Systems and Procedures Validation Q & A
AIRBUS A319/320/321
CQT 2014–2015

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Send corrections / comments to:
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Preflight

1. ICAO requires all airlines to carry a copy of several different documents on board each airplane. All of these documents are in the Cockpit Forms (Yellow) Book or mounted somewhere in the airplane, usually in the cockpit.
Reference: FM Part I 18.5.2

If any Yellow Book forms are missing, make an Info Only maintenance entry in the FDML.
Cockpit Forms Book Typical Contents (varies by aircraft):

- Medical Emergency Information Sheet
- Air Operator Certificate
- Noise Certification (required for international flights)
- Mexican Insurance (aircraft-specific and required when operating in Mexico
- Aircraft Smoke Odor Questionnaire
- Lightning Strike/Static Incident Report:
- Drinking Water Crew Notice messages (1-9)
- ICAS/ECAM Screen Cleaning

2. If a flow or checklist is preceded by the diamond symbol (◆), that item is accomplished only on the first flight of the day (i.e., the first flight entered into the FDML under the current day using local time). Reference: OM Vol I 2.2.4

Captain:

ADIRS Panel ... Checked
◆ A full alignment should be performed prior to the first flight of the day.

◆ RCDR Panel - Checked

FIRE Panel ... Checked
◆ ENG 1 and ENG 2 TEST … Press & hold
◆ APU FIRE TEST ... Press & Hold

ELEC Panel ... Checked
◆ ECAM ELEC Page ... Select
◆ BAT 1 and BAT 2 ... OFF then ON
Ten seconds after selecting ON, check on the ECAM ELEC page that both battery charge currents are below 60 amps and decreasing.
◆ ECAM ELEC Page ... Deselect

◆ Alternate Brakes - Checked

First Officer:

◆ Flightdeck Door - Checked

Note: An item followed by a (†) means additional information is available in the Supplemental Normal Procedures Chapter.

3. It is the __Captain's__ responsibility to ensure that no condition exists that prohibits use of Flex Thrust even though it appears on the TPS.
Reference: PM 1.3.8

4. The PWS Advisory, Caution and Warning alerts are inhibited during takeoff from __100__ knots until __50__ feet AGL.
Reference: OM Vol I 2i.3.3

The PWS Advisory, Caution and Warning alerts are inhibited during approach below 50 feet AGL.

Note: *Reactive* windshear detection is activated from 3 seconds after liftoff up to 1300 feet RA during takeoff and 1300 feet to 50 feet during approach.

5. During the Safety & Power On Checklist, if battery voltage < 25.5V, a charging cycle of __20__ minutes is required. Reference: OM Vol I 2a.2.1

6. The Configuration Deviation List (CDL) program allows for the dispatch of an aircraft with certain parts that may be missing providing __performance limitations__ are followed.
Reference: FM Part I 5.4.4

- The MEL program allows for the dispatch of an aircraft with inoperative items of equipment for a period of time until repairs can be accomplished.
- The CDL program allows for the dispatch of an aircraft with certain parts that may be missing providing **performance limitations** are followed.

7. During the Safety & Power On Checklist, before starting the APU, ensure an __APU FIRE TEST__ is accomplished.
Reference: OM Vol I 2a.2.2

8. A __Yellow__ placard is used for MEL/CDL items when a maintenance procedure requires repetitive action at a defined frequency.
Reference: FM Part I 5.4.10

INOP Placard. A white adhesive backed placard with "INOP" stenciled across the front. The MIC Number is written on the lower margin for correlation to the original discrepancy/tracking. The placard will be posted on, or adjacent to, the affected control, switch, or instrument, etc. in the flight deck, galley, or cabin unless another type of placard is specified by the MEL/CDL or NEF.

Blank Adhesive Placard. A white adhesive backed blank label used for placarding limitations or instructions as defined by the MEL/ CDL, or NEF. Placard will be posted as directed within the appropriate procedure.
D. White Form E-693-1Placard. A white placard is used for MEL or CDL items where no continuing maintenance actions are required. A Flight Crewmember action may still be required under this placard. White E-693-1 placards are not used for NEF items.

A yellow placard is used for MEL/CDL/ NEF items if there are continuing maintenance actions or repetitive checks (based on days, flights or flight hours) that require an AML entry. Maintenance has the sole responsibility for monitoring the time restrictions and for accomplishing the required maintenance action(s) associated with this placard. The Captain and Dispatch (For Dispatch notification items) are responsible for ensuring all operational MEL/CDL or NEF requirements are met. If there is a yellow placard posted in the clear MEL sleeve, crews must refer to the placard to determine the Maintenance Action Interval Required and the AML for documentation of these actions.

9. The Flightdeck Preparation Flow should be accomplished on the first flight of the day, after a crew change or prior to flights further than 162 NM from the nearest shoreline. This flow should also be accomplished __after maintenance has been performed in the flightdeck__ or __when the flightdeck has been left unattended and not in view of a pilot crewmember.__
Reference: OM Vol I 2a.6.1

Note: The flightdeck preparation flow trigger has been changed from "prior to an oceanic flight" to "prior to flights farther than 162 NM from the nearest shoreline".

