# AIRBUS A319/320/321
## Flight Scenario Q and A
### 2005 – 2006

| Updated : 11/19/05 | PHB : 27-05 | FOM 17-05 |
|---|---|---|
| Send corrections/comments to Bob Sanford, E-mail: busdriver@hky.com | | |

## Prior to Gate Departure

***1. Safety is the top priority at US Airways at all times and at all levels. Reference: FOM 2.3***

***2. Operational decisions should be prioritized in the following order of importance: Reference: FOM 2.2***

- Safety
- Passenger Comfort
- Schedule
- Efficiency

***3. When operating on an international leg, arrive at the aircraft no later than 50 minutes prior to scheduled departure time to facilitate crew verification, crew briefing and passenger boarding. Reference: FOM 5.3.1***

***4. When operating on a domestic leg, arrive at the aircraft no later than 40 minutes prior to scheduled departure time to facilitate crew verification, crew briefing and passenger boarding. Reference: FOM 5.3.1, FOB 1-05***

***5. If the first leg of the duty period is domestic, then the report time is 1 hour prior to departure. If the first leg is international (except for Nassau and Canada), the report time is 1 hour and 30 minutes prior to departure. Reference: FOM 5.1.1***

***6. If your medical requires corrective lenses while performing flight duties, spare corrective lenses must also be carried. Reference: FOM 5.1.1***

***7. For international TOLA flights, have the appropriate Oceanic or Non-Oceanic Planning Guide out for use on every flight. Refer to the FOM TOLA information as necessary. Reference: FOM 17b PG and FOM 17c PG***

***8. The crew briefing sets the tone for a positive working environment and as a minimum consists of introducing the crew and ensuring open communications regarding the operation. The mandatory briefing items are: Reference: FOM 5.3.4***

- Statement of captain's focus on safety
- Stress open communications
- Necessary items from the Flight Operations Update

***9. To find the minimum number of flight attendants required at the gate with passengers onboard refer to FOM 4.3.9: Flight Attendant Complements . A pilot substituting for a flight attendant must be identified to the passengers and be located in the forward part of the cabin prepared to perform emergency evacuation duties until the flight attendant returns. Reference: FOM 4.3.9***

***10. During preflight it is discovered that the Emergency Response Guidebook is missing. An OF-12 has been issued for the flight. What actions must be taken? Reference: FOM 9.2.2***

This guidebook must be carried onboard whenever hazardous materials requiring an OF-12 are transported. Make an entry in the logbook if the guidebook is missing. It will be replaced at the first maintenance station containing a spare. If the guidebook is required but not onboard the aircraft, inform the controlling dispatcher to fax a copy of the required orange pages appropriate to the HAZMAT contents aboard.

***11. US Airways continues to have an unacceptable rate of inadvertent slide deployments. It's extremely important that flight crews raise awareness to inadvertent slide deployments through crew briefings. Additionally pilots must insure that the Parking and Securing checklist item, "SLIDES VERIFY 4 DISARMED" is accomplished. (<u>True</u> or False) Reference: PH 3.16***

Warn cabin crew if any of these slides are not disarmed. Armed slides are identified on the ECAM DOOR page by a white SLIDE indication.

***12. Whenever MEL/CDL relief is used make sure the flight release lists the item, there is an MEL/CDL sticker near the item and on the logbook, and all three contain the same control number. Ensure the MEL has not expired by checking the last 2 digits of the control number and in all cases read and comply with the MEL/CDL prior to departure. Reference: FOM 5.3.8 and MEL book***

True

***13. If the MEL/CDL requires an action in flight (e.g., logging engine readings), the crew should establish a procedure when reading the MEL to remind them to accomplish the action in flight. Failure to accomplish the MEL actions may result in an FAA investigation. (<u>True</u> or False) Reference: No Reference***

***14. The dispatcher uses the FOM <u>Planned Fuel Determination</u> diagram to determine the correct amount of fuel to load on the aircraft. Reference: FOM 5.3.12***

***15. On average the planned arrival fuel compared to the actual arrival fuel is within 500 pounds for each fleet month after month. However, the flight plan fuel burn calculations do not include items such as unexpected vectors, delayed climb, early descent and flying below the planned cruise altitude. The extra <u>30</u> minutes of hold without an alternate, or <u>15</u> minutes of hold fuel with an alternate is added to cover these events. Reference: FOM 5.3.12***

***16. During boarding a passenger becomes disruptive. The procedures that cover this can be found under FOM <u>8.1.7</u> "Disruptive Passengers." Reference: FOM 8.1.7***

Note: See also FOM 8.2.2 – Passenger Removal for Misconduct.

***17. On an international non-oceanic operation the dispatcher will plan the flight to remain within <u>100</u> nm from the nearest shoreline when at or above 35 degrees latitude and within <u>162</u> nm when south of 35 degrees latitude. Reference: FOM 17a.3***

***18. To help ensure an on time departure the captain needs to be ready to establish communications with the ground crew <u>6</u> minutes prior to pushback. Reference: FOM 5.4.1***

***19. During a TSA required cabin search, it is permissible for flight attendants to remain onboard with their luggage. (True or <u>False</u>) Reference: CBS dated March 09, 2005, FOM 4.7.4***

Flight attendants and crew bags, except those stowed on the flightdeck, will <u>not</u> be present on the aircraft. The flight crew is permitted to remain onboard to complete the required inspections.

| **MEL FR ITEM**<br><br>**35-1002A Indications on DOOR/OXY ECAM Page – OXY High Pressure Indication** | REPAIR CATEGORY<br>**B** | QUANTITY INSTALLED<br>**1** | MINIMUM REQUIRED<br>**0** |
|---|---|---|---|

May be inoperative.

