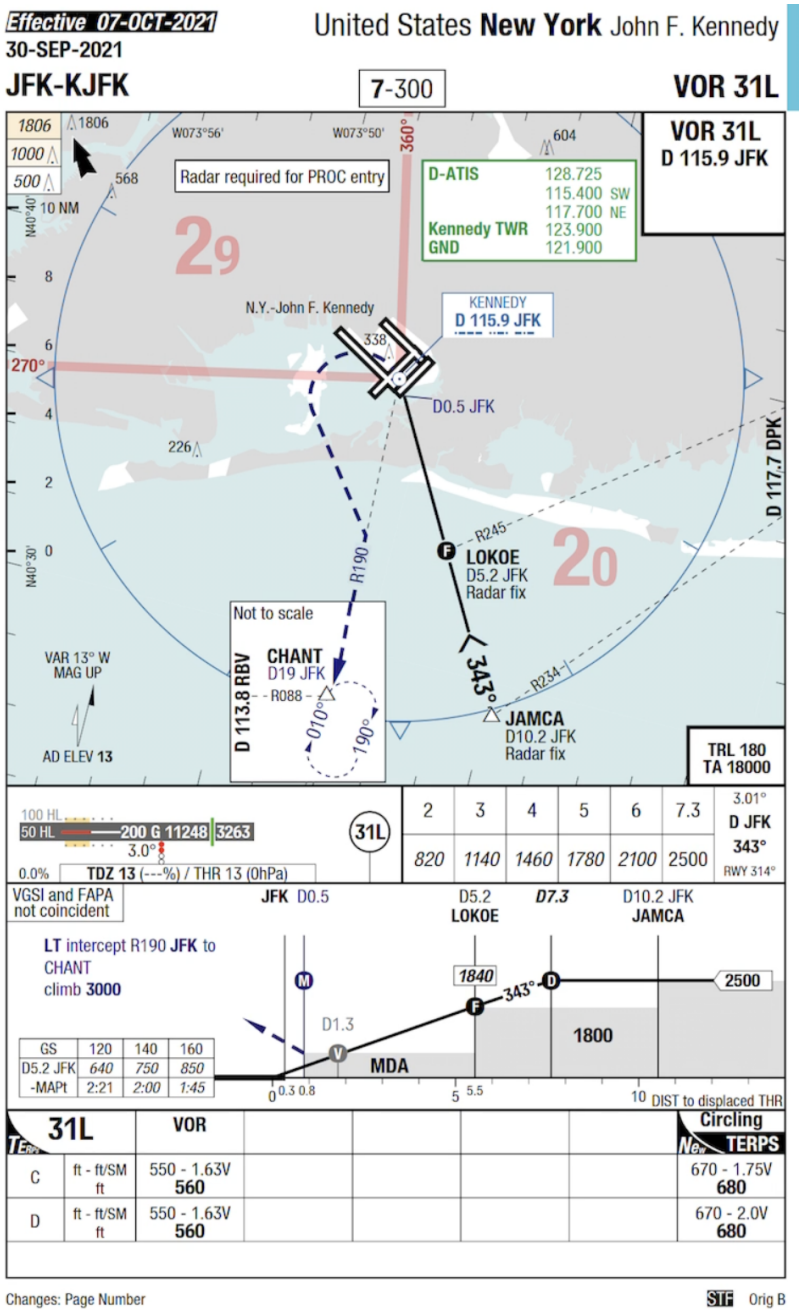
- Rolling Takeoff - do not hold brakes
- Max Performance/Static Takeoff - hold brakes until Takeoff N1 is achieved
  or
  hold brakes until 75% N1 is achieved

SEP14

VOR Approach

Please open SOP 2-18.3 and then brief this approach using the weather provided on your Lesson Handout.

- How will you fly it?
- White Needles?
- Green Needles?
- Combination?



Balked Landings

- A balked/rejected landing is a go-around that occurs after the aircraft has been placed in a low energy state (e.g., airspeed below V_{ref}, negative airspeed trend vector, thrust at or near flight idle).
- In this low energy state, it can take up to eight (8) seconds for a turbofan engine to accelerate to maximum power. When a rejected landing is initiated after the aircraft is placed in a low energy state, it is possible for the aircraft to contact the ground prior to achieving a positive rate of climb.
- For a successful go-around or balked/rejected landing to be carried out, the pilot must control the aircraft's attitude and energy state before executing the go-around climb profile. Aircraft configuration must not be changed until a positive airspeed trend vector and rate of climb have been established.
- Note: As stated in SOP Section 3, you may not attempt to reject the landing once the thrust reversers have been deployed.

Diversion

Diversion from the approved flight plan may be necessary for reasons of flight safety. The captain, when faced with an emergency situation, must decide whether it is prudent to continue to destination or land at another airport. The following is offered as guidance in making that decision. In all cases, flight safety is the first consideration.

Landing at the nearest suitable airport should be accomplished in the event of:

- any fire, overheat or smoke indication, which cannot be immediately and positively determined to be eliminated, or extinguished
- one engine remaining
- loss of a complete Hydraulic System
- one AC power source remaining (engine or APU generator)
- any other situation determined by the crew to present significant adverse effect on safety if the flight is continued

Flight Instrument Abnormalities

MHIRJ	ABNORM 12-1
	Rev. 31, Sep 18/2020

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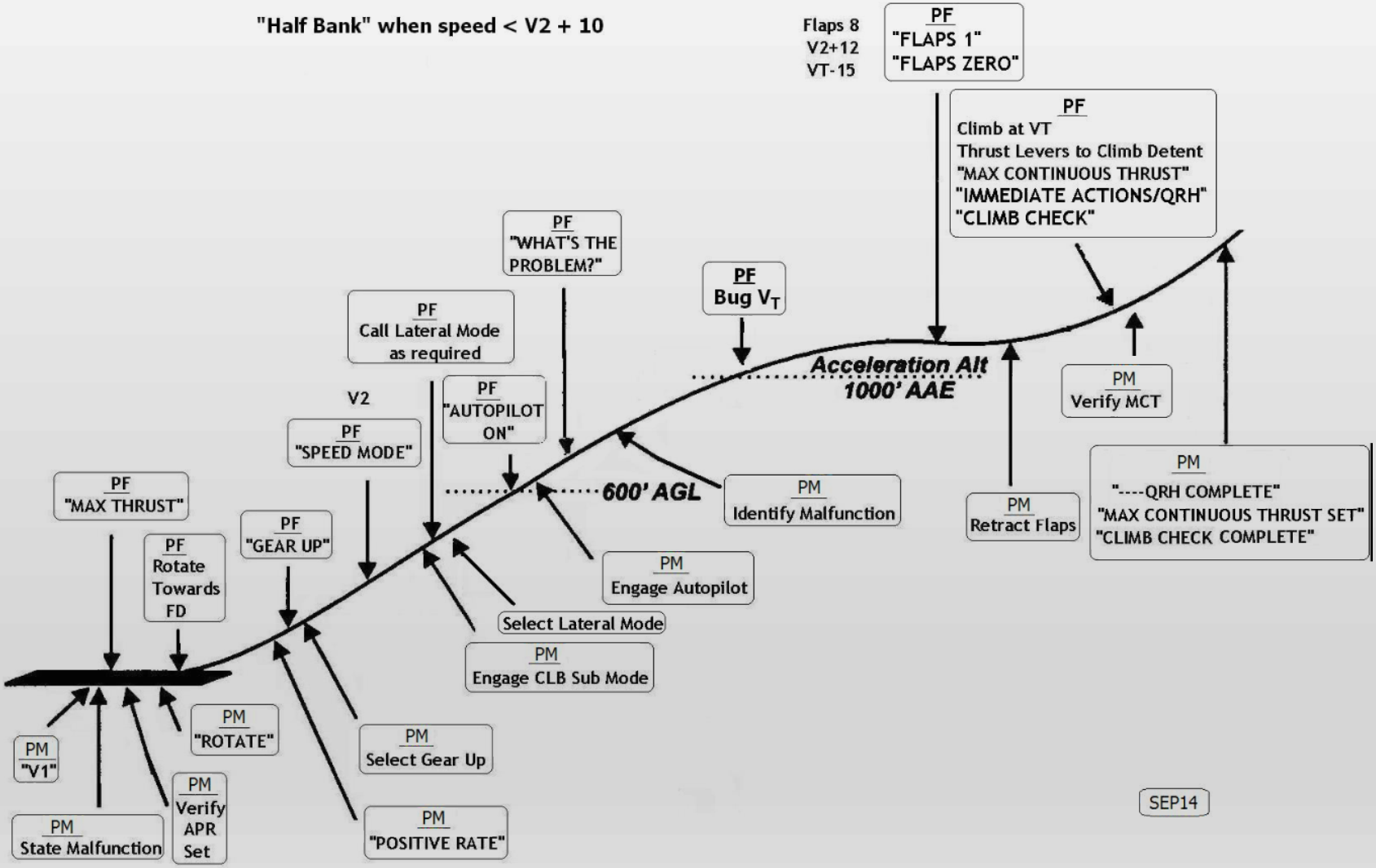
INSTRUMENTS SYSTEM

Tailwind Landings

- If LASHO, the tailwind on the hold short runway shall be calm (less than three (3) kts).
- The maximum tailwind component approved for landing is 10 knots.
- Tailwind landings should not be performed on contaminated runways, when visibility is less than 1 mile, or when aircraft stopping ability is degraded.
- Analyze and verify runway performance criteria before accepting clearance and landing with any tailwind component
- Higher groundspeed and descent rate on glideslope
- Be prepared to execute an immediate go-around if the approach exceeds stabilized parameters or the tailwind limitation is exceeded.

V1 Cut


"Half Bank" when speed < V2 + 10
Flaps 8
V2+12
VT-15
PF
"FLAPS 1"
"FLAPS ZERO"
PF
Climb at VT
Thrust Levers to Climb Detent
"MAX CONTINUOUS THRUST"
"IMMEDIATE ACTIONS/QRH"
"CLIMB CHECK"
PF
"WHAT'S THE PROBLEM?"
PF
Bug V_T
PF
Call Lateral Mode as required
V2
PF
"AUTOPILOT ON"
PF
"SPEED MODE"
Acceleration Alt
1000' AAE
PM
Verify MCT
600' AGL
PM
Identify Malfunction
PM
Retract Flaps
PM
"----QRH COMPLETE"
"MAX CONTINUOUS THRUST SET"
"CLIMB CHECK COMPLETE"
PF
"MAX THRUST"
PF
"GEAR UP"
PF
Rotate Towards FD
PM
Engage Autopilot
Select Lateral Mode
PM
Engage CLB Sub Mode
PM
"ROTATE"
PM
Select Gear Up
PM
"V1"
PM
Verify APR Set
PM
State Malfunction
PM
"POSITIVE RATE"
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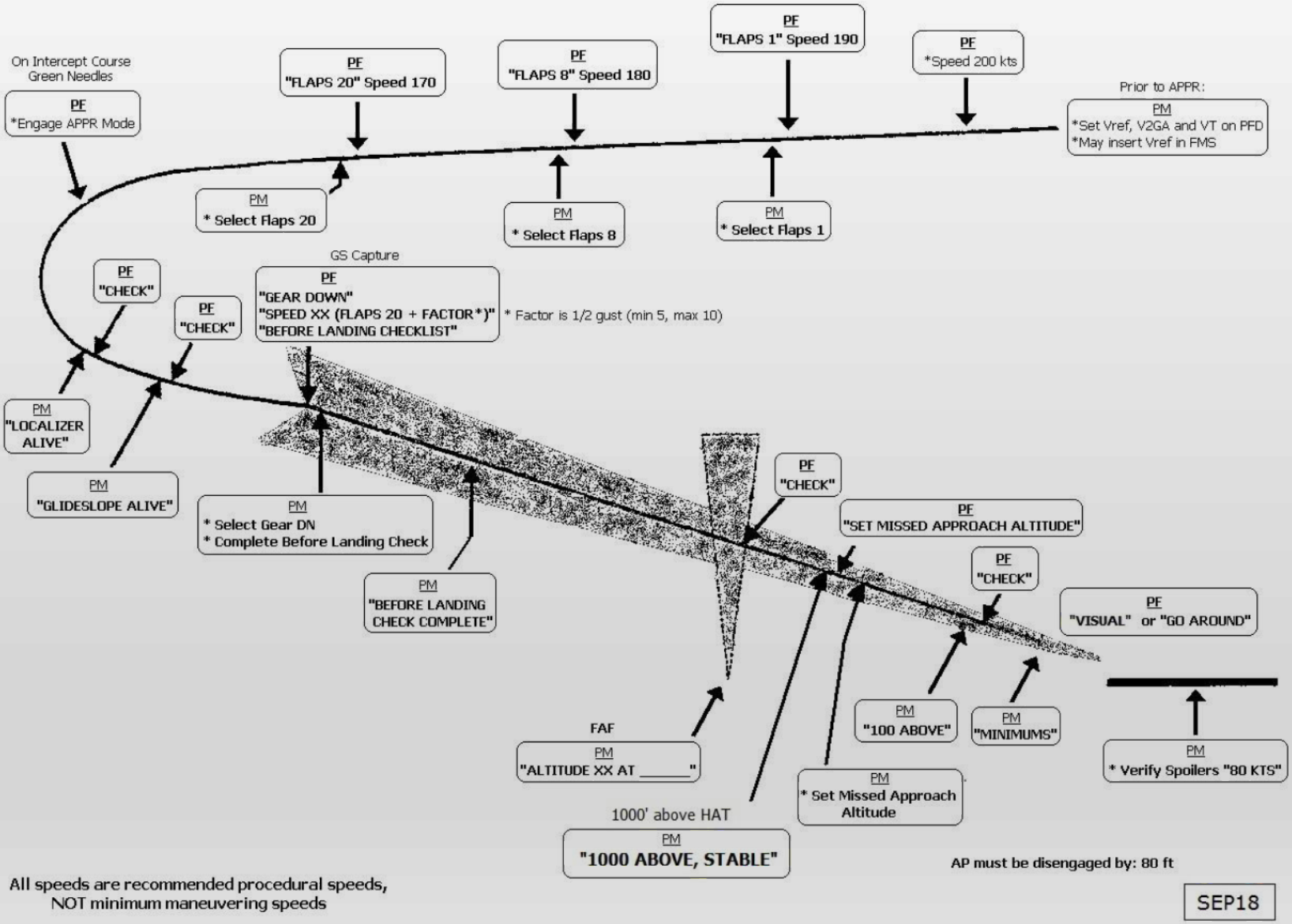
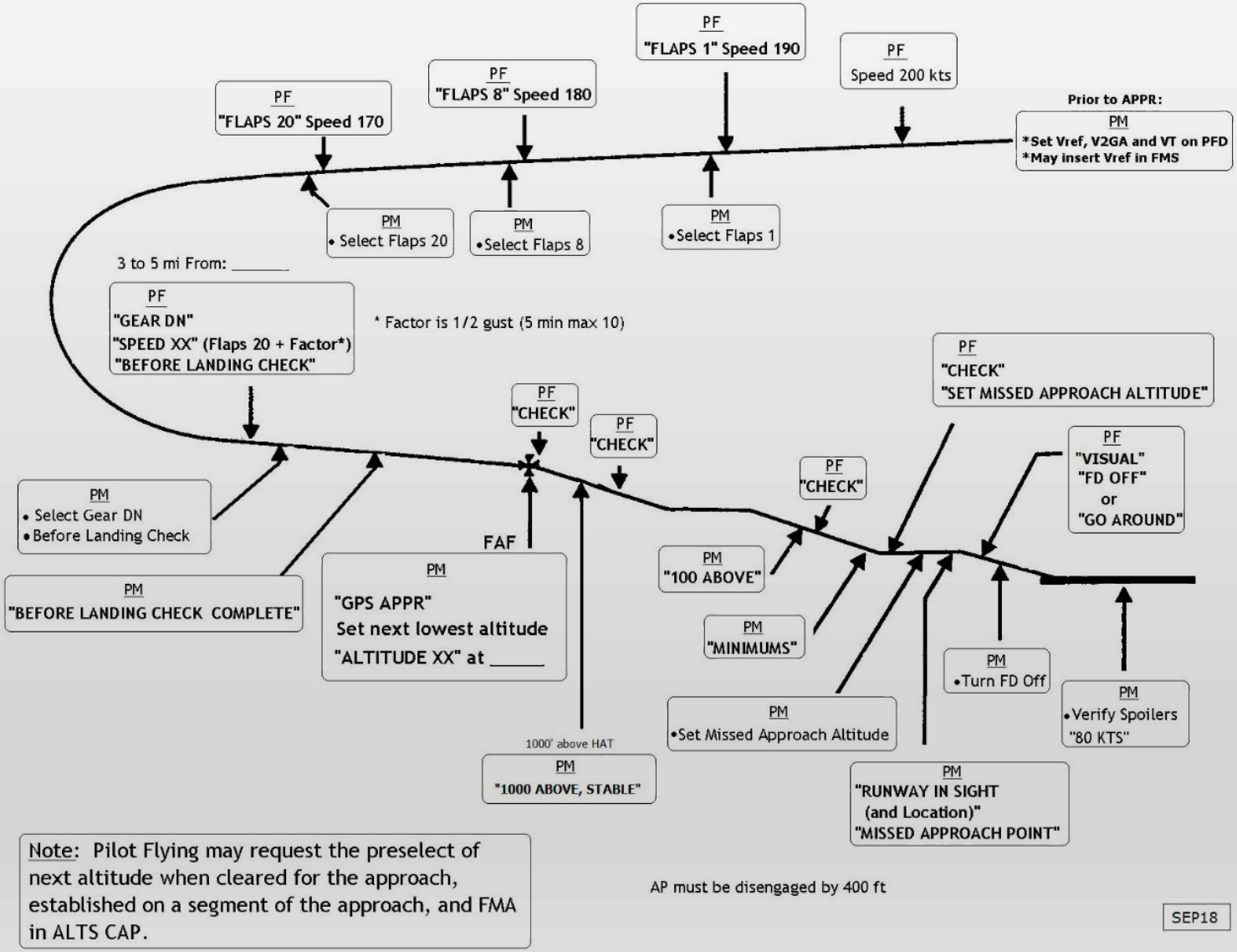
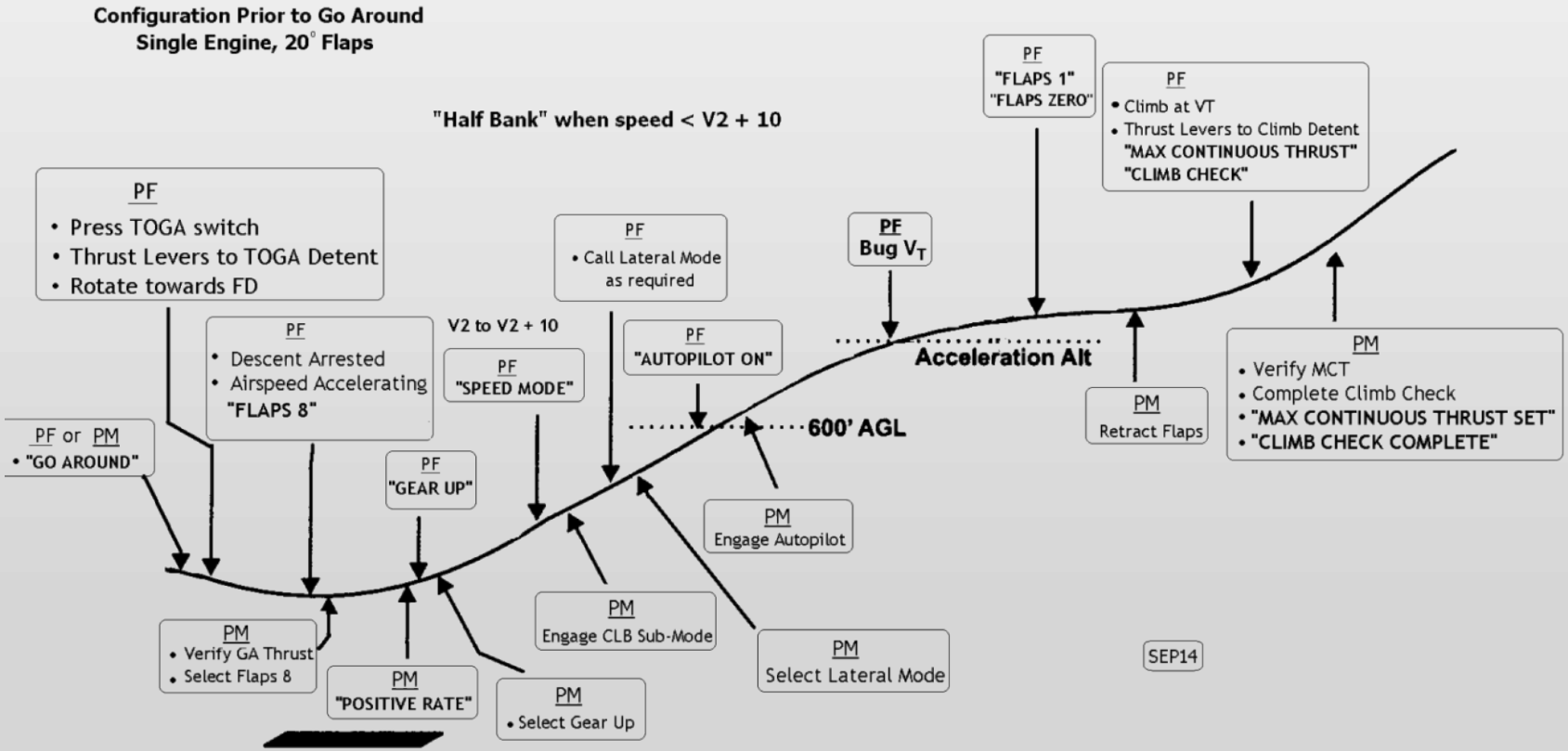
Single Engine Precision Approach



Single Engine Non-Precision Approach



Single Engine Missed Approach



Debrief

- ✓ How did you do as Pilot Flying?
- ✓ How did you do as Pilot Monitoring?
- ✓ Instructor Feedback
- ✓ Review and Initial Training Forms

Next Lesson – HOMEWORK!

- ❑ Review KMKE, KGRB, set up your LIDO and save the trip as KMKE-KGRB Lesson 4
- ❑ Review Section 02 General of the WOP
- ❑ Review the SureWx SureApp manual in Comply
- ❑ Review SOP 3-5 Operation in Icing Conditions
- ❑ Review SOP 3-6 Cold Weather Operations