Pilot CQ24 SPOT

CRJ-550 Instructor Whiteboard

Flight Number 4500

Introductions

- Names
- Exchange Telephone Numbers and/or Emails
- Hotel and Transportation Discussion

Success Tips

Maintain a Positive Mental Attitude!

Compartmentalize

- Put life problems in a “mental box” one hour prior to show time.
- Tell your instructor or management if you have unmanageable training distractors.

Work together chair flying profiles and rehearsing callouts

Plan your sleep periods

- Turn off all distractions
- Use the hour prior to going to sleep to study for your next lesson.

Eat sensibly

- Avoid large meals immediately prior to scheduled simulator times.
- Try to avoid sugar “rush” and “crash”, it’s a marathon – not a sprint.

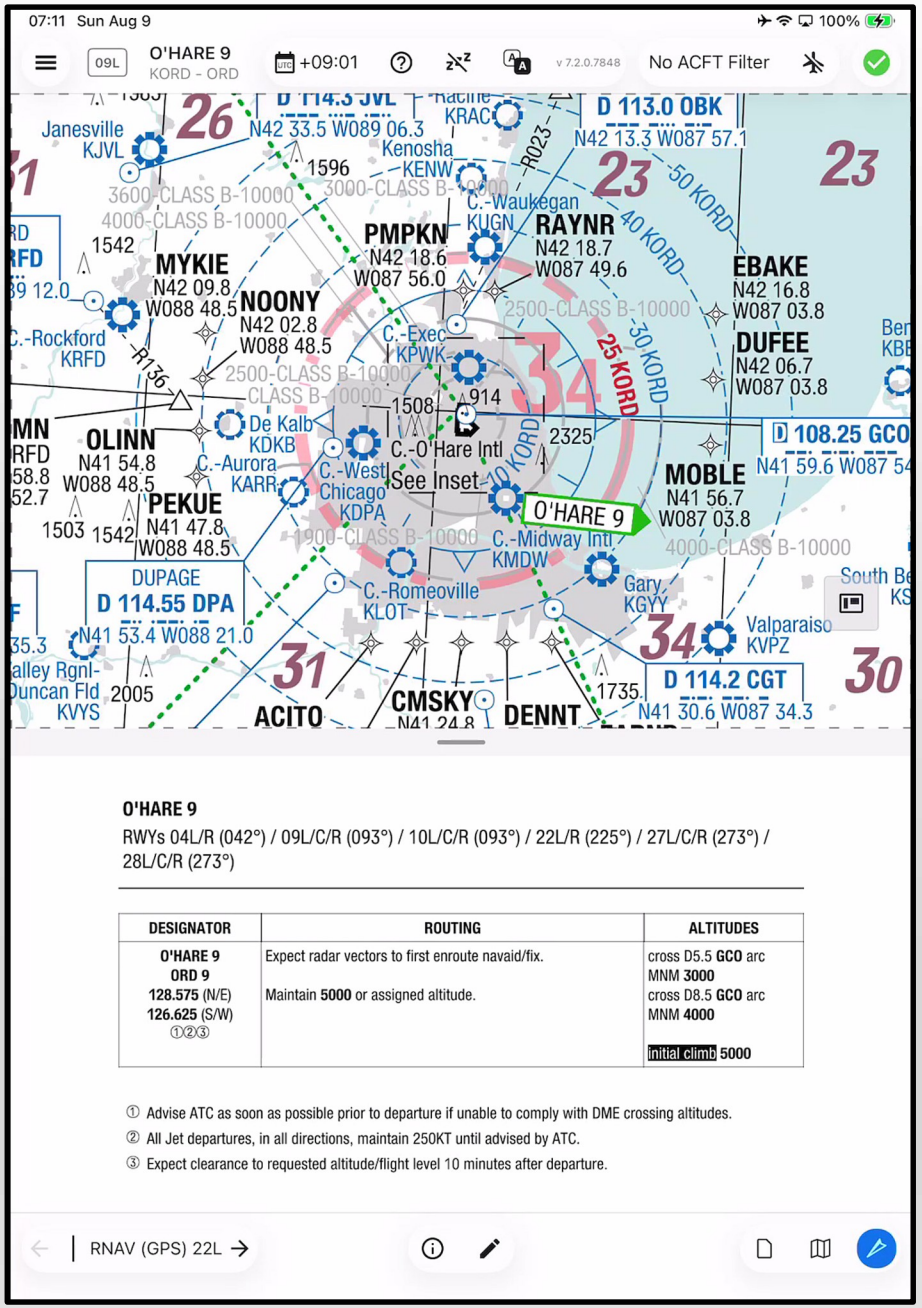
Exercise daily

Briefing Items ORD

- Normal Takeoff O'HARE # Departure
- AP PITCH TRIM
- Circle to Land
- Bounced Landing
- TCAS RA
- PRM Approach
- Hand Flown ILS

Normal Takeoff
O'HARE # Departure

- Night
- Runway 9L
- Except Maintain
  - 4,000 FT
  - 200 KIAS



O'HARE 9

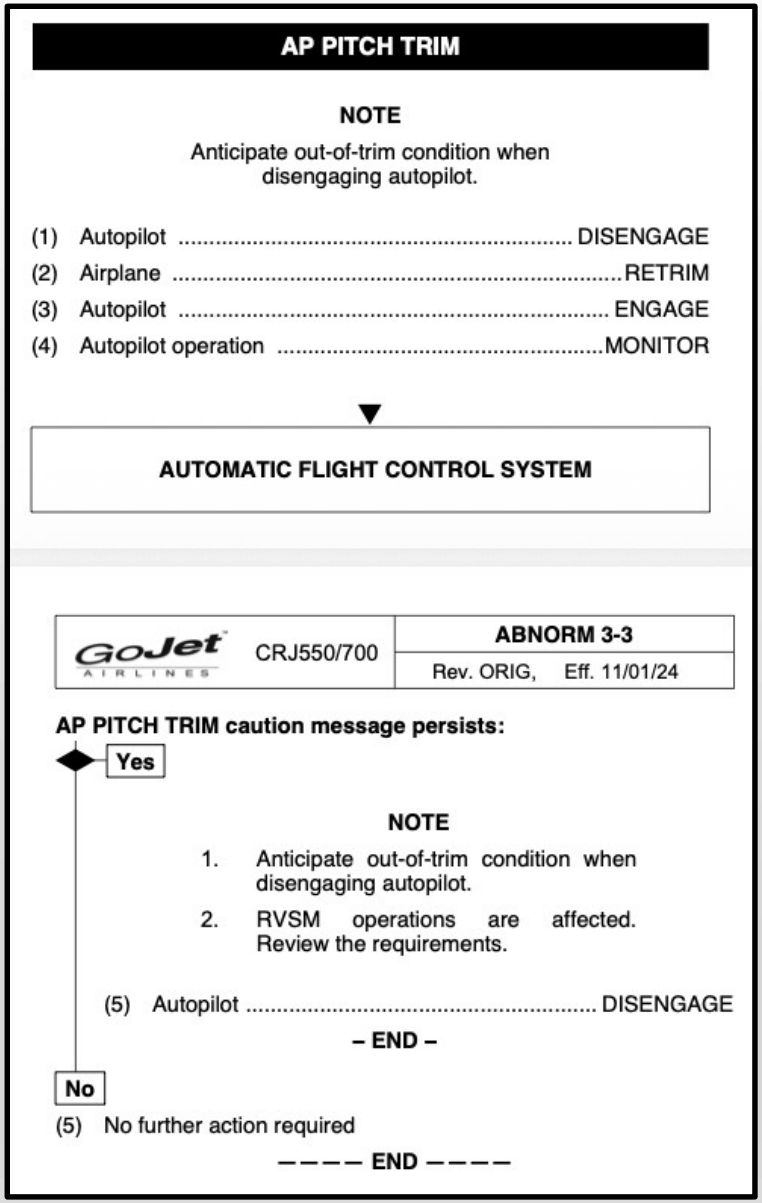
RWYs 04L/R (042°) / 09L/C/R (093°) / 10L/C/R (093°) / 22L/R (225°) / 27L/C/R (273°) / 28L/C/R (273°)

DESIGNATOR	ROUTING	ALTITUDES
O'HARE 9 **ORD 9** **128.575** (N/E) **126.625** (S/W) ①②③	Expect radar vectors to first enroute navaid/fix. Maintain **5000** or assigned altitude.	cross D5.5 **GCO** arc MNM **3000** cross D8.5 **GCO** arc MNM **4000** initial climb **5000**

① Advise ATC as soon as possible prior to departure if unable to comply with DME crossing altitudes.
② All Jet departures, in all directions, maintain 250KT until advised by ATC.
③ Expect clearance to requested altitude/flight level 10 minutes after departure.

AP PITCH TRIM

- Indicates that autopilot pitch trim has failed.
- Inhibited during Initial and Final Takeoff Phase
- Would you declare an emergency?
- Expect Vectors for RNAV (GPS) 22L, Circle to land 28L



AP PITCH TRIM

NOTE

Anticipate out-of-trim condition when disengaging autopilot.

(1) Autopilot ..... DISENGAGE
(2) Airplane ..... RETRIM
(3) Autopilot ..... ENGAGE
(4) Autopilot operation ..... MONITOR

▼

AUTOMATIC FLIGHT CONTROL SYSTEM

GoJet AIRLINES | CRJ550/700 | **ABNORM 3-3** | Rev. ORIG, Eff. 11/01/24

AP PITCH TRIM caution message persists:

Yes

NOTE

1. Anticipate out-of-trim condition when disengaging autopilot.
2. RVSM operations are affected. Review the requirements.

(5) Autopilot ..... DISENGAGE

– END –

No

(5) No further action required

———— END ————

Takeoff Inhibits (FCOM 31-41-30)

During the initial take-off, final take-off and landing phases, the DCU's will process inhibit logic to minimize intermittent or distracting warning or caution messages.

- **Initial Take-off Phase - The initial take-off inhibits are enabled when:**
  - **Left and right engine N1 is greater than 79%, and**
  - **Weight-on-wheels, and airspeed is less than 100 knots.**

  - **The initial take-off inhibit is removed when:**
    - **Left and right engine N1 is less than 67.6%, or**
    - **Airplane is in the final take-off phase.**

- **Final Take-off Phase - The final take-off inhibits are enabled when:**
  - **Left and right engine N1 is greater than 79%, and**
  - **Airspeed transitions to greater than 100 knots.**

  - **The final take-off inhibit is removed when:**
    - **Left and right engine N1 is less than 67.6%, or**
    - **Radio altitude is greater than 400 ft AGL, or**
    - **30 seconds after ground to air transition.**

Landing Inhibits (FCOM 31-41-30)

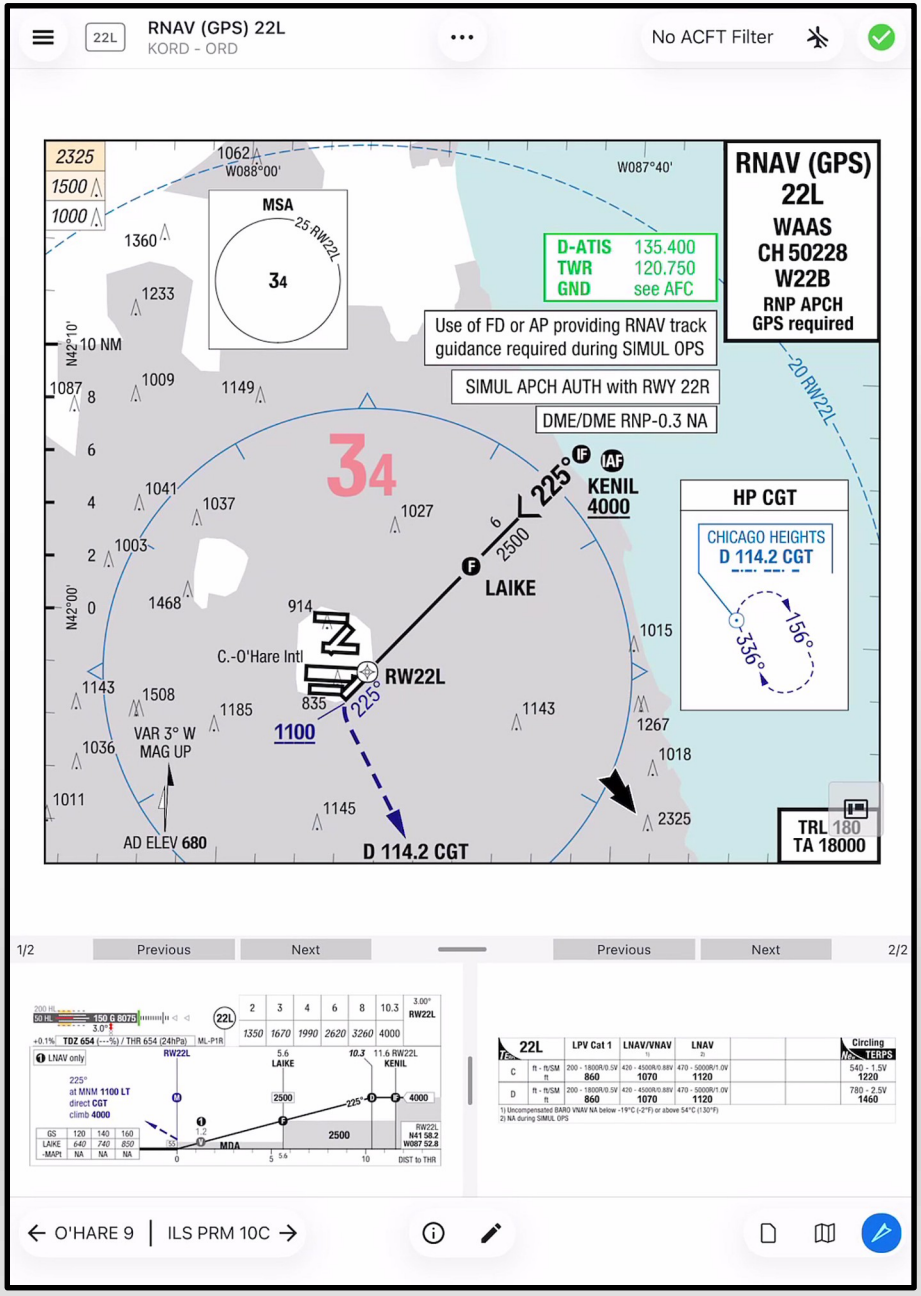
During the initial take-off, final take-off and landing phases, the DCU's will process inhibit logic to minimize intermittent or distracting warning or caution messages.

- **Landing Phase - Landing phase inhibits are enabled when:**
  - **Radio altitude transitions to less than 400 ft AGL, and**
  - **Landing gear down and locked.**