**Maintenance FR Procedure – Accomplish during the initial application of the MEL and prior to each departure**

Verify oxygen pressure as follows:
1. Open access door 812.
2. Check oxygen pressure on the direct reading gauge.
3. Close access door 812
4. Record the oxygen pressure by making the following log book entry "Oxygen pressure is XXX PSI. Verified per MEL 35-1002A FR procedure."

AMM CROSS REFERENCE INFORMATION

| Task Number | Designation |
|---|---|
| TASK 35-10-00-040-002 | OXY High Pressure Indication-Direct Reading. |

**Operations Procedure – Accomplish each flight**

1. The oxygen pressure is required to be verified prior to each departure. Verification will be a log book entry indicating Oxygen pressure is XX PSI. Verified per MEL 35-1002A FR procedure. Ensure this entry appears in the log book.

***20. Upon receipt of your aircraft, a logbook write-up has been entered and an MEL has been issued for erroneous oxygen indications on the DOOR/OXY ECAM page. With MEL 35-1002A an FR is included in the MEL. How often does the FR have to be accomplished? Reference: MEL (above)***

The oxygen pressure is required to be verified prior to each departure. Verification will be a log book entry indicating Oxygen pressure is XX PSI. Verified per MEL 35-1002A FR procedure. Ensure this entry appears in the log book.

***21. Whose responsibility is it to see that the maintenance FR procedure is accomplished and signed off? Reference: MEL book, page D-11***

The captain.

***22. If your Flight Release and TPS do not reference this MEL, are they valid? Reference: PH 4.2***

No

***23. What is the definition of "departure" when dealing with an MEL? Reference: FOM 11.4.1***

Departure, as used in the MEL, indicates the time the aircraft has been either pushed back, taxied, or is towed from the blocks for the purpose of flight.

***24. US Airways requires all crewmembers to maintain and carry a passport for international flights only. (True or <u>False</u>) Reference: FOM 4.3.14***

US Airways requires all crewmembers to maintain and carry a valid passport on <u>all</u> flights. Crewmembers will also provide a valid copy of their passport to their respective Chief Pilot's office.

***25. Federal Air Marshals (FAMs) are specially trained armed federal law enforcement officers whose primary mission is to prevent hijacking. FAMs are permitted to board the aircraft with passengers, but may never be allowed onboard without a crewmember present. (True or <u>False</u>) Reference: FOM 4.7.8***

FAM's <u>are</u> permitted to board the aircraft or remain onboard without crewmembers being present.

***26. While commuting a Federal Flight Deck Officer (FFDO), when transporting a firearm must identify himself to the gate agent and captain before the flight. (True or False) Reference: FOM 4.7.10***

True – Also applies to deadheading FFDO's.

***27. During boarding a passenger becomes disruptive. Who is responsible for the decision whether to remove or not remove the passenger? Reference: FOM 8.2.2***

The Captain may request a disruptive passenger be removed from the aircraft.

***28. When operating in international, non-radar environment with no transponder code assigned, you should plan to squawk __2000__. In areas without ATC radar service, the TCAS should be set to __TA/RA__. Reference: FOM 17.b.3.1***

If flight, even in areas without ATC radar service:

- Transponder – AUTO
- Altitude Reporting – ON
- TCAS – TA/RA

***29. When fueling the Airbus A319/320/321 series of aircraft the maximum allowable fuel imbalance between the left and right wing tanks (A321), inner tanks (A319/320) is: Reference: PH 2.8.2***

Maximum allowable fuel imbalance between the L & R wing tanks (A321), inner tanks (A319/320): 2,500 lbs
Maximum allowable fuel imbalance between the L & R outer wing tanks (A319/320): 1,000 lbs

***30. During preflight, a crewmember notices the spoiler, flap, and/or flight control positions are not in agreement with control lever positions. The crewmember should: Reference: PH 3.3***

Check with ground crew before applying hydraulic power.

***31. During preflight, a crewmember presses the STS pushbutton and sees "CAT 3 DUAL" is displayed in the INOP SYS. The crewmember should: Reference: PH 3.4.1***

Try to reset FAC 1 and FAC 2.

***32. The flight management nav database is revised every 28 days. At what time on the revision date does the new nav database become effective? Reference: PH 3.4.1***

0900Z on the date of change.

***33. It's important to warn any ground personnel whose headset may be connected to the service interphone system that a loud noise will be heard when performing a crew oxygen test. (__True__ or False) Reference: PH 3.4.1***

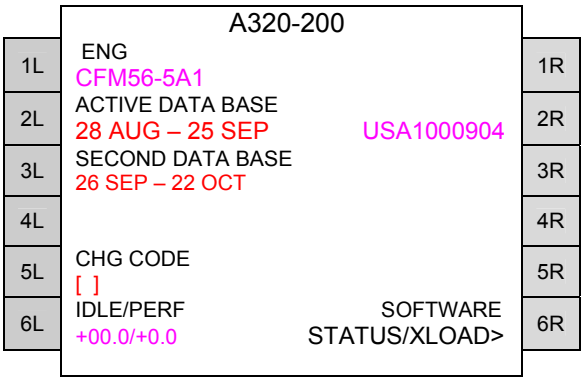
***34. The SABRE flight planning system looks at all stored routes and altitudes to determine the one that results in the __least flight time__. Reference: PH 3c2.2***

***35. An alternate will appear on the release if the dispatcher has determined that an alternate is required. If, in the captain's opinion, the alternate may be deleted, he should __contact the dispatcher__. Reference: PH 3c2.2***

Even if the fuel is on the aircraft, this contact may alert the dispatcher the alternate is no longer required for this destination.

***36. On average, external electrical power is approximately __10__ times more cost efficient than using the APU. Reference: PH 3c2.5***

**Please refer to the FMS 2 graphic below for questions 37 and 38:**




***37. The A/C STATUS page in the FMS 2 MCDU will show the active data base. According to this example the active data base runs from __28 AUG__ to __25 SEP__.***

***38. In the above AC STATUS page example, how can the flight crew be certain the data base is intended for use by US Airways?***

The data string adjacent to RSK 2R is preceded by USA.

***39. To improve cooling the cabin, it is permissible to use external conditioned air simultaneously with the airplane air conditioning packs (True or __False__) Reference: PH 2.9.3***

***40. Prior to APU start, the crew receives the ECAM message "LOW OIL LEVEL". The crew should know: Reference: PH 2.14.9***

The remaining oil quantity allows normal APU operation for 10 additional hours.

***41. The preflight altimeter check requires the altimeters to be within __± 20__ feet of each other and within __± 75__ feet of the field elevation. Reference: PH 3.5 and FIL 08-04***

***42. For timely distribution of duties and fleet-wide standardization, the Evacuation checklist, found on the cover of the new A319/320/321 QRH, reassigns the CAB PRESS MODE SEL MAN V/S CTL to FULL UP. This task should be performed by the __First Officer__. Reference: QRH Cover***

## Taxi and Takeoff

***1. After pushback is complete, the ground crew will state, "confirm brakes set", the captain will respond (state) "Parking brake set; disconnect". Reference: FOM 5.4.1***

***2. Prior to taxi, the crew should anticipate airport surface movements by doing a pre-taxi review based on ATIS and previous experience at each airport. The crew should review the expected taxi route on the airport diagram or taxi chart, noting any runway incursion hot spots. Reference: FOM 5.5.1***

***3. Prior to taxi, to ensure orientation both pilots will have the airport diagram/taxi chart in view. Reference: FOM 5.5.3***

***4. If the ACARS becomes inoperative during taxi out accomplish the FOM Discrepancy – After Dispatch Before Takeoff procedure. If the flight can be safely executed an amended release is not required. Reference: FOM 5.4.3***

| Discrepancy – After Dispatch Before Takeoff | |
|---|---|
| **Step** | **Action** |
| 1 | Does the captain want to continue the flight?<br>• If no, goto Step 2<br>• If yes, goto Step 3 |
| 2 | Return for maintenance action.<br>• Enter the discrepancy in the Maintenance Logbook.<br>• Obtain a new/amended Flight Release, if appropriate. |
| 3 | Contact the controlling dispatcher via phone patch, relay through Operations, or ACARS to discuss flight issues. |
| 4 | Can the flight be safely executed?<br>• If no, return to Step 2.<br>• If yes, goto Step 5 |
| 5 | Comply with any applicable MEL/CDL and supplemental/non-normal procedures prior to takeoff. |
| 6 | When time permits and not in a critical phase of flight<br>• Enter the discrepancy in the Maintenance Logbook, and …<br>• Send an ACARS message of the discrepancy using the procedures outline in FOM 5, "Mechanical Discrepancies In-Flight" |

***5. When experiencing an on aircraft delay, when the aircraft is parked and the extended delay is projected to be 15 minutes or more, the captain will: Reference: FOM 4.6.11 and 5.3.29***

Make an announcement authorizing use of PEDs.

The flight crew will provide customers with updated delay status approximately every 15-20 minutes. The announcement should include the current status, reason for the delay, forecasted weather, ETD, and any other pertinent information (including if there is no new information).

The captain will contact the controlling dispatcher and local station personnel, discussing viable options with passenger comfort as the primary goal. After conferencing with dispatch, station personnel, and his crew, the captain decides if the flight should return to the gate.

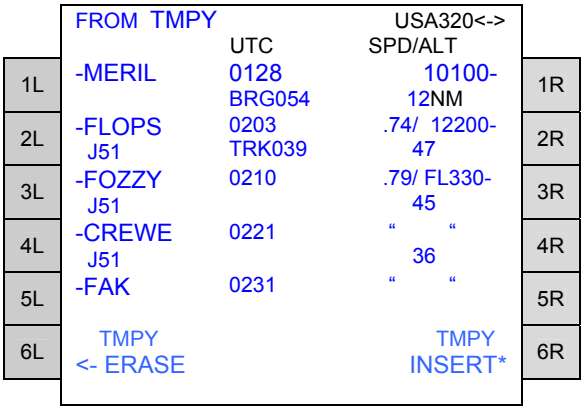
***6. Differences exist between ICAO and North American standard phraseology. The only approved ICAO phraseology to enter a runway is "Line up (and wait)". Reference: FOM 5.5.4***

***7. Prior to the flight or after airborne, when you are aware that routes or altitudes may be available or necessary that are different from the flight plan (e.g., red eye flights, weather along flight, etc.) coordinate with the dispatcher to determine the most cost efficient operation prior to accepting/requesting a change. Reference: PH 3c.2***

***8. When entering the runway the flight crew will: Reference: FOM 5.6.6***

- Verify assigned runway by whatever means available.
- Coordinate ATC instructions.
- Scan any short final area(s) and runway(s) for potential conflicts.
- During low visibility and night operations slightly offset the aircraft from runway centerline to avoid blending in with the runway lights.
- Consider displaying approaching traffic with TCAS
- If holding in position for more than 90 seconds or upon seeing a potential conflict, contact ATC.
- Illuminate landing lights when cleared for takeoff.