10. Flight Attendants are responsible for reporting all cabin discrepancies not previously recorded to the flightdeck. The FA will complete a Cabin Discrepancy Worksheet located in the _Cabin Book_. Reference: FM Part 1 5.4.37

The Cabin Book is located in the forward cabin galley or closet and contains:

- the Non-Essential Equipment and Furnishings List (NEFL)
- the aircraft-specific Deferred Items List of NEF items previously recorded and deferred
- a pad of Cabin Discrepancy Worksheets used by the F/As as a communication tool to report a cabin discrepancy to the flightdeck

11. According to the DOT Tarmac Delay policy, an opportunity to deplane ONLY exists if the passengers onboard a delayed aircraft are _notified they have ability to deplane_. Reference: FM Part I 13.3.1

DOT regulations require that passengers on flights at U.S. airports that are delayed from taking off (departure delay) or from deplaning upon arrival (arrival delay) not be kept on board an aircraft without an "opportunity to deplane" for longer than 3 hours for domestic flights (which includes the U.S.Virgin Islands and Puerto Rico flights), or 4 hours for international flights, (departing from or arriving at U.S. airports) unless the pilot in command determines there is a safety or security related reason deplaning cannot be offered.

The mere fact an aircraft is at the gate or other disembarkation point with the door open does NOT qualify as an "opportunity to deplane". An opportunity to deplane ONLY exists if the passengers onboard a delayed aircraft are SPECIFICALLY INFORMED by a PA. This "stops and resets" the applicable 3 or 4 hour delay clock at the time the PA is completed.

12. (_True_ or False) If a gate delay requires opening a door, all doors will be disarmed prior to any cabin door being reopened. Reference: FM Part I 8.1.10

If a gate delay requires opening any door after the Captain has received the "Cabin Ready" notification, the Captain informs the FAs of the need to disarm and reopen the door(s). All doors will be disarmed prior to any cabin door being reopened.

13. The _TPS_ is the primary source of takeoff data. Reference: PM 1.1.1

For most operations, the TPS will provide all necessary data. In some situations, TPS data is used in conjunction with Information located in the Takeoff section.

14. A weight restricted flight is designated when the planned weight of the aircraft is within _1500_ lbs. of any structural or inflight weight limitation. The flight crew will send an ACARS message of the actual FOB as soon as possible after fueling. Reference: FM Part I 6.1.16

The captain and dispatcher will consult to verify that an excess fuel load is not precluding the accommodation of revenue. The flight crew will send an ACARS message of the actual FOB as soon as possible after fueling. Additionally, a weight restricted flight will be held at the gate by the Crew Chief/Ramp Lead or Gate Agent until the Load Agent has determined that the final passenger count and cargo weights have not caused the aircraft to exceed any certified weight limitations.

15. If center tank fuel is not full on the A321, dispatch with more than _200_ pounds of total fuel in both ACTs is prohibited, unless directed by an MEL.
Reference: OM Vol I 1.6.4

- The center tank fuel must be emptied before the wing tanks are emptied unless the center tank fuel is treated as ballast.
- Takeoff using center tank fuel is prohibited.
- **Caution - A321:** If center tank is not full, dispatch with more than 200 pounds of total fuel in both ACTs is prohibited, unless directed by an MEL.

16. A fuel slip is only required if there is a _MEL_ that requires reference to a current fuel slip.
Reference: FM Part I 7.3.5

- A fuel slip is only required if there is a placarded MEL item that requires reference to a current fuel slip.
- A fuel slip will be provided when a flight deck or fueling panel quantity indicator is inoperative (even if the affected tank will be empty).
- If a fuel slip is provided, it will be reviewed as early as practical to ensure that the numbers are correct and within allowable tolerances indicated on the fuel slip. If any fuel slip discrepancies are noted, they must be resolved with fueling personnel or maintenance and a corrected fuel slip provided prior to departure.

17. The APU may be started and operated even if the LOW OIL LEVEL ECAM advisory is displayed. Maintenance action is required within the next _10_ hours of APU operation.
Reference: OM Vol I 1.13.4

18. TPS will choose the flap configuration that can achieve the maximum _assumed (FLEX) temperature_.
Reference: PM 1.1.3

If none of the flap configurations can achieve flex thrust, CONF 2 will be selected unless the PTOW is too heavy for CONF 2. Then the flap configuration that can accommodate the PTOW will be chosen.

19. The first runway displayed on the TPS is referred to as the "primary" runway. On secondary runways, if an asterisk appears next to the flap setting, it indicates that another _flap setting_ would be more advantageous for this runway.
Reference: PM 1.2.3

If this is the case and time permits, get new TPS data.

20. If the temperature on the TPS is colder than _15˚C_, the AIRPORT ANALYSIS section will show Engine Anti-ice corrections for the Climb and Runway limits.
Reference: PM 1.2.5

21. If the uplinked data (assumed temperature and v-speeds) to the FMGC changes from the original TPS due to a change of weight, this data may be used without requesting a new TPS, provided the _TPS quick reference guide_ does not require a new TPS.
Reference: PM 1.2.7

22. For a contaminated runway, the dispatcher can provide V-speeds on the _Contaminated Runway Correction Message_. But these speeds will not be shown on the TPS.
Reference: PM 1.3.2

Start

23. Approximately 10 minutes prior to departure and after ATC Route Clearance Verification is completed, _Start the APU (if not already running)_ before accomplishing the Before Start Flow.
Reference: OM Vol I SOPs.3

24. The Before Pushback Flow is used to prepare for pushback and starting the engines. The triggers for the Pushback Flow are _receiving the cabin ready notification_ and _all doors are closed and armed_.
Reference: OM Vol I 2b.6.2

25. The before Start Checklist states "PARK BRK .... ON, Checked". The Operating Manual Part I requires the captain to reference the _brake triple indicator_ whenever the PARK BRK is set ON or OFF.
Reference: OM Vol I 2.5.17

Check the brake triple indicator to confirm that all indications are normal for brakes ON (i.e., pressure indicated on both brakes and the accumulator.)