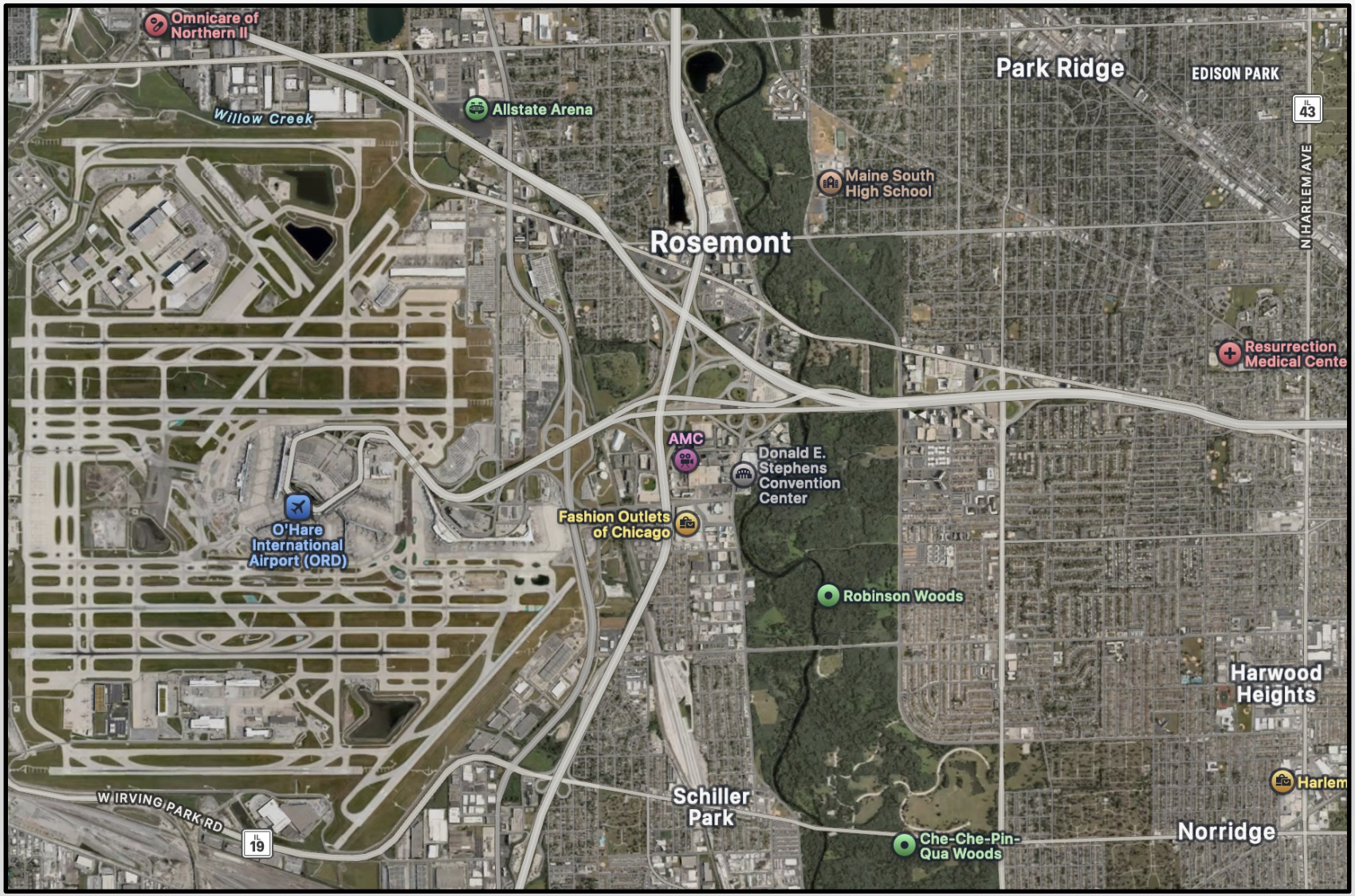
  - **The landing phase inhibit is removed when:**
    - **30 seconds after air to ground transition, or**
    - **Radio altitude transitions from less than 400 ft to greater than 400 ft.**

RNAV 22L

- Circle to land 28L
- Bounced Landing



Circle to Land 28L



Circle to Land

1-6.10 Visual Circling Approach

A visual circling maneuver may be required to permit landing on a runway not served by an approach facility.

The normal visual circling configuration is Flaps 30 with landing gear down. Once the airport environment is in view, maneuver the aircraft to final while maintaining visual reference to the runway. Select a pattern that displaces the airplane far enough from the runway that will allow a turn to final without overbanking or overshooting final. Do not descend below the safe maneuvering altitude until in a position to land. Once landing is assured, Flaps 45.

Standard Circling Approach Maneuvering Radius

Circling approach areas developed prior to 2011 used the radius distances (in NM) as depicted in the following table. The distances are dependent on the aircraft approach category.

Circling MDA in feet MSL	Approach Category and Circling Radius (NM)				
	CAT A	CAT B	CAT C	CAT D	CAT E
All altitudes	1.3	1.5	1.7	2.3	4.5

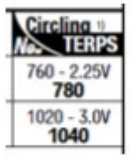
Expanded Circling Maneuvering Airspace Radius

Circling approach areas for approach procedures developed beginning in 2013 use the radius distances (in NM) as depicted in the following table. These distances, dependent on aircraft category, are also based on the circling altitude which accounts for the true airspeed increase with altitude.

Circling MDA in feet MSL	Approach Category and Circling Radius (NM)				
	CAT A	CAT B	CAT C	CAT D	CAT E
1000 or less	1.3	1.7	2.7	3.6	4.5
1001 – 3000	1.3	1.8	2.8	3.7	4.6
3001 – 5000	1.3	1.8	2.9	3.8	4.8
5001 – 7000	1.3	1.9	3.0	4.0	5.0
7001 – 9000	1.4	2.0	3.2	4.2	5.3
9001 and above	1.4	2.1	3.3	4.4	5.5

Affect on Lido Charts

Charts where these criteria have been applied can be identified by the symbol in the CIRCLE-TO-LAND minima box.



The new minima will be published on approach procedure charts on an as-revised basis as the new criteria are applied by the FAA and issued via their source documents.

Note 1: Bombardier CRJ aircraft are classified Category 'D' for circling approach limits. **CAT 'D'** protected airspace is shown above.

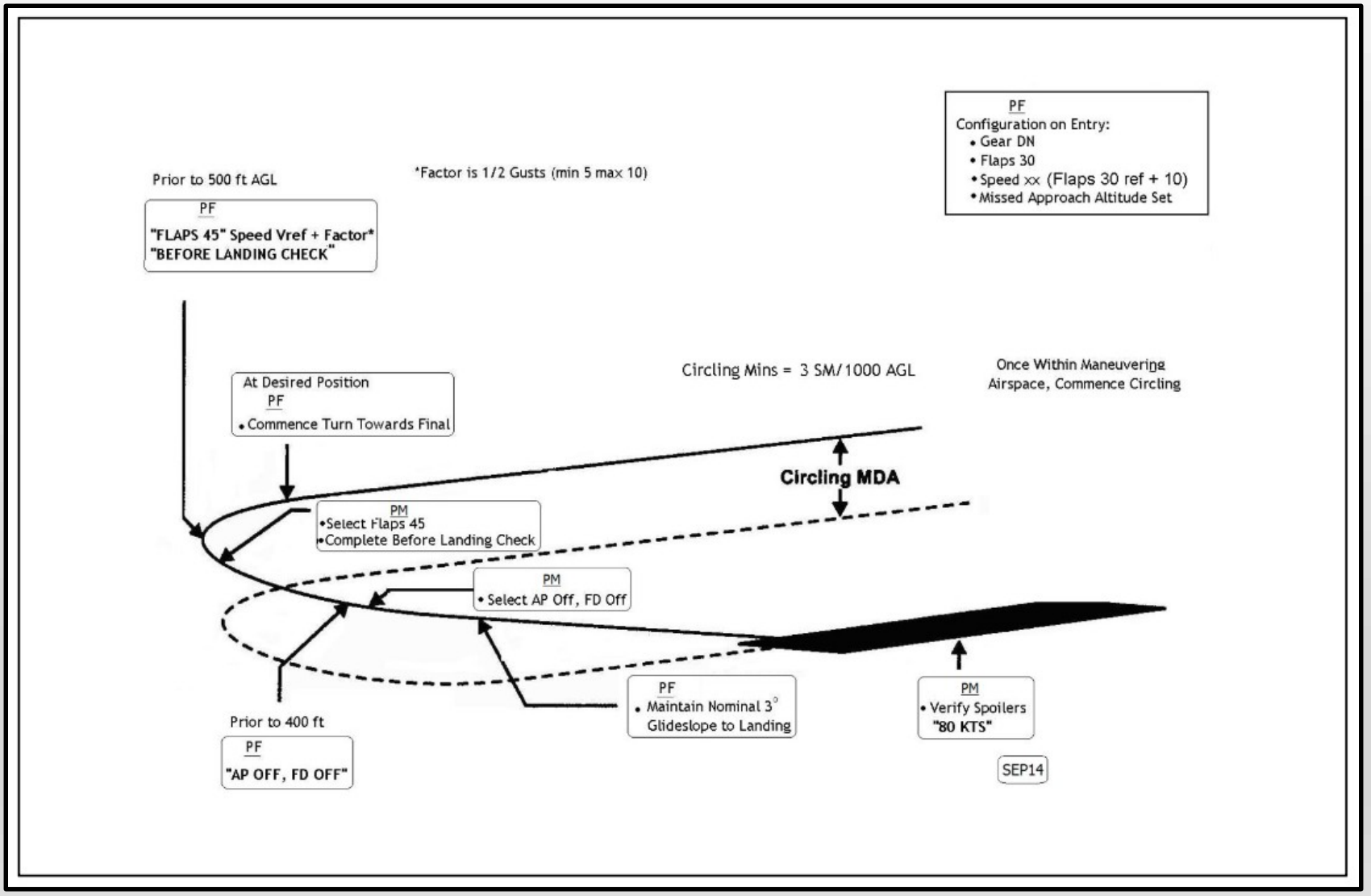
Note 2: Be aware of the tendency to maneuver the airplane too close to the runway at altitudes lower than the normal VFR pattern altitude.

Note 3: GoJet will only conduct circling approaches when the reported ceiling is at least 1,000' and the visibility is at least three (3) statute miles; or the reported weather is at least equal to the charted circling landing minimums for the approach to be used, whichever is greater.

Note 4: The crew will set the higher of 1000' HAA or published circling minimums in the MDA window on the PFD. The required visibility will be the greater of 3SM or published circling minimums. In the absence of published circling minimums, a circling approach is not authorized.

If there is any doubt whether the airplane can be safely maneuvered to touchdown or if visual contact is lost while circling, initiate the missed approach procedure.

Circle to land



Bounced Landing

The Ground Lift Dumping (GLD) system is very effective in preventing bounced landings, but its automatic deployment requires that the thrust levers be at IDLE prior to touchdown, as they should be at all landings. Do not attempt to cushion the touchdown with power.

If the pilot believes that thrust must be added and maintained until touchdown to salvage a landing, then a balked/rejected landing should be executed.

Improper landing technique (thrust levers not at IDLE) may result in a shallow bounce. Reducing the thrust levers to idle, while the aircraft is airborne after a bounce, will cause the GLD to deploy. When this occurs, lift will be lost causing the aircraft to touchdown at a descent rate that may exceed the structural capability of the aircraft.

A poorly executed approach and touchdown with a high rate of descent can generate a high, hard bounce that can quickly develop into a hard landing accident. A balked/rejected landing should always be executed following such a bounce. GO AROUND!!!!

TCAS RA

- Pilots are authorized to deviate from their Air Traffic Control (ATC) clearance in order to comply with a TCAS resolution advisory (RA) command.
- Disengage Autopilot
- Get and stay in the green
- Recover to level flight when RA is complete
- Contact ATC
- Pilots shall notify Dispatch after compliance with a TCAS RA, as defined in GOM 1-8.6.5.

TCAS System Failure (TCAS FAIL Flag on PFD/MFD)

(1) Radio tuning unit, TCAS main display page, MODE line select key ..... STBY MODE

———— END ————

TCAS Resolution Advisory Failure (TCAS RA FAIL Flag on PFD)

(1) Radio tuning unit, TCAS main display page, MODE line select key ..... TA MODE ONLY

———— END ————

TCAS Traffic Display Failure (TCAS DISPLAY FAIL Flag on MFD)

TCAS DISPLAY FAIL flag displayed on one MFD:

(1) Functional MFD ..... Use for TCAS data

———— END ————

PRM Approaches

- PRM approaches are independent, simultaneous operations to runways spaced between 3000 and less than 4300 feet apart. The approach courses are normally parallel but may be offset by between 2.5 and 3.0 degrees depending on the runway separation.
- One Attention All Users Page (AAUP) is published for each airport where PRM approaches are conducted.
- It is required to brief the General airport procedures and those Runway Specific applicable to the approach that is to be conducted.
- Tune a secondary communication radio to the PRM frequency (or, if silent, to another, e.g. ATIS), set the volume as desired, retune if necessary to the PRM frequency, then deselect the secondary audio. When switched to the tower, re-select the secondary radio audio.
- Though issuance is rare, the “breakout” instruction will begin with the words “Traffic Alert,” followed by the Aircraft call sign, A Turn, Climb (normally) or desend (rarely).

Traffic Alert Lindberg 4506, turn left immediately, heading 040, climb and maintain 5000

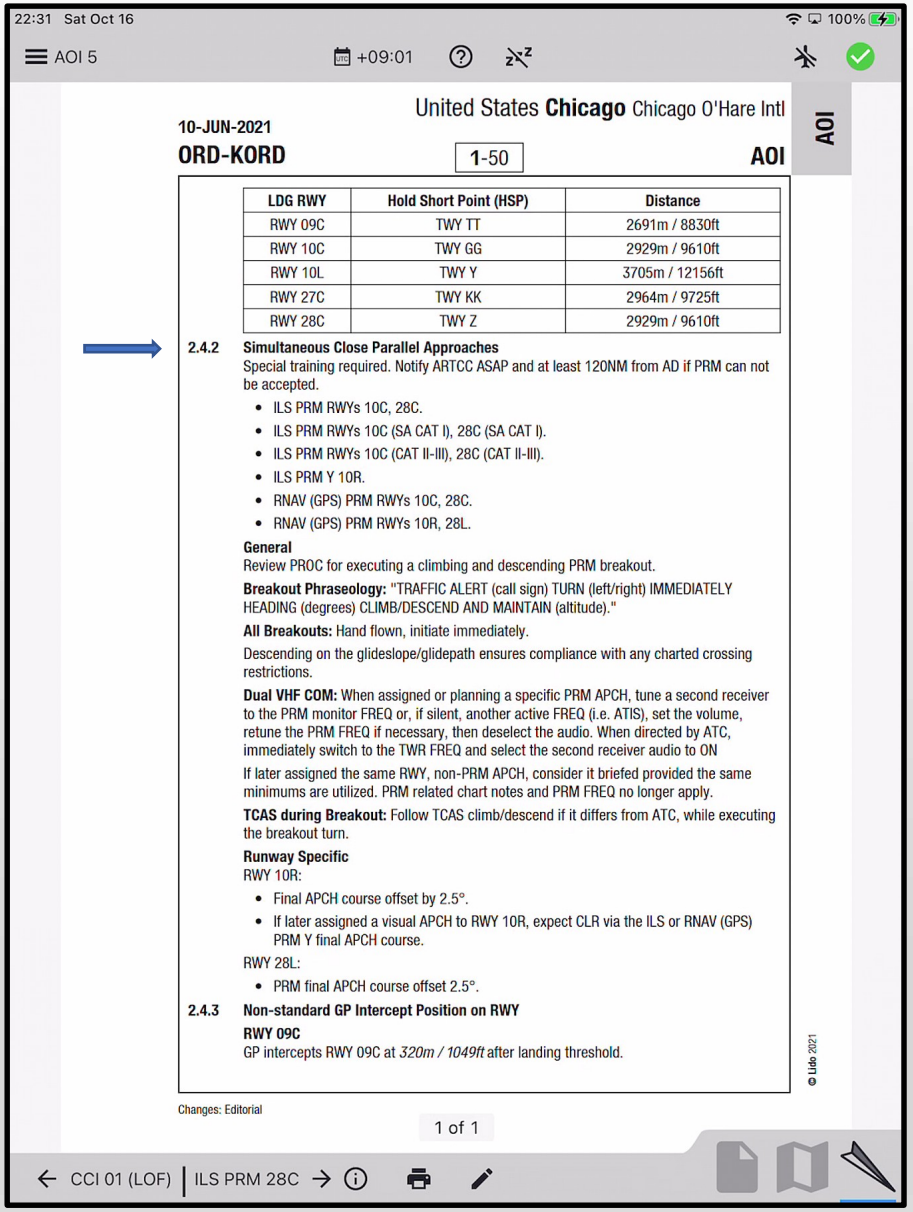
or

Traffic Alert Lindberg 4506, turn right immediately, heading 150, descend and maintain 1500

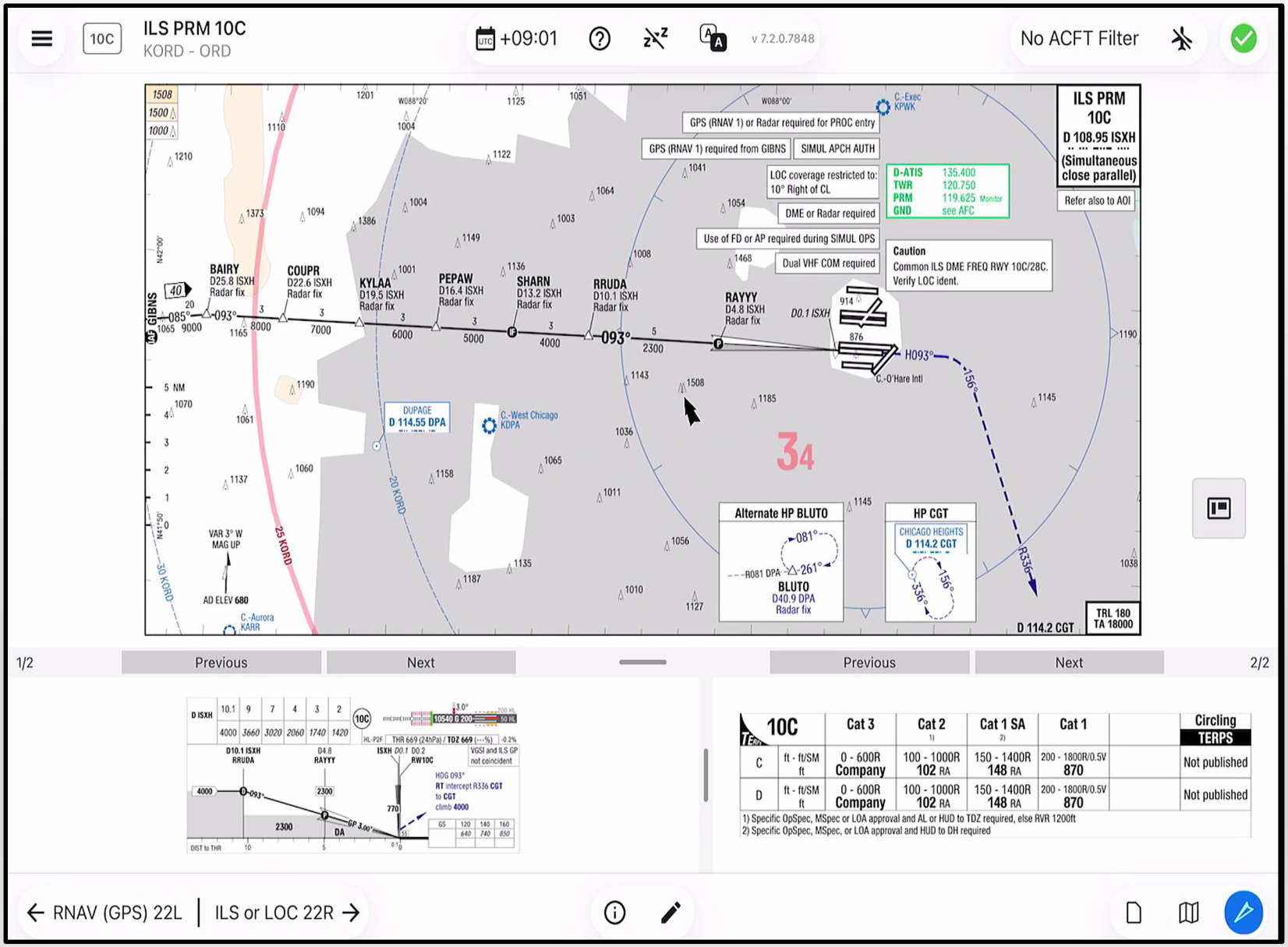
PRM Approaches
AAUP Briefing

The AAUP (Attention All Users Page) brief includes:

- ❑ Reviewing the procedure for executing a breakout.
- ❑ Reviewing the breakout phraseology: “Traffic alert (call sign) turn (L/R) immediately climb/descend and maintain (altitude).”
- ❑ Noting that all breakouts are hand flown, initiate immediately.
- ❑ Noting that descending on the glideslope/glidepath meets any charted crossing restrictions.
- ❑ Noting that later assignment of the non-PRM approach to the same runway, consider it briefed if the same vertically guided minima are utilized. PRM related notes may be disregarded.
- ❑ Follow a TCAS RA climb/descend during a breakout, even if it differs from ATC, while executing the breakout turn.
- ❑ Using dual communications to tune a secondary radio to the PRM monitor frequency, set the volume, then deselect the audio.
- ❑ When directed by ATC, immediately switch to the tower frequency and select the secondary radio audio to ON.



KORD ILS PRM 10C



10C	Cat 3	Cat 2 1)	Cat 1 SA 2)	Cat 1		Circling TERPS
C ft - ft/SM ft	0 - 600R Company	100 - 1000R 102 RA	150 - 1400R 148 RA	200 - 1800R/0.5V 870		Not published
D ft - ft/SM ft	0 - 600R Company	100 - 1000R 102 RA	150 - 1400R 148 RA	200 - 1800R/0.5V 870		Not published

1) Specific OpSpec, MSpec or LOA approval and AL or HUD to TDZ required, else RVR 1200ft
2) Specific OpSpec, MSpec, or LOA approval and HUD to DH required

Engine Failures in Flight

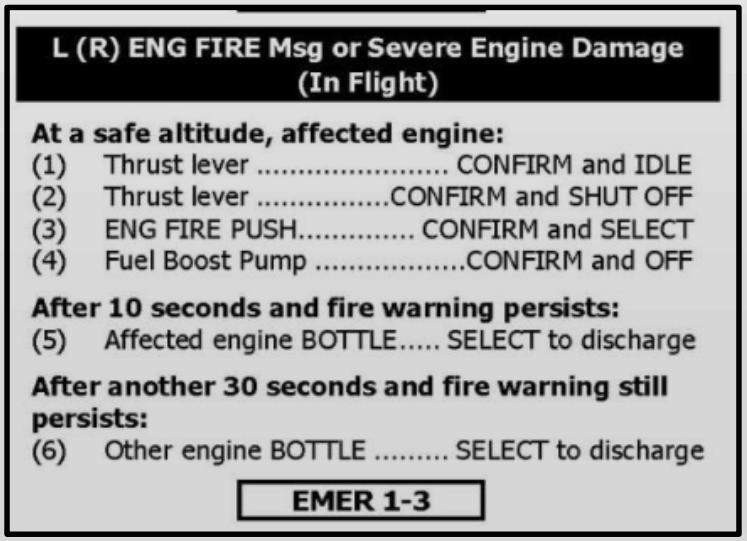
Engine Flameout (L ENG FLAMEOUT or R ENG FLAMEOUT)

- Not on the Immediate Action Checklist, refer to the QRH (Abnormal 1-15)
- Check for oil pressure and quantity, fans turning (N_1 and N_2), no unusual noises or vibrations, etc.
- Restartable

Engine Damage & Engine Fire

- On the Immediate Action Checklist
- Not Restartable

SOP Section 1-4.23.5 provides a sample dialog for a Left Engine Fire Indication.



L (R) ENG FIRE Msg or Severe Engine Damage (In Flight)

At a safe altitude, affected engine:

(1) Thrust lever ..... CONFIRM and IDLE
(2) Thrust lever .....CONFIRM and SHUT OFF
(3) ENG FIRE PUSH..... CONFIRM and SELECT
(4) Fuel Boost Pump .....CONFIRM and OFF

After 10 seconds and fire warning persists:

(5) Affected engine BOTTLE..... SELECT to discharge

After another 30 seconds and fire warning still persists:

(6) Other engine BOTTLE ..... SELECT to discharge

EMER 1-3

Engine Flameout

L ENG FLAMEOUT or R ENG FLAMEOUT

(1) Affected thrust lever .....CONFIRM and IDLE

(2) Engine instruments .....MONITOR auto-relight

NOTE

1. Affected engine's ITT may drop; N_2 may drop below idle.
2. Affected engine may shut down.

L ENG FLAMEOUT or R ENG FLAMEOUT caution message persists or N_2 drops below 40%:

Yes

(3) Single Engine Procedures, In-flight Engine Shutdown .....ACCOMPLISH

Refer to ABNORM 1–4

– END –

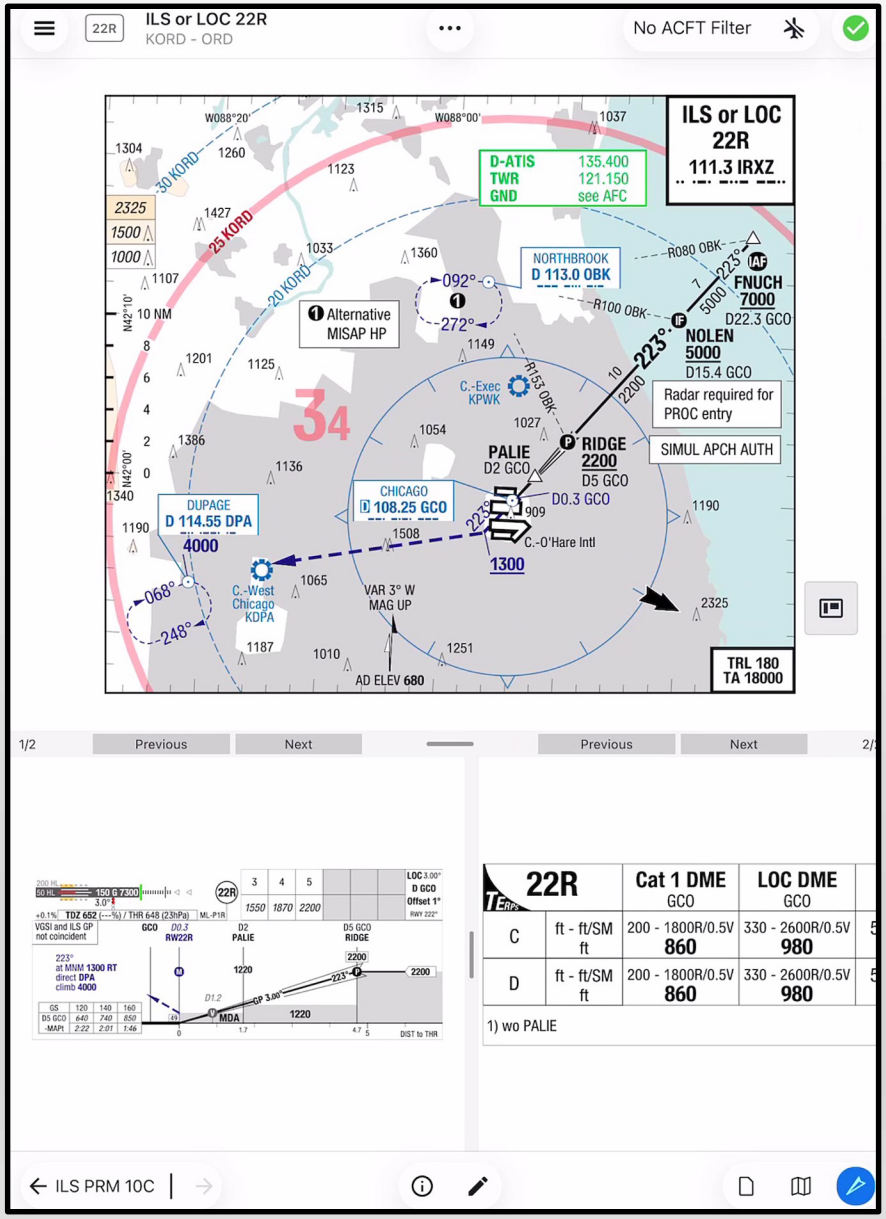
No

(3) No further action required.

———— END ————

ORD ILS 22R

Hand Flown Single Engine



Briefing Items
COS

- Takeoff Stall Flaps 20
- Loss of Reliable Airspeed
- EGPWS
- High Altitude Stalls
- UPRT (Upset Recoveries)
- Windshear
- Low Altitude Stalls
- Fire
- Evacuation

Flaps 20 Takeoff

- Flaps 20 Takeoffs provide shorter takeoff rolls and steeper climb gradients.
- ACARS takeoff data will state flaps 20.
- Clean Up: For a Flaps 20 takeoff, at acceleration altitude: At V2 + 12, select Flaps 8. At V2 + 20, select Flaps 1 and allow the aircraft to continue its acceleration to VT - 15 knots, then select Flaps 0.

61000 lb TAKE–OFF

Add 1 knot to V_1 & V_R for Wing & Cowl Anti–Ice ON

	Flaps 8								Flaps 20							
	OAT	Altitude X 1000 ft							OAT	Altitude X 1000 ft						
	°C	SL	2	4	6	8	10		°C	SL	2	4	6	8	10	
V_1 118	≤0	0	1	2	3	4	5	V_1 113	≤0	0	1	2	2	3	4	
	20	0	1	2	3	5	6		20	0	1	2	3	4	5	
	30	0	2	3	5	6	7		30	0	1	3	4	5	6	
	40	2	3	4	6	––	––		40	2	3	4	5	––	––	
	50	4	5	––	––	––	––		50	3	4	––	––	––	––	
V_R 119	≤0	0	1	2	2	3	4	V_R 113	≤0	0	1	2	2	3	4	
	20	0	1	2	3	4	5		20	0	1	2	3	4	5	
	30	0	1	2	4	5	6		30	1	2	3	4	5	6	
	40	1	2	3	5	––	––		40	2	3	4	5	––	––	
	50	3	4	––	––	––	––		50	3	4	––	––	––	––	
V_2 132	≤0	0	–1	–1	–1	–1	–1	V_2 125	≤0	0	0	–1	–1	–1	–1	
	20	–1	–1	–1	–2	–1	–1		20	0	0	–1	–1	–1	–1	
	30	–1	–1	–1	–2	–1	–1		30	0	–1	–1	–1	–1	–1	
	40	–1	–1	–2	–1	––	––		40	–1	–1	–1	–1	––	––	
	50	–2	–1	––	––	––	––		50	–1	–1	––	––	––	––	

V_{FTO} / V_{ENR}	FL	SL – 100	200	250	300	350	410
	KIAS	179	181	190	196	203	213

61000 lb LANDING

FLAPS	0°	1°	8°	20°	30°	V_{REF} 45°	V_{2GA} 8°
V_{APPR}	168	152	146	140	136	128	136

<CRJ700_QRH_takeoff_cafm_imp_Jun09_61000.ps>

Takeoff Stall

1-5.7.5 Takeoff Stall

The Takeoff Stall is meant to simulate an approach to stall in the takeoff phase of flight. The aircraft should be configured for a flaps 20 takeoff without the use of the autopilot (Gear – DOWN, Flaps – 20, Left/Right Bank).

1.	Autopilot	Disengage, if required
2.	Pitch attitude	Lower nose to reduce angle of attack
3.	Thrust levers	Advance to MAX POWER
4.	Roll attitude	Wings level
5.	FLIGHT SPOILER	RETRACT

After airspeed increases and stall warning goes out:

6	Pitch attitude	Adjust to minimize altitude loss
7.	Thrust levers and aircraft configuration	Adjust as required

Note 1: It is essential that the AOA be immediately reduced, even if this means a loss of altitude.

Note 2: Avoid abrupt or aggressive pitch control inputs during recovery. Inappropriate recovery inputs can result in a secondary stall.

Note 3: Height loss resulting from high AOA recovery, especially at cruise altitude and/or low initial thrust conditions, can be significant.

Loss of Reliable Airspeed

Unreliable Airspeed In-flight

(1) Autopilot ..... DISENGAGE
(2) FDs ..... DESELECT
(3) Use ISI for pitch reference.

Initial take-off climb or go-around is required:

(4) Pitch/N_1 ..... 10 degrees/TOGA from SL to 15000 ft; 5 degrees/CLB above 15000 ft
(5) Aircraft configuration ..... At clean up altitude Gear UP / FLAPS 0
(6) Airplane altitude ..... MAINTAIN lowest safe altitude or higher

CAUTION

Respect stall warning/stick shaker.

(7) Set and monitor pitch and roll using ISI. <1099>
(7) Set and monitor pitch and roll using PFD. <1025> or <1100>

At desired altitude:

(8) Pitch/N_1 ..... Set as per Table A – Level Flight – FLAPS 0
(9) STALL PTCT, PUSHER (left or right) ..... OFF

CAUTION

1. Do not use any FD/autopilot SPEED mode.
2. Rudder travel limits may be inappropriate for phase of flight. For cruise and descent flight, avoid excessive rudder inputs. For approach, landing and go-around flight, differential thrust and aileron input may be required to assist in maintaining directional control. Select the longest runway available with minimum crosswind and turbulence.
3. ISI must be used for pitch reference. <1099>

(10) Flight Director ..... PTCH/ROLL or HDG modes

▼

Please open QRH 2 Page 17-2

Flight Technique:

Set thrust and pitch to target, then adjust pitch to maintain required altitude or path:

- Allow sufficient time to stabilize altitude or path between pitch adjustments.
- If still descending below desired altitude or path, INCREASE pitch using 0.5–degree increments.
- If still climbing above desired altitude or path, DECREASE pitch using 0.5–degree increments.
- If displayed, VSI can be used to monitor required altitude or path.

NOTE

1. Initial pitch target is for reference only. See Flight Technique to adjust pitch as required up to a maximum of +/– 1.5 degrees.
2. If pitch is increased, REDUCE expected speed range by ΔKIAS/ΔMach.
3. If pitch is decreased, INCREASE expected speed range by ΔKIAS/ΔMachs.

Table A – LEVEL FLIGHT – FLAPS 0

ALT (ft)	EXPECTED SPD RANGE KIAS/Mach	EXPECTED SPD CHANGE FOR 0.5 DEGREE CHANGE IN PITCH ΔKIAS/ΔMach	Weight lb Pitch (degree) / Initial Thrust (%N1)						
			45000	50000	55000	60000	65000	70000	75000
40000	220 – 250/ .73 – .82	5/0.01	– 0.5 / 80.9	– 0.5 / 82.2	0.0 / 83.5	0.5 / 83.4	1.0 / 85.7	-- / --	-- / --
35000	230 – 275/ .69 – .81	5/0.01	– 1.0 / 75.6	– 0.5 / 79.4	– 0.5 / 80.3	0.0 / 81.4	0.5 / 82.5	0.5 / 83.6	1.0 / 84.9
30000	250 – 285	10	– 1.0 / 74.9	– 0.5 / 77.8	– 0.5 / 78.6	0.0 / 79.4	0.5 / 80.3	0.5 / 81.2	1.0 / 82.1
25000	250 – 286	10	– 1.0 / 74.2	– 0.5 / 74.8	– 0.5 / 75.5	0.0 / 76.3	0.5 / 77.1	0.5 / 77.8	1.0 / 78.6
20000	250 – 287	10	– 1.0 / 70.6	– 0.5 / 71.2	– 0.5 / 71.9	0.0 / 72.6	0.5 / 73.2	0.5 / 73.8	1.0 / 74.5
15000*	260 – 285	10	– 1.0 / 67.1	– 0.5 / 67.6	– 0.5 / 68.2	0.0 / 68.9	0.5 / 69.5	0.5 / 70.1	1.0 / 70.8
15000**	200 – 235	5	1.0 / 58.9	1.0 / 59.9	1.5 / 61.1	2.0 / 62.4	2.5 / 63.9	3.0 / 65.3	3.5 / 66.8
10000	200 – 230	5	1.0 / 54.6	1.5 / 55.7	2.0 / 56.9	2.5 / 58.2	3.0 / 59.6	3.5 / 61.0	4.0 / 62.5
5000	200 – 230	5	1.0 / 51.0	1.5 / 52.0	2.0 / 53.1	2.5 / 54.3	3.0 / 55.6	3.5 / 56.9	4.0 / 58.3
0	200 – 230	5	1.0 / 47.9	1.5 / 48.8	2.0 / 49.8	2.5 / 51.0	3.0 / 52.2	3.5 / 53.4	4.0 / 54.7
If any indicated speed is outside the expected indicated airspeed range, it should be considered UNRELIABLE.									

* Pitch/N_1 settings for cruise phase
** Pitch/N_1 settings for transition to approach phase

Interpolation is acceptable

The tables start on page 17-7. There are tables for Level Flight, Climb, Descent, Approach, and Approach Flaps 45 Gear Down.

EGPWS

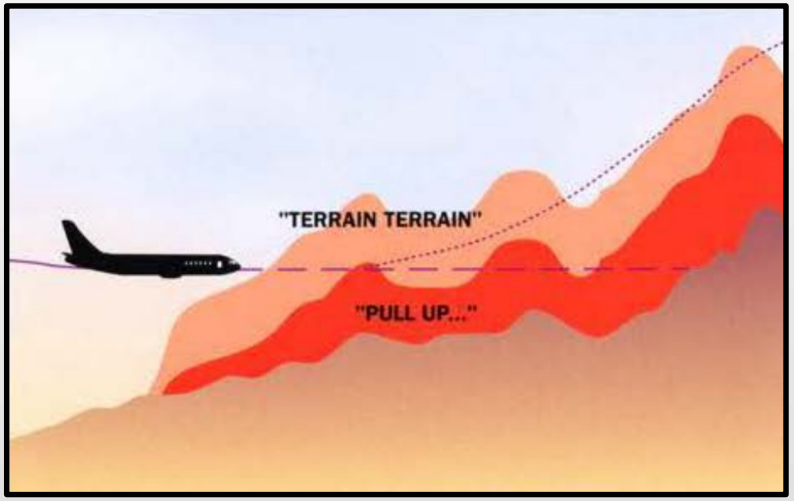
Airplane navigation must not be predicated upon the use of the terrain display.

To avoid giving unwanted alerts, the terrain awareness alerting, and display functions must be inhibited on takeoff, approach or landing within 15 nm of an airport not contained in the EGPWS airport database.

If in doubt call dispatch, they can use https://ads.honeywell.com/search/egpwsSearch to verify.

The terrain database, terrain displays and alerting system do not account for man-made obstructions, except for all known man-made obstructions in Canada, the United States and Mexico.

If GPS is inoperative (identified by NO GPS RAIM, GPS NOT AVAILABLE or GPS – FMS DISAGREE message on the FMS CDU), the EGPWS may fail to alert when a terrain threat exists, during ambient surface temperatures below ISA, during non-standard temperature lapse rates or if incorrect barometric settings are set on the altimeter.



High Altitude Stalls
High Altitude Aerodynamics

- High altitude is flight above FL250.
- The forces required to make a change to pitch attitude are much less at the high Mach numbers flown at high altitude because there's less aerodynamic damping.
- At a constant airspeed, a given (consider 3° for example) elevator deflection at 35,000 ft. will result in a significantly higher pitch rate than the same elevator deflection at 5,000 ft.. Therefore, the change creates more lift and a higher load factor.
- The angle of attack at which a wing stalls reduces (Smaller angle) with increasing Mach…. So that at high Mach (normally, high altitude), an airplane may enter an accelerated stall at an angle of attack that is less than (smaller) the angle of attack for stalling at lower Mach numbers.
- Smooth and precise control inputs are required at high altitude, you must be aware of this, and apply this knowledge when manually controlling the aircraft. Improper control inputs can result in high load factors, resulting in an inadvertent high-altitude stall.

High Altitude Stalls

Speeds

Climb:

Sea Level to 10,000’	250 KIAS
Above 10,000’	Long Range Climb is 250 KIAS / M 0.70 up to FL320 then transition to normal Climb by FL350
	Normal Climb is 290 KIAS / M 0.74 Above FL 350 climb at NO LESS than Mach 0.74
	High Speed Climb is 320 KIAS / M 0.77

Cruise:

At no time should the aircraft be flown at less than Mach .70 or driftdown speed, whichever is higher. The driftdown speed is based on the aircraft’s weight and altitude and may be found in the speed cards located in the CRJ QRH Volume 1. This will provide adequate protection from stall while maneuvering up to at least 1.3g.

High Altitude Stalls
Stall Recovery

The high-altitude clean stall is meant to simulate an approach to stall condition during the normal cruise phase of flight.

Aircraft buffet, un-commanded roll, stick shaker activated and/or stall warbler on:

1. Autopilot	Disengage, if required
2. Pitch attitude	Lower nose to reduce angle of attack (-15°)
3. Thrust levers	Advance to MAX POWER
4. Roll attitude	Wings level
5. FLIGHT SPOILER	RETRACT

After airspeed increases and stall warning goes out (at between 0.70 and 0.74 Mach, gently) :

6. Pitch attitude	Adjust to minimize altitude loss
7. Thrust levers and aircraft configuration	Adjust as required

Note 1: It is essential that the AOA be immediately reduced, even if this means a loss of altitude.

Note 2: Avoid abrupt or aggressive pitch control inputs during recovery. Inappropriate recovery inputs can result in a secondary stall.

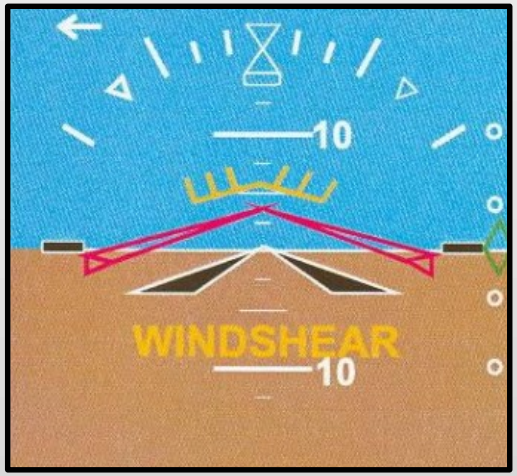
Note 3: Height loss resulting from high AOA recovery, especially at cruise altitude and/or low initial thrust conditions, can be significant. (Don't worry about it – recover from the stall and let ATC know what altitude you think you can hold).

UPRT Upset Recoveries

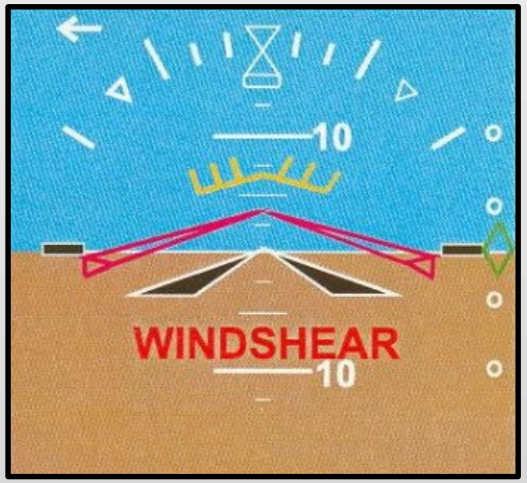
- PUSH
- ROLL
- PITCH
- THRUST

Windshear

Windshear is a weather phenomenon of sudden wind speed and/or direction changes over a short distance. The downburst is the most dangerous type of windshear and studies have confirmed the existence of a more hazardous, yet smaller-scale, form of downburst known as “microburst”. Please open your SOP to Section 1-10.3.5



Increasing performance windshear is annunciated on the PFD by a flashing amber “WINDSHEAR” message and the alpha margin indicator (AMI).



Decreasing performance windshear is annunciated on the PFD by a flashing red “WINDSHEAR” message and the alpha margin indicator (AMI)

Landing Stall

1-5.7.9 Landing Attitude Stall

The Landing stall is meant to simulate an approach to stall in the landing configuration. The aircraft should be configured for landing with the autopilot on (Gear – DOWN, Flaps – 45).

1. Autopilot..... Disengage, if required
2. Pitch attitude ..... Lower nose to reduce angle of attack
3. Thrust levers.....Advance to MAX POWER
4. Roll attitude.....Wings level
5. FLIGHT SPOILER..... RETRACT

After airspeed increases and stall warning goes out:

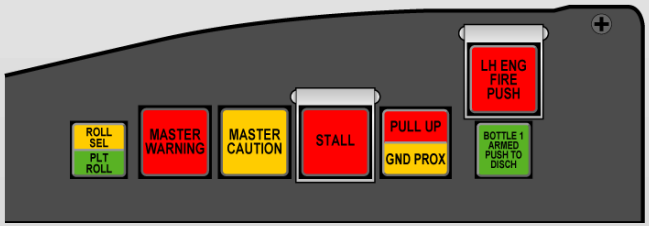
6. Pitch attitude..... Adjust to minimize altitude loss
7. Thrust levers and aircraft configuration ..... Adjust as required

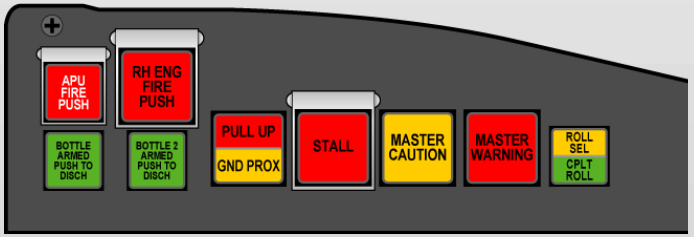
Note 1: It is essential that the AOA be immediately reduced, even if this means a loss of altitude.

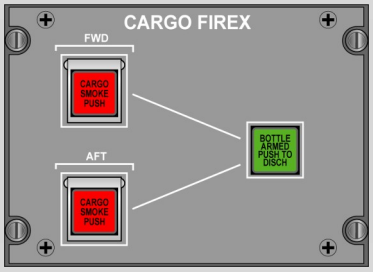
Note 2: Avoid abrupt or aggressive pitch control inputs during recovery. Inappropriate recovery inputs can result in a secondary stall.

Note 3: Height loss resulting from high AOA recovery, especially at cruise altitude and/or low initial thrust conditions, can be significant.

Fire Detection and Protection



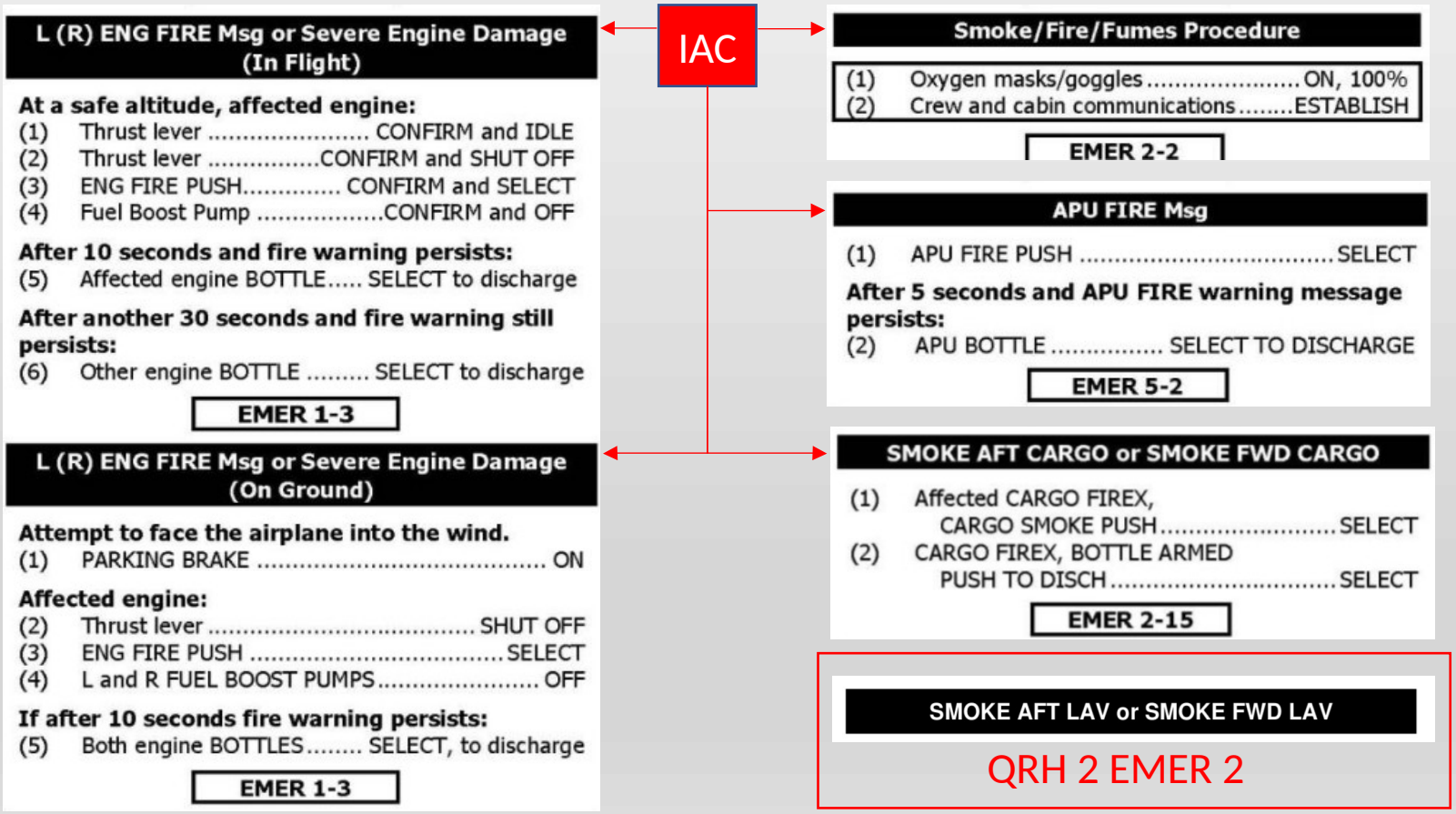




Fire Checklists

Time is critical during smoke/fire/fumes emergencies. The flight crew should consider an immediate landing anytime the situation cannot be controlled. (QRH2 EMER 2-2)

Passenger masks should not be deployed when performing smoke or fire procedures



Debrief

- ✓ How did you do as Pilot Flying?
- ✓ How did you do as Pilot Monitoring?
- ✓ Instructor Feedback
- ✓ Homework!

What’s next:

- Maneuvers Validation (MV)
- Seat Dependent Training (SDT)
- Seat Dependent Evaluation (SDE)
- Please make a list of anything that you have questions on!