**Please refer to the FMS 2 graphic below for questions 9 and 10:**

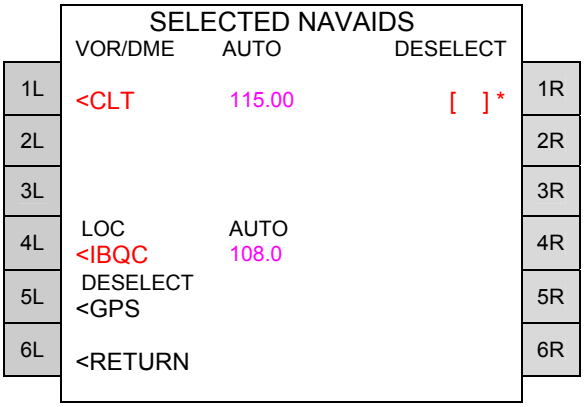



***9. The flight plan has been modified, by selecting the LSK #6L, the flight plan will: Reference: Pilot guide***

Erase the temporary flight plan.

***10. By selecting the LSK #6R, the flight plan will be made permanent. (<u>True</u> or False) Reference: Pilot guide***

**Please refer to the FMS 2 graphic below for questions 11 and 12:**




***11. On the SELECTED NAVAIDS page below, what function does the DESELECT (LSK #1R) serve? Reference: FIL FMS 2***

Deselects a navaid that has been removed from service.

***12. On the SELECTED NAVAIDS page, if the DESELECT GPS 5L LSK, is depressed, this will <u>inhibit all GPS functions from the flight management system</u>. Reference: FIL – FMS 2***

***13. High bypass engines require warm-up prior to applying takeoff thrust. Engine #2 must be started at least __5__ minutes prior for the engine to stabilize before applying thrust for the first flight of the day. Reference: PH 3.7***

For subsequent takeoffs, plan for a 5 minute warm up for workload management; however, the warm up time may be reduced to 3 minutes.

***14. After engine start, prior to receiving the "thumbs up" signal from ground personnel, it is permissible for the first officer to set the flaps for takeoff as they pose no hazard to the ground crewmembers. (True or <u>False</u>) Reference: PH 3.6***

The AFTER START Checklist flow pattern should not be initiated prior to the "thumbs up" signal.

***15. PHL ATIS is: INFO "A" 1200Z. 27018 1/8SM BR 1 OVC 10/09/2990 REM RVR 09R 700. DEPARTING 27R and 27L. Could PHL be used as a takeoff alternate for Airbus aircraft? Reference: FOM 10.5.5, QRH OD1***

Yes - Airbus may use landing minimums down to CAT IIIa at the departure airport when available.

***16. During takeoff, the flight crew receives the message NAV FM/GPS POS DISAGREE. The PF should continue the takeoff. (<u>True</u> or False) Reference: PH 18.3.2***

***17. During takeoff roll, the flight crew receives a predictive windshear aural caution. The flight crew should: Reference: PH 18.8.3***

| **Predictive Windshear Procedures** | | | |
|---|---|---|---|
| | **ADVISORY** | **CAUTION** | **WARNING** |
| ***INDICATIONS:*** | | | |
| **ND** | Windshear icon | | |
| **PFD** | (N/A) | <u>Amber</u><br>**W/S AHEAD** | <u>Red</u><br>**W/S AHEAD** |
| **AURAL** | | **"MONITOR RADAR DISPLAY"** | **"WINDSHEAR AHEAD"**<br>(Twice on takeoff)<br>**"GO AROUND WINDSHEAR AHEAD"**<br>(On approach) |
| ***PHASE OF FLIGHT:*** | | | |
| **Aligned for Takeoff** | Delay the takeoff until the alert no longer exists. | | |
| **Prior to V1** | TOGA.<br><u>Continue</u> the takeoff | <u>Reject</u> the takeoff if sufficient runway remains. | |
| **At or Above V1** | • TOGA<br>• Rotate no later than 2,000 feet of runway remaining<br>• Follow SRS commands<br>• Retract gear and flaps on schedule<br>If a PWS Warning occurs – roll wings level <u>unless terrain is a factor</u> in order to maximize aircraft performance. | | |
| **During Approach** | <u>Continue</u> the approach | • Execute a normal <u>go-around</u> using TOGA thrust.<br>• Retract gear and flaps on schedule.<br>If a PWS Warning occurs – roll wings level <u>unless terrain is a factor</u> in order to maximize aircraft performance. | |

In all cases, notify ATC and if windshear is encountered, as evidenced by the Reactive Windshear aural warning "WINDSHEAR, WINDSHEAR, WINDSHEAR" and red WINDSHEAR message on both PFDs, initiate windshear recovery maneuver.

***18. The tailwind takeoff limitation on Airbus A319/320/321 aircraft is __15 knots__. Reference: PH FIL 07-04, PH 2.3.1***

***19. The tailwind landing limitation on Airbus A319/320/321 aircraft is __10 knots__. Reference: PH FIL 07-04, PH 2.3.1***

## Climb and Cruise

***1. During cruise on a non-oceanic route the captain will ensure any route changes remain within 100/162 nm from a shoreline. Deviations are authorized when necessary due to __in-flight emergencies__ or to avoid __hazardous weather__. Reference: FOM 4.3.4***

***2. The standard international thrust reduction/acceleration altitudes are __1500 / 3000__ feet. (Add to Airbus only) If no change is indicated on the Airport Advisory page, the crew should make no adjustment to the uplinked altitudes. Reference: FOM 17b.2.12***

***3. When immediate, decisive and correct control of aircraft path is required, hand flying without flight director guidance may be necessary. This is an example of __Level 1__ automation. Reference: FOM 4.3.6***

- Level 1: All automation OFF
- Level 2: Autopilot OFF, Optional use of FD
- Level 3: Autopilot, FD, ATHR ON (FCU Selected)
- Level 4: Autopilot, FD, ATHR ON (FMGS Managed)

***4. The "Fasten Seatbelt" sign shall be "ON" during pushback, taxi, takeoff/landing operations, and when __moderate or greater turbulence__ is anticipated. For passenger comfort and safety, the seatbelt sign shall be extinguished in flight when not required. Reference: FOM 4.6.10***

***5. If a circuit breaker trips or has to be cycled, follow the procedure in FOM paragraph __Circuit Breakers (CB) Reset/Cycle Policy__. Reference: FOM 7.31.1***

On the Ground:

- Resetting Tripped CB - A CB tripped by an unknown cause may be reset as part of an approved maintenance trouble-shooting process or after maintenance determines the cause of the tripped CB and that it may be safely reset. A logbook entry is required if a CB is reset.
- Cycling CB – A CB may be cycled when part of the written flight crew procedure or approved maintenance trouble-shooting procedure. In addition, a CB may be cycled one time on the ground when necessary to assist with general trouble-shooting or as instructed by Maintenance.

In Flight:

- Resetting or Cycling Tripped CB - Do not reset a tripped CB or cycle a CB unless consistent with an approved maintenance trouble-shooting process, written flight crew procedure, or unless the captain deems the reset necessary to safely complete the flight. A logbook entry is required if a CB is reset.

***6. According to the FOM International Non-Oceanic Operations, the crew will accomplish a system accuracy check when __initially established in cruise flight__. If GPS Primary is displayed no action is required. Reference: FOM 17b.3.3***

Note: If GPS Primary is not displayed, compare the FMGS position to a ground-based navaid.

***7. When first level at an RVSM altitude record the altitude displayed on the captain, standby and first officer altimeters. Ensure the captain and first officer altimeters indicate within __200__ feet of each other. Reference: FIL 08-04***

Both PFD altimeters must agree within 200 feet at all times in RSVM airspace.

***8. With the captain flying, the altimeter readings in question 7 are: Captain-31,000 ft, Standby- 30,860, First Officer-31,050. Thirty minutes later the First Officer questions the altitude. The readings are now: Captain-31,000 ft, Standby-31,160, First Officer-31,350. Which primary altimeter should be used for reference? __First Officer__ Reference: FIL now but PH 3 shortly***

Best 2 out of 3 … Both Standby and First Officer's altimeters showed a 300 feet increase, while the Captain's did not change.

***9. If the ETA is more than 10 minutes early, operate the flight so as to minimize fuel consumption, while ensuring that the flight will arrive at or before the scheduled arrival time. The best way to reduce airspeed in all flight phases is by reducing the __cost index__. If speed adjustment causes a problem with ATC, honor ATC airspeed requests. Reference: PH 3c***

The crew may adjust airspeed, altitude, or route of flight to maximize cost savings where possible. The dispatcher can help in this assessment.

- If the ETA is more than 10 minutes early, operate the flight so as to minimize fuel consumption, while ensuring that the flight will arrive at or before the scheduled arrival time.
- If the ETA is within 5 minutes of the scheduled time, adhere to the flight plan.

The best method to reduce airspeed in all flight phases is by reducing the cost index. Reduce the cost index gradually to allow the FMGC to recalculate the ETA and EFOB at the destination. This way, the crew can compare ETAs and fuel consumptions.

***10. After dispatch, when one pilot leaves the flight deck the "A" flight attendant should coordinate which flight attendant will enter the flight deck. A __second flight attendant__ should maintain a presence between the passengers and the flight deck door while it is open. Reference: FOM 4.10.3***

***11. If notified in flight of a dangerous goods leak or spill or you suspect one, use the OF-12 to identify the substance and location. Coordinate the Emergency Response Guidebook __Orange: Fire/Spill/First Aid__ Procedures with the flight attendants. Reference: FOM 7.28.6, FOB 3-05***

***12. When reviewing the states "Rules and Procedures" pages for an international arrival in Latin America you see holding speeds are based on ICAO PANS-OPS Doc 8168. This means that holding speeds in __knots (KIAS)__ are used. Reference: FOM 17d.7.5***

***13. If the flight crew deems an enroute diversion is necessary, it is the Captain's responsibility to notify O.C.C. (__True__ or False). This information will normally be relayed by ATC (True or __False__) Reference: FOM 7.16***

***14. During initial climb, if departure control requires a specific altitude before allowing a turn, it is permissible to climb at green dot speed until the turn is issued. (__True__ or False) Reference: PH 3c.5***

Climb in OP CLB at green dot.

***15. During climb with an intermediate level-off, it is desirable to speed select a higher speed (than climb speed) in order to be ready for the continued climb. (True or __False__) Reference: PH 3c.5***

During intermediate level-offs, do not accelerate. Instead, maintain the recommended climb airspeed.

***16. If the note "CTLD CALC/RTE" is printed in the remarks section of the release, what should the crew do prior to accepting any alternate routes? Reference: PH 3c.6***

Coordinate with the dispatcher before making a significant change in routing, especially if the dispatcher has locked the route, which is determined by "CTLD CATC/RTE" appearing on the FPL line, directly below the dispatcher's name in the release. The same is true for a significant change in altitude when "CTLD CALC/FL" is shown.

***17. If the crew decides a climb to the recommended maximum (REC MAX) is warranted, they should know when flying 2,000 above optimum (OPT) will incur a __2__ % fuel penalty. REC MAX is based on the present gross weight and temperature and will provide __1.3g__ protection. Reference: PH 3c.6***

***18. In flight, where would the crew find the procedure for in-flight reset of a flight warning computer? Reference: QRH***

QRH – In Flight Computer Reset

***19. During climb out the flight crew suspects the possibility of airframe icing. It's important to note that they should delay the use of engine anti-ice until visual evidence of ice accumulation can be seen either on the windshield, windshield wipers, or temperature probe. (True or <u>False</u>) Reference: PH 2.6.1***

Ground and takeoff:

- Outside Air Temperature (OAT) is 10°C (50°F) or below ***and***
- visible moisture in any form is present (i.e., clouds, fog with visibility of 1 mile or less, rain, snow, sleet, or ice crystals), ***or***
- when operating on ramps, taxiways, or runways where surface snow, standing water, or slush may be ingested by the engines or freeze on engines, nacelles, or engine sensor probes.

In flight:

- Total Air Temperature (TAT) is 10°C (50°F) or below ***and***
- visible moisture in any form is present (i.e., clouds, fog with visibility of 1 mile or less, rain, snow, sleet, or ice crystals).

Engine anti-ice operation:

- Engine anti-ice must be ON during all ground and flight operations when icing conditions exist or are anticipated (except during climb and cruise when the temperature is below -40°C SAT).
- Engine anti-ice must be ON prior to and during descent in icing conditions (including temps below -40° SAT).

Wing anti-ice operation:

- Select WING ANTI ICE ON after thrust reduction altitude
- Normally, WING ANTI ICE should be selected OFF at the FAF
- If in severe icing conditions, WING ANTI ICE may be left ON for landing

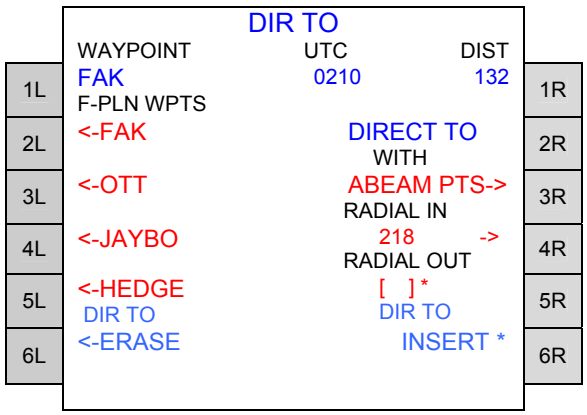
Wing anti-ice is not permitted on the ground or in flight when the TAT exceeds 10°C.

***20. Enroute if during an ECAM procedure LAND ASAP is written in either amber or red, the crew must land at the nearest suitable airport. (<u>True</u> or False) Reference: FIL 08-03***

Landing at the nearest suitable airport is also required for the following non-normal conditions that do not generate a LAND ASAP message on the ECAM:

- Cabin smoke/fire which cannot immediately and positively be determined to be eliminated/extinguished.
- One AC power source available (i.e., engine or APU)
- Any situation the crew feels makes safety of continuing the flight questionable.

**Please refer to the FMS 2 graphic below for questions 21, 22, 23 and 24:**




***21. In the DIR TO example, FAK has been selected as the DIR TO fix. In order to make the DIR TO active the flight crew would select <u>DIR TO INSERT * (6R)</u> . Reference: FIL – FMS 2***

***22. If the DIR TO waypoint JAYBO is selected and the pilot would like to see the ABEAM points, which line select key should be selected? Reference: FIL – FMS 2***

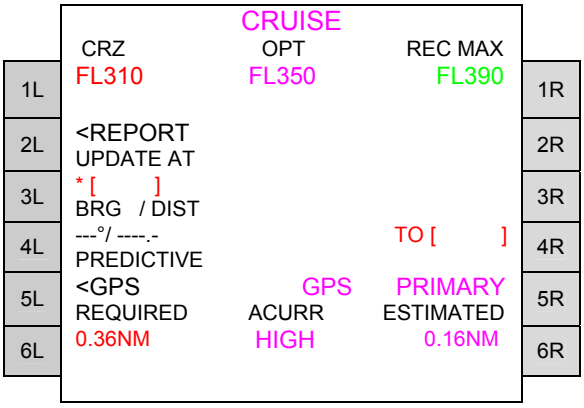
3R ABEAM PTS

***23. If after selecting a DIR TO, along with ABEAM PTS, as long as the abeam position is within 100 nm of the original course, all wind data will be automatically transferred. (<u>True</u> or False) Reference: FIL – FMS 2***

***24. If a DIR TO is desired immediately after takeoff (no nav departure), it is permissible for the flight crew to enter the DIR TO prior to takeoff. (True or <u>False</u>) Reference: FIL – FMS 2***

The flight crew should never enter or leave a DIR TO pending while on the ground prior to takeoff.

**Please refer to the FMS 2 graphic below for questions 25 and 26:**



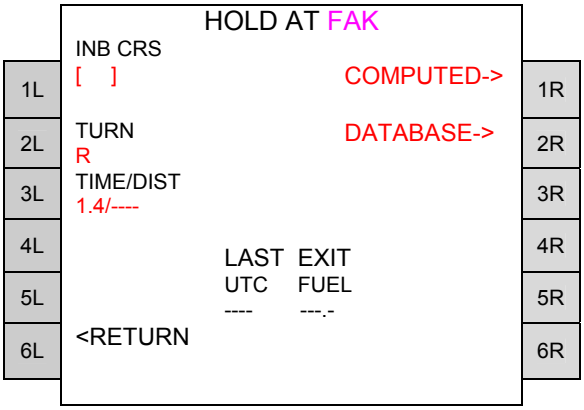

***25. By referring to the CRUISE PROG page, the flight crew can determine the OPT is <u>FL350</u> and the REC MAX is <u>FL390</u>. REC MAX with all engines running is the maximum certified altitude which meets the following conditions: _____ Reference: FIL – FMS 2***

The recommended maximum altitude based on present GW and deviation from ISA. It gives the aircraft a 0.3g buffet margin, a minimum rate of climb at MAX CL thrust, and level flight at MAX CRZ thrust. It is limited to FL 390. With an engine out, it shows the recommended maximum EO altitude, computed for long-range cruise, anti-icing off.

The optimum flight level indicates the most economic flight level for a given cost index, weight, and weather data and is continuously updated in flight. It is a compromise between fuel and time saving, and may show steps due to slight GW, ISA, or wind changes. As a consequence, the pilot may observe jumps in optimum flight level.

***26. Extreme care should be exercised if ever using the UPDATE AT function in flight. (<u>True</u> or False) Reference: FIL – FMS 2***

**Please refer to the FMS 2 graphic below for question 27:**




***27. When viewing the HOLD page, it can be determined that there is a database hold available for FAK. (<u>True</u> or False) Reference: FIL – FMS 2***

The small arrow to the right of DATABASE confirms the availability of a database hold.

***28. The only memory item contained in the new A319/320/321 QRH is printed in red on the SMOKE/AVIONICS SMOKE/FUMES checklist and requires what action? Reference: QRH***

Oxygen Masks … Verify … ON/100%

***29. The new A319/320/321 QRH contains checklists for five situations where the successful outcome depends on an appropriate immediate response. These five are: Reference: QRH***

- ENG FIRE (on ground)
- ENG TAILPIPE FIRE
- ENGINE OUT – UNABLE TO MAINTAIN ALTITUDE
- SMOKE/AVIONICS SMOKE/FUMES
- UNRELIABLE SPEED INDICATION

***30. ENGINE-OUT UNABLE TO MAINTAIN ALTITUDE checklist is found in the Immediate Action Items section of the new A319/320/321 QRH. This checklist replaces the Gross Driftdown procedure in the obsolete QRH, and calls for an airspeed of __0.82M/320 kts__ if in oceanic airspace. Reference: QRH***

***31. Pilots should be familiar with the ECAM exceptions listed on the front cover of the new A319/320/321 QRH as they include five situations where the QRH contains additional procedures which MUST be referenced PRIOR to following the associated ECAM procedure. These five exceptions are: Reference: QRH Cover***

- AVIONICS SMOKE
- BRAKES HOT
- ENG DUAL FAILURE
- FUEL (L or R) WING TANK LO LVL
- SMOKE (FWD or AFT) CARGO SMOKE (ON GROUND ONLY)

## Descent, Approach, Landing, and Taxi to the Gate

***1. A clearance to descend "via" authorizes the pilots to _____. Reference: FOM 5.9.2***

A "Descend via" clearance authorizes pilots to navigate vertically and laterally, in accordance with the depicted procedure, to meet published restrictions. Vertical navigation is at the pilot's discretion; however, adherence to the published altitude crossing restrictions and speeds is mandatory unless otherwise cleared.

Note: MEAs are not considered restrictions; however, pilots are expected to remain above MEAs.

***2. If during a TCAS RA the controller issues vertical guidance that conflicts with RA guidance, the PF should __follow the RA vertical guidance while complying with the controller's lateral instructions__. Reference: FOM 12.2.1***

***3. The ideal point to initiate a descent is at the FMC calculated __TOD (top of descent point)__. If ATC issues a descent prior to this point ask if the descent can be at pilot's discretion. Reference: PH 3c.7***

***4. When given a crossing restriction and time permits, use a __managed (DES mode)__ descent to provide the optimum descent path. If not sure a crossing restriction can be met, start the descent using vertical speed. Reference: PH 3c.7***

***5. There are signs of hazardous convective weather within 15 miles of the destination airport. If no microburst alert has been issued and you can maintain at least 3 nm horizontal separation from severe weather when the aircraft is 1,000 feet AGL what severe weather information should be briefed and flown? Reference: QRH OD***

Landing Windshear Precautions located on QRH SEVERE WEATHER/WINDSHEAR chart.

***6. When below 2500 ft. on the radio altimeter, do not descend at a rate greater than __2,000 ft/min__. Reference: FOM 5.9.1***

***7. FOQA data shows almost all unstabilized approaches occur during visual approaches. Pilots will plan to be stabilized on __all__ approaches by 1000 ft. AFE in accordance with the Stabilized Approach rate of descent and flight parameters unless non-normal conditions require deviation and are briefed (e.g. DCA River Visual, flap non-normal, etc.). Reference: FOM 5.10.14***

***8. All touchdowns must occur within __the touchdown zone__. Reference: FOM 5.11.1***

The touchdown zone is the first 3000 ft of the runway beginning at the threshold.

***9. Crews overnighting at international locations who experience an acute medical condition should contact MedLink for professional guidance and/or referral to an accredited medical facility. (True or False) Reference: FOM 8.5.4***

***10. When holding is required, the flight crew can improve fuel efficiency by: Reference: PH 3c.8***

- Slowing the airplane as soon as possible when a hold is expected (advise ATC).
- Using the longest holding legs possible (holding in straight and level flight reduces fuel consumption by approximately 5%).
- Keeping the airplane in clean configuration.
- Flying the FMGC calculated holding airspeed. (FMGC holding speeds may exceed FAA max holding speeds. Advise/request ATC approval).

***11. If CAT 3 DUAL is displayed in INOP SYS without any other failures the crew should: Reference: PH 3b.3.7***

1. Change the AP in command. This may allow the CAT 3 DUAL function to be recovered.

If this procedure fails:

2. SET FAC 1 pb to OFF and back to ON,
3. WAIT for FAC 1 fault ECAM warning to disappear, and
4. APPLY the same procedure for FAC 2.

***12. If an RNAV approach shows a required MDA of 720 feet, the flight crew should enter 720 in the MDA box when setting up the PERF page. (True or False) Reference: PH 18.6.12***

- RNAV (LNAV/VNAV) approaches have a published DA.
- RNAV (LNAV only) and VOR approaches have a published MDA. If a non-precision approach contains a VNAV path but has a published MDA, a DA must be calculated by adding 50 feet to the published MDA.

If the approach procedure specifies "Only authorized operators may use VNAV DA(H) in lieu of MDA(H)", the MDA(H) value provided should be entered into the FMGC PERF APPR Page MDA field.

***13. During an ILS PRM approach the TCAS should be left (selected) in TA/RA, however if an RA (resolution alert) is received the PF should follow the controllers instructions and disregard the RA. (True or False) Reference: PH 18.6.22***

Follow the RA vertical guidance while complying with the controller's lateral instructions.

***14. It is permissible to make an auto land on a CAT 1 runway as long as ATC is notified and the ILS critical area is protected. (True or False) Reference: FOM 5.11.2, PH 18.6.9***

Autolands may be conducted on CAT I runways (with CAT I or better visibility minimums) or when ILS critical areas are not protected provided:

- The runway is listed as approved on the Airport Advisory page.
- The crew is aware that LOC or G/S beam fluctuations, independent of the aircraft system, may occur and the captain is prepared to immediately disconnect the AP and take appropriate action should unsatisfactory guidance occur.
- At least CAT 2 capability is displayed on the FMA and CAT II/III procedures are used.
- Visual references are obtained at a DA appropriate for the CAT 1 approach being flown or a go around is performed.

***15. If the airport advisory page identifies your destination airport as ASDE-X equipped, during taxi in the transponder should be set to __AUTO__. Reference: PH 3.6***

***16. During taxi in the brake temperature exceeds 300C. The crew should select brake cooling fans ON when?***
***Reference: PH 3.15***

Brake fans selection should be delayed for a minimum of 5 minutes or just prior to the turn into the gate area, whichever occurs first.

***17. If on an overnight a crewmembers I.D. is stolen, the crewmember should: Reference: FOM 16.1.2***

Follow the FOM Replacement ID Procedure (After Trip Origination).

## *ADDITIONAL MEMORY LIMITATIONS*

***OPERATION LIMITS***

| Structural Weight Limits | A319 | A320 | A321 |
|---|---|---|---|
| Maximum Takeoff | **166,400 LBS** | **169,700 LBS** | **205,000 LBS** |
| Maximum Landing | **137,800 LBS** | **142,200 LBS** | **171,500 LBS** |

Maximum 90 degree crosswind component (including gusts) for takeoff and landing: **29 knots**
Maximum 90 degree crosswind component (including gusts) for CAT II/III approaches: **15 knots**
Limiting tailwind component for takeoff: **15 knots**; landing: **10 knots**
Maximum operating altitude: **39,000 feet**

***SPEED LIMITS***

Maximum operating airspeed ($V_{MO}$): **350 KIAS**
Maximum operating mach number ($M_{MO}$): **0.82M**
Maximum gear extension speed ($V_{LO}$): **250 KIAS**
Maximum gear retraction speed ($V_{LO}$): **220 KIAS**
Maximum gear extended speed ($V_{LE}$): **280 KIAS/0.67M**

| Maximum Flaps/Slats Extended Speeds ($V_{FE}$) | | | | | |
|---|---|---|---|---|---|
| FLAPS | 1 | 1+F | 2 | 3 | 4 |
| A319/320 $V_{FE}$ | **230 KIAS** | **215 KIAS** | **200 KIAS** | **185 KIAS** | **177 KIAS** |
| A321 $V_{FE}$ | **235 KIAS** | **225 KIAS** | **215 KIAS** | **195 KIAS** | **190 KIAS** |

| Turbulence Penetration Speeds | A319/320 | A321 |
|---|---|---|
| At or above 20,000 feet | 275 KIAS/.76M | 300 KIAS/.76M |
| Below 20,000 feet | 250 KIAS | 270 KIAS |

***ICE & RAIN PROTECTION***

Engine Anti-ice ON when OAT (Ground) / TAT (Flight): **10 degrees C or below**
(except during climb and cruise when the temperature is below –40 degrees C SAT)

Engine anti-ice must be ON prior to and during descent in icing conditions
(including temperatures below –40 degrees C SAT)

***FUEL***

| Usable Fuel Tank Quantity | | |
|---|---|---|
| | A319/320 | A321 |
| Wing Tanks | 27,500 lb | 27,500 lb |
| Center Tank | 14,500 lb | 14,500 lb |
| ACT | - | 10,500 lb |
| TOTAL | **42,000 lb** | **52,500 lb** |

Max allowable fuel imbalance between the L&R wing tanks (A321), inner tanks (A319/320): **2,500 lbs**
Max allowable fuel imbalance between L&R outer wing tanks (A319/A320): **1,000 lbs**

***HYDRAULICS, BRAKES, & LANDING GEAR***

Maximum landing gear extension altitude: **25,000 feet**

***FLIGHT CONTROLS***

Maximum operating altitude with slats, or flaps and slats extended: **20,000 feet**

***AUTO FLIGHT SYSTEM***

Autopilot Engaged – Minimum Height: **100 feet AGL** After Takeoff (if SRS is indicated)

| Maximum Winds for Automatic Approach, Landing, and Rollout | |
|---|---|
| Headwind | **30 knots** |
| Tailwind | **10 knots** |
| Crosswind other than CAT II/III | **20 knots** |

***POWERPLANT***

Minimum oil quantity for dispatch: 12.5 quarts