26. Operate engines for at least _5_ minutes prior to applying takeoff thrust to allow engine temperature to stabilize. The warm-up can be reduced to a minimum of _3_ minutes (workload permitting) if an engine has been shutdown for _one and a half_ hours or less.
Reference: OM Vol I 2b.11.5

27. If an amber FAULT light appears in the ENG 1 (2) ANTI ICE pb, this would be an indication the position of the anti-icing valve _disagrees with ENG 1 (2) pb selection_.
Reference: OM Vol II 13.2.1

FAULT: Amber light illuminates and caution message appears on ECAM if position of anti-icing valve disagrees with ENG 1(2) pb selection.

Note: The amber FAULT light illuminates briefly as valve transits.

28. If during engine start, the ground crew reports a leak from the engine drain mast, run the engine at idle for _5_ minutes. If the leak disappears, the aircraft can be dispatched.
Reference: OM Vol I 2b.11.2

29. A supplemental procedure is a procedure used in lieu of a normal procedure in certain circumstances. Pilots may accomplish the supplemental procedure from memory, by reviewing the procedure prior to its accomplishment, or _by reading the procedure during its accomplishment_.
Reference: OM Vol I 4.1.1

30. (_True_ or False) A5 powered aircraft have a fuel de-pulse feature that is initiated during engine auto start. If de-pulse occurs during engine start, do not abort the start.
Reference: OM Vol I 2c.3.8

A5 powered aircraft have a fuel de-pulse feature that is initiated during engine auto start if an impending hung start is anticipated by the FADEC. A fuel de-pulse (momentary cut-off) is introduced to unload the compressor section allowing for a normal start. Cockpit indications appear as a slow start with EGT rising. At that point, the EGT will decrease rapidly followed by normal EGT rise and acceleration. Both igniters will automatically engage after de-pulse and both igniter symbols will be indicated on the ECAM. **If de-pulse occurs during engine start, do not abort the start.** Allow the FADEC to continue with the auto start sequence. A FDML entry is not required under this scenario.

Taxi

31. Do not attempt a 180° turn on a surface less than _100_ feet wide (A319/320) or _105_ feet wide (A321).
Reference: OM Vol I 2c.3.8

32. Routine ECAM messages may occur as a result of normal procedures or operations and are not considered non-normal by the manufacturer. Two routine ECAMs listed in the Operating Manual are _ELEC GEN 2 OFF (During single engine taxi) and _DOORS CABIN/CARGO (Upon gate arrival)_.
Reference: OM Vol I 2.3.7

When a message occurs under the specified conditions, the crew should carefully read and verbally acknowledge the ECAM to ensure the message is **routine** before clearing the ECAM, if necessary. ECAM messages directly related to the application of an MEL may be emergency cancelled (EMER CANC) at the discretion of the captain. Example: Single PACK operation.

33. For a mechanical discrepancy after gate departure, if the discrepancy is associated with an ECAM Message, the crew must refer to the ECAM/MEL _Cross Reference Appendix_ located at the front of the MEL.
Reference: OM Vol I 2c.1.1

Discrepancy – After Dispatch Before Takeoff	
Step	**Action**

1	Refer to MEL:
	If discrepancy is associated with an ECAM Message:
	• Refer to ECAM/MEL **Cross Reference Appendix**, located at the front of the MEL.
	• Does "NO TAKEOFF" appear in the DISPATCH CONDITION column for the applicable ECAM warning?
	  ○ If no, refer to the referenced MEL and go to Step 2
	  ○ If yes, go to Step 3
	If discrepancy is not associated with an ECAM Message:
	• Refer to the MEL and go to Step 2

2	Can the MEL be placarded by the flight crew (i.e., a "Y" in the MEL "Flight Crew May Placard" column) and the flight be safely executed? • If no, go to Step 3 • If yes, go to Step 4
3	Return for maintenance action. • Notify the controlling dispatcher when returning to the gate (include the reason why returning to the gate). • Enter the discrepancy in the AML • Obtain a new/amended Flight Release, if appropriate.
4	Contact the controlling dispatcher via voice communications (e.g., direct dial, phone patch, etc.) to establish a conference with MOC. • Comply with MEL procedures prior to takeoff and enter the discrepancy in the AML. Placard the aircraft per MOC in accordance with Crew Placarding procedures • obtain an amended release • obtain new TPS (via ACARS/Voice) if MEL affects takeoff or landing performance If not possible, go to Step 3.

34. Single engine taxi is the standard mode of taxi. To configure for single engine taxi, the ENG MODE Selector should be in _IGN/START_, the Y ELEC PUMP is selected to _ON_ and GEN 2 is selected _OFF_.
Reference: OM Vol I 2b.14.3

Y ELEC PUMP must be selected ON for single-engine taxi operations to limit PTU operation. The PTU will cycle on under high hydraulic loads. Selecting GEN 2 OFF for single-engine taxi prevents unanticipated electrical transfer.

Caution:
- Prior to selecting GEN 2 ON, verbally communicate with the captain to ensure no brake or steering inputs are being made.
- The airplane must be taxied with no braking or steering inputs or stopped with the parking brake ON when placing GEN 2 ON. Unwanted steering and/or braking response may occur during electrical power source transfer.

35. Before crossing an intersecting runway, scan the full length of the runway for potential conflicts and verbalize "clear left, clear right".
Reference: OM Vol I 2c.2.3

Before crossing an intersecting runway:
- Scan the full length of the runway for potential conflicts and verbalize "clear left, clear right".
- Ensure red runway entrance lights (RELs), if installed, are not illuminated. If they are illuminated, do not cross the hold short line and advise ATC.
- Illuminate both the taxi and landing lights during low visibility and night operations. All lighting that will increase the visibility of the aircraft must be illuminated.

Prior to crossing the hold short line:
- Verify assigned runway by whatever means available.
- Monitor TCAS display for approaching traffic, if able.
- Scan any short final area(s) and runway(s) for potential conflicts and verbalize "clear left, clear right".
- If red runway entrance lights (RELs) are installed, ensure they are not illuminated. If they are illuminated, do not cross the hold short line and advise ATC.

When cleared onto the runway:
- At night, turn on lights (except for landing lights) that highlight the aircraft's silhouette.
- During low visibility operations at SMGCS approved airports precisely follow green lead-on lights and low visibility markings.

When on the runway:
- During low visibility and night operations slightly offset the aircraft from runway centerline to avoid blending in with the runway lights.
- If holding in position for more than 90 seconds, or upon seeing a potential conflict, contact ATC.

When cleared for takeoff:
- Illuminate landing lights
- Ensure red takeoff hold lights (THLs) are not illuminated. If they are illuminated, do not takeoff and advise ATC.

36. Crews should not takeoff if brake temperatures exceed _150_ °C with brake fans on (or shortly after brake fans are used) or _300_ °C with brake fans off. If fans are not used for taxi, crews may depart with indicated brake temperatures less than _300_ °C, as the reading will represent actual temperature.
Reference: OM Vol I 2c.3.6

The relationship between the actual disc temperature and the indicated temperature on the ECAM WHEEL page can vary by as much as 50° to 150°C. This is due to temperature sensor location, and the result of direct fan air on the sensors. When brake fans are selected on, the indicated temperature drops rapidly. Similarly, when the brake fans are selected off, a delay of several minutes may be noted before the ECAM WHEEL page displays accurate brake temperatures. As a result, if brake fans are used during taxi out, the actual temperature may be higher than indicated. This condition could result in a BRAKE HOT advisory message shortly after takeoff. Crews should not takeoff if brake temperatures exceed 150°C with brake fans on (or shortly after brake fans are used) or 300°C with brake fans off. If fans are not used for taxi, crews may depart with indicated brake temperatures less than 300°C, as the reading will represent actual temperature.

Caution: Do not takeoff with brake temperatures in excess of 300°C (fans off) or 150°C (fans on).

37. For acceptable RVSM altimeter tolerances, ground check PFD 1 and PFD 2 with a known airport altitude within +/- _75_ feet and altitude tolerance between PFD 1 and PFD 2 within _20_ feet.
Reference: OM Vol I 1.16.1

- Ground check PFD 1 and 2 with a known airport altitude ± 75 feet
- Altitude tolerance between PFD 1 and 2 within 20 feet

Note: If the altimeters are not within ±75 feet, it is acceptable to check the altimeter accuracy at a known elevation point on the airport (i.e., runway end elevation). If the altimeters do not read within ±75 feet, or do not agree with each other within 20 feet, maintenance action is required.

The maximum allowable in-flight difference between captain and first officer PFD altitude displays for RVSM operations is 200 feet.

38. If performing single-engine taxi, the Y ELEC PUMP must be selected OFF prior to the second engine start to allow what action?
Reference: OM Vol I 2b.11.2

If performing single-engine taxi, the Y ELEC PUMP must be selected OFF prior to the second engine start to allow the PTU to perform necessary self-test.

Note: If the second engine is started within 40 seconds following the end of the cargo doors operation, a PTU FAULT is triggered.

39. If a fuel is entered that differs from Plan by _4000_ lbs. or more, an appropriate ACARS message will be received. If reentered, the fuel value is accepted, even if in error.
Reference: PM 2.3.1

40. On the ground after departing the gate, what requirements must be met before a cell phone may be used for operations?
Reference: PH 2b.1.10

Ensure all PED cellular service is turned off prior to pushback (including any jumpseat riders). On the ground after departing the gate, a cell phone may be used for operations only if the aircraft is stopped and the parking brake set. After its use, ensure the cell phone is off prior to releasing the brakes. Pilots on duty occupying a flightdeck seat may not access paper-based or electronic-based reading material and information, not directly related to the operation of the aircraft. Jumpseat riders and resting pilot(s) occupying the jumpseat may access paper-based or electronic-based reading material and information unrelated to the operation of the aircraft as long as it does not disrupt other flightdeck crewmember performance and is stowed according to passenger procedures.

Takeoff

41. All takeoffs performed by US Airways crews meet noise abatement criteria. For a "Normal Takeoff Profile", climb thrust is selected and acceleration is initiated at _1,000_ feet AFL. For a "Noise Abatement Profile", climb thrust is selected at _1,500_ feet AFL and acceleration is initiated at _3,000_ feet AFL.
Reference: OM Vol I 2d.1.1

Normally this is automatically triggered in accordance with the THR RED and ACC values entered in the PERF Takeoff page.

Normal Takeoff Profile (NADP2): Crews will perform a normal takeoff profile for a domestic airport and/or when the Airport Advisory page states the normal takeoff profile procedure is to be used.

Noise Abatement Profile (NAPD1): Crews will perform a noise abatement profile from an international airport and/or when the Airport Advisory page states the noise abatement profile procedure is to be used.

42. Due to N1 fan blade flutter, IAE engines should not maintain prolonged thrust settings between _61%-74%_ N1 while on the ground. Asymmetric thrust can occur if the pilot incorrectly stabilizes thrust settings above 1.05 EPR.
Reference: OM Vol I 2d.1.2

43. The maximum crosswind for takeoff and landing is _29/G35 knots_.
Reference: OM Vol I 1.3.1

44. A FLEX temperature was not entered in the MCDU and the thrust levers are positioned in the FLEX detent during the takeoff roll resulting in an ENG FLEX TEMP NOT SET message to appear on the ECAM. The crew should _set TOGA thrust and continue the takeoff roll_.
a. reject the takeoff
b. do nothing and continue the takeoff roll
c. set TOGA thrust and continue the takeoff roll
Reference: OM Vol I 2d.1.2

45. The ailerons are normally controlled by _ELAC 1_. If it fails, control is automatically transferred to _ELAC 2_.
Reference: OM Vol II 9.1.1

Each aileron is powered by green and blue hydraulic systems through two actuators (one active and the other in damping mode). If the operating actuator fails the inactive takes over aileron control. The ailerons droop 5° when flaps are extended.

The ailerons are normally controlled by ELAC 1. If ELAC 1 fails, control is automatically transferred to ELAC 2. If both ELACs or their associated hydraulic systems fail, aileron droop is deactivated and roll control is provided by spoilers only.

Five hydraulically-actuated spoilers are controlled by three SECs. Each spoiler is powered by either the green, blue, or yellow system. All five spoilers are used as ground spoilers. The four outboard spoilers operate in conjunction with the ailerons to assist in roll control. The three middle spoilers are used for speedbrakes. If a fault is detected by the SEC or if electrical power is lost, the affected spoiler(s) automatically retracts. If hydraulic pressure is lost the spoiler(s) either remains at the existing deflection, or at a lesser deflection depending on aerodynamic forces. If a spoiler fails on one wing the symmetrical panel on the other wing is deactivated.

46. The main factors that result in tail strikes during takeoff are _early rotation_, _over-rotation_, _excessive pitch_, or some combination of the three.
Reference: OM Vol I 2d.3.1

Early rotation can occur:

- If using a flap setting that is inconsistent with the computed VR,
- If attempting to avoid birds or obstacles, or
- When applying the recommended windshear technique with less than 2000 feet of runway remaining.

To avoid a tail strike as a result of early rotation, do not begin to rotate prior to the PM's "Rotate" callout. Over-rotation and excessive pitch are usually associated with engine out procedures, dual inputs from both pilots, the aircraft being out of trim, or the aircraft being loaded improperly. To ensure the aircraft arrives at the proper pitch attitude without exceeding the margin of error, rotate the aircraft at a normal rotation rate of 3° of pitch per second. This rotation rate will result in the aircraft arriving at the flight director commanded pitch attitude of 15°-18° in 5-6 seconds.

47. The last waypoint that is common to both the SID and the associated EOSID is known as the _diversion waypoint_. After this point, the courses for the SID and the EOSID begin to diverge.
Reference: OM Vol I 2d.8.11

This waypoint may be a fixed waypoint or a pseudo waypoint. After this point, the courses for the SID and the EOSID begin to diverge. If an engine failure is detected by the FMGS and the aircraft has not yet reached the diversion waypoint, the EOSID will be displayed on the MCDU F-PLN page as a temporary flight plan and may then be inserted into the primary flight plan. If an engine failure is detected after the aircraft has passed the diversion waypoint, or the Temp FPLN is not inserted prior to this point, the EOSID will not be available to insert into the primary flight plan, however, the ND will display the EOSID as a yellow, dashed path that may be used for orientation.

Climb

48. During initial climb, with all engines operating, adjust the pitch attitude to follow the F/D commands. Engage the autopilot by __500__ feet AGL for all RNAV departures.
Reference: OM Vol I 2d.3.2

49. 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.
Reference: OM Vol I 1.5.2

Definition of Icing Conditions:

- OAT (on the ground and for takeoff) or TAT (inflight) is 10 °C or below, and
- visible moisture in any form is present such as clouds, fog with visibility of one mile or less, rain, snow, sleet and ice crystals, or
- when operating on ramps, taxiways, or runways where surface snow, ice, standing water, or slush may be ingested by engines, freeze on engines, nacelles, or engine sensor probes

50. When making autoflight systems inputs (FMS or FCU), crews should __Confirm__, __Activate__, __Monitor__ and __Intervene__ if necessary.
Reference: OM Vol I 2.9.3

When making autoflight systems inputs:

- **C**onfirm FMS inputs with the other pilot when airborne.
- **A**ctivate the input.
- **M**onitor mode annunciations to ensure autoflight system performs as desired, and
- **I**ntervene if necessary.

51. What are the Maximum Rate of Climb speeds for an A319/320?
Reference: OM Vol I 2e.3.2

<table>
<tr><th>Climb</th><th>Managed Speed</th><th colspan="2">Selected Speed</th></tr>
<tr><td colspan="4">Normal</td></tr>
<tr><td>1000 ft. AFL to
< 10,000 ft. MSL</td><td rowspan="2">ECON CLB speed based on CI</td><td colspan="2">Accelerate to 250 KIAS</td></tr>
<tr><td>> 10,000 ft. MSL</td><td colspan="2">Accelerate to flight plan climb speed / Mach</td></tr>
<tr><td colspan="4">Other Situations</td></tr>
<tr><td>Maximum Angle</td><td>EXPED pb</td><td colspan="2">Use OP CLB and Green Dot or EXPED pb</td></tr>
<tr><td>Maximum Rate</td><td></td><td colspan="2">Use OP CLB and
• A319/320: 260 KIAS/.76M
• A321: 280 KIAS/.76M</td></tr>
<tr><td rowspan="3">Severe Turbulence</td><td rowspan="3"></td><td colspan="2">Turbulence Penetration Speeds</td></tr>
<tr><td>Below 20,000 feet</td><td>At or above 20,000 feet</td></tr>
<tr><td>A319/320:</td><td>250 knots</td><td>275 knots / 0.76M</td></tr>
<tr><td></td><td>A321:</td><td>270 knots</td><td>300 knots / 0.76M</td></tr>
<tr><td rowspan="5">Holding</td><td rowspan="5"></td><td colspan="2">Maximum Holding Airspeeds</td></tr>
<tr><td>Altitude</td><td>Airspeed</td></tr>
<tr><td>Minimum Holding Altitude through 6000 ft.</td><td>200 KIAS</td></tr>
<tr><td rowspan="2">Above 6,000 ft. through 14,000 ft.</td><td>230 KIAS</td></tr>
<tr><td>210 KIAS[1]</td></tr>
<tr><td>Above 14,000 ft.</td><td>265 KIAS</td></tr>
<tr><td colspan="4">[1]Where published</td></tr>
</table>

Cruise

52. During a RVSM Flight Altimeter check, when initially established in cruise flight, at or above _FL290_ , crosscheck each PFD altimeter and the standby altimeter. Record the results for use in contingency situations. The two (2) PFD altimeters must agree within _200_ feet at all times within RVSM airspace.
Reference: OM Vol I 2e.8.1

53. When above FL250, the pilot at the controls shall don an O2 mask when the other pilot at the controls leaves his _seat_ . All pilots shall don their O2 masks with cabin altitude above _10,000_ feet.
Reference: OM Vol I 2e.8.2

54. Pressing the EMERGENCY pressure selector on the Crew Oxygen Mask creates an overpressure which eliminates condensation and prevents smoke, smell or ashes from entering the mask. Overpressure supply is started automatically when cabin altitude exceeds _30,000_ feet.
Reference: OM Vol II 16.2.1

55. Periodic system checks are required throughout the flight. One recommended method is to perform a HEFOE (Hydraulic, Electric, Fuel, Oxygen, Engine) check approximately _every hour_ at or abeam the closest flight plan waypoint.
Reference: OM Vol I 2e.8.3

Page	Check
HYD	Quantity and pressure • Fluid contraction during cold soak can be expected. A slight increase in quantity is normal. • Following landing gear retraction, green system quantity is lower than on the ground.
ELEC	Parameters, GEN loads
FUEL	Fuel quantity, temperature[1], and distribution
DOORS	**O**xygen pressure
ENG	Oil pressure and temperature
[1]Fuel temperature is ECAM monitored. Periodic checks not required.	

56. The Cargo Smoke DISCH pb is listed as a "Confirm" item under the Non-Normal methodology. _one_ extinguisher bottle supplies _one_ nozzle in the forward compartment and _two_ nozzles in the aft compartment.
Reference: OM Vol I 9.1.5 / OM Vol II 8.1.4

Both cargo compartments are equipped with smoke detector loops. The forward compartment contains two smoke detectors in the A319/320 and four smoke detectors in the A321. On the A319/320, the aft compartment contains two loops each with two smoke detectors each. On the A321, the aft compartment contains three loops each with two smoke detectors in each. A Smoke Detection Control Unit (SDCU) issues a smoke warning when two smoke detectors on one loop detect smoke. If one smoke detector fails, the system remains operational with the other detector.

Cargo smoke is indicated by an aural CRC, the illumination of the MASTER WARN and CARGO SMOKE light on the overhead CARGO SMOKE panel. One extinguisher bottle supplies one nozzle in the forward compartment and two nozzles in the aft compartment. The agent is discharged by pressing either the FWD or AFT DISCH pb. If the cargo smoke warning is activated in either compartment, the associated isolation valves close and the extraction fan stops

57. For LUS, make an INFO-ONLY discrepancy entry in the AML for intermittent/temporary malfunctions that have been corrected. If the malfunction has been previously written up in the AML _two or more times_ (excluding this occurrence) in the past _10_ days, do not add "INFO-ONLY" to the discrepancy section, and contact MOC.
Reference: FM Part I 5.4.14

Make an INFO-ONLY discrepancy entry for:

- items that need to be relayed to maintenance but are not discrepancies (e.g., no de/anti-icing worksheets on aircraft)
- intermittent/temporary malfunctions that have been corrected (e.g., malfunction indication that clears by itself or through pilot action).

Start the discrepancy with the text, "INFO-ONLY." Example: INFO-ONLY - no de/anti-icing worksheets on aircraft.

A corrective action must be completed prior to the next dispatch. If at a non-maintenance base, contact MOC through the controlling dispatcher.

58. There is no requirement to correct a fuel imbalance inflight unless an _ECAM fuel advisory_ is displayed.
Reference: OM Vol I 4.3.4

59. When accomplishing non-normal procedures, the PF calls for the "QRH procedure" in case of an ECAM Exception or Non-Normal procedure that is not indicated by ECAM. The PF calls "ECAM Action" in case of ECAM procedures that are not ECAM Exceptions.
Reference: OM Vol I 9.1.4

Note: See expanded discussion in Simulator Callouts and Briefing Guide.

60. Upon entering a holding pattern, the total fuel on board will be calculated every _15_ minutes by the _First Officer_.
Reference: FM Part I 9.2.3

After each calculation, the captain will be advised of the fuel remaining, holding time remaining and any other information required to ensure that adequate fuel remains to continue to the destination or alternate.

61. Do not pull circuit breakers to deactivate an item unless directed by the MEL or Maintenance Control.
Reference: OM Vol I 9.3.6

On the Ground:

- Resetting Tripped CB - A circuit breaker 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 circuit breaker and that it may be safely reset. A logbook entry is required if a circuit breaker is reset.
- Cycling CB - A circuit breaker may be cycled when part of a written flight crew procedure or an approved maintenance trouble-shooting procedure. In addition, a circuit breaker may be cycled one time on the ground, when necessary, to assist with general trouble-shooting or as instructed by Maintenance.
- Deactivating an Item - Do not pull circuit breakers to deactivate an item unless directed by the MEL or Maintenance Control.

In Flight:

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

Note: Make a logbook entry if a tripped circuit breaker is reset. Include the exact conditions when the circuit breaker tripped, when reset, and the results of the reset.

62. The passenger oxygen mask doors open automatically if the cabin altitude exceeds what altitude?
Reference: OM Vol II 16.1.4

The passenger oxygen system has chemical oxygen generators. Each generator supplies a group of 2, 3 or 4 masks. Both the masks and generators are located in containers in the cabin, galleys, and at each Flight Attendant station. **Each container has an electrically activated door that opens automatically when the cabin altitude exceeds 14,000 ft.** The doors are opened manually by pressing the MASK MAN ON pb on the oxygen overhead panel. Illumination of the SYS ON light does not necessarily mean all masks have fully deployed. Oxygen generation begins when a mask is pulled toward the seat. Oxygen generation produces considerable heat; some smell and cabin temperature rise are normal. Once oxygen generation begins, it will continue approximately 13 or 15 minutes (as installed).

63. If severe turbulence is encountered, maintain turbulence airspeed. Turbulence airspeed for the A319/320 is:
Reference: OM Vol I 3.1.3

Turbulence Penetration Speeds		
	Below 20,000 feet	***At or above 20,000 feet***
A319/320	250 knots	275 knots / 0.76M
A321	270 knots	300 knots / 0.76M

Descent

64. (True or False) The FAA recommends that operators of turbojet airplanes have procedures for flight crews to assess landing performance based on conditions actually existing at time of arrival, as distinct from conditions presumed at time of dispatch.
Reference: PM 8.4.2

This assessment does not mean that a specific calculation must be made before every landing. In many cases, the before takeoff criteria, with their large safety margins, will be adequate to ensure that there is sufficient landing distance with at least a 15% safety margin at the time of arrival. Only when the conditions at the destination airport deteriorate while en-route (e.g., runway surface condition, runway to be used, winds, airplane landing weight/configuration/speed/deceleration devices) would a calculation or other method of determining the actual landing distance capability normally be needed.

65. When a flight reports leaving an altitude, the PF maintains a descent rate consistent with ATC requirements and fuel conservation procedures. Below 2000 feet on the radio altimeter, do not descend at a rate greater than _2000_ ft./min.
Reference: OM Vol I 2e.11.3 / OM Vol I 2f.1.1

66. When selecting an altitude in the FCU that is below 10,000 feet, the ALT increment selector should be set to _100_.
Reference: OM Vol I 2.8.4

When selecting a new altitude in the FCU that is at or above 10,000 feet, the ALT increment selector knob may be set to 100 or 1000 at the pilot's discretion. When selecting an altitude in the FCU that is below 10,000 feet, the ALT increment selector should be set to 100.

67. The PM's Descending Through 18,000 Feet Flow is _SEAT BELTS - ON_, _ECAM - Checked_ and _MCDU - Set_.
Reference: OM Vol I 2e.15.2

- ECAM check should include memos, status, and cabin rate of descent to ensure proper aircraft pressurization.
- Ensure all applicable MCDU pages (i.e., F-PLN RAD NAV, PROG, PERF APPR, etc.) are set and reviewed for arrival. Use the default settings on the PERF GO AROUND page.

68. The _Dispatcher_ should be notified as soon as possible of a decision to divert to any airport other than the intended destination.
Reference: FM Part 1 9.2.6

If feasible, the captain and the dispatcher should jointly evaluate weather, airport, or fuel problems which may lead to a diversion.

Dispatch should be notified as soon as possible of a decision to divert to any airport other than the intended destination. If time and circumstances permit, the captain should make a voice call to Dispatch. If unable, an ACARS diversion message should be sent. In addition, notify the station of intended landing ASAP of your ETA, number of passengers on board, and any services requested.

A flight may not land at an airport that is not the destination or a designated alternate on the original dispatch release unless either:

- An amended dispatch release is obtained from the dispatcher for a new destination or alternate that is authorized for that type aircraft or
- The captain exercises his/her emergency authority.

69. The maximum holding airspeed 6000 ft. and below is _200 KIAS_.
Reference: OM Vol I 2i.1.4

Maximum Holding Airspeeds	
Altitude	**Airspeed**
Minimum Holding Altitude through 6000 ft.	200 KIAS
Above 6,000 ft. through 14,000 ft.	230 KIAS
	210 KIAS[1]
Above 14,000 ft.	265 KIAS
[1] Where published	

Approach

70. The Predictive Windshear System (PWS) will generate an ADVISORY, CAUTION or WARNING alert depending on the _location_ and not the relative strength of the windshear event.
Reference: OM Vol I 2i.3.3

The windshear icon only displays areas of detected shear from the movement of precipitive particles. The windshear system will not detect all possible hazardous windshear conditions such as clear air turbulence and extremely dry events due to the lack of these precipitive particles. The Predictive Windshear System (PWS) will generate an ADVISORY, CAUTION or WARNING alert depending on the location and not the relative strength of the windshear event. In other words, a WARNING predicts an event that is closer to the airplane than a CAUTION alert. Therefore, if maneuvering and a PWS Warning is received, roll wings level, unless terrain is a factor, regardless of the ND displayed weather, in order to maximize aircraft performance.

<table>
<tr><th colspan="4">Predictive Windshear Alerts</th></tr>
<tr><th></th><th>ADVISORY</th><th>CAUTION</th><th>WARNING</th></tr>
<tr><td>INDICATIONS:</td><td colspan="3"></td></tr>
<tr><td>ND</td><td colspan="3">Windshear Icon</td></tr>
<tr><td>PFD</td><td rowspan="2">(N/A)</td><td><u>Amber</u>
W/S AHEAD</td><td><u>Red</u>
W/S AHEAD</td></tr>
<tr><td>AURAL</td><td>“MONITOR RADAR DISPLAY”</td><td>“WINDSHEAR AHEAD”
(Twice on takeoff)
“GO AROUND WINDSHEAR AHEAD”
(On approach)</td></tr>
<tr><th colspan="4">Predictive Windshear Crew Actions</th></tr>
<tr><td>PHASE OF FLT:</td><td colspan="3"></td></tr>
<tr><td>Aligned for Takeoff</td><td colspan="3">Delay the takeoff until the alert no longer exists.</td></tr>
<tr><td>Prior to V1</td><td>TOGA.
<u>Continue</u> the takeoff</td><td colspan="2"><u>Reject</u> the takeoff if sufficient runway remains.</td></tr>
<tr><td>At or Above V1</td><td colspan="3">• TOGA
• Rotate no later than 2,000 feet of runway remaining
• Utilize autopilot, if engaged, but be aware autopilot disengagement may occur if α > α prot
• Follow SRS commands
• Retract gear and flaps on schedule
If a PWS Warning occurs – roll wings level <u>unless terrain is a factor</u> in order to maximize aircraft performance.</td></tr>
<tr><td>During Approach</td><td><u>Continue</u> the approach</td><td colspan="2">• Execute a normal <u>go-around</u> using TOGA thrust.
• Utilize autopilot, if engaged, but be aware autopilot disengagement may occur if α > α prot
• Retract gear and flaps on schedule.
If a PWS Warning occurs – roll wings level <u>unless terrain is a factor</u> in order to maximize aircraft performance.</td></tr>
</table>

Note: *<u>Reactive</u>* windshear detection is activated from 3 seconds after liftoff up to 1300 feet RA during takeoff and 1300 feet to 50 feet during approach.

71. The aircraft is certified for an engine-out CAT III Single approach (fail passive) and autoland provided engine-out procedures are completed prior to _1000_ feet AFL.
Reference: OM Vol I 1.10.2

- A320 Engine-out autolands are authorized in CONF FULL only.
- A319/321 Engine-out autolands are authorized in CONF 3 or CONF FULL.

72. _CONF 3_ is the standard flap setting for landing.
Reference: OM Vol I 2f.2.7

CONF FULL landing should be considered in the following situations:
- short runway (6000 FT or less)
- low visibility approaches
- wet or icy runways (Except A321)
- tailwind landings
- steep approaches
- when operating with an MEL item or abnormal system condition that impacts landing performance

When planning a normal landing with CONF 3 the GPWS LDG FLAP 3 pb must be selected ON and CONF 3 must be selected in the MCDU PERF APPR page.

73. If "CAT 3 DUAL" is displayed in INOP SYS without any other failure being detected, change the AP in command. This may allow the CAT 3 DUAL function to be recovered. If this procedure fails, cycle the _FAC_ pbs to OFF and back to ON one at a time.
Reference: OM Vol I 4.13.7

If "CAT 3 DUAL" is displayed in INOP SYS without any other failure being detected:
Procedure.
1. Change the AP in command. This may allow the CAT 3 DUAL function to be recovered.

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

CAT III approaches are based on either an Alert Height (AH) or DH depending on aircraft approach capabilities when the approach was commenced. This is displayed on the FMA as "SINGLE" or "DUAL."
- The "SINGLE" annunciation indicates the autoland system is operating in a "Fail Passive" mode. "Fail Passive" will allow successful completion of an autoland, but visual verification of the runway environment at or prior to the DH is required. Use a 50' entry in the DH/RADIO field on the PERF page.
- The "DUAL" annunciation indicates the autoland system is operating in a "Fail Operational" mode. "Fail Operational" allows successful completion of an autoland even if an internal or external failure occurs at or below the AH. Use a 100' entry in the DH/RADIO field on the PERF page.

74. The AUTO LAND lights flash when excessive deviation occurs in LOC or GLIDE, both autopilots disengage, both localizer transmitters or receivers fail, both G/S transmitters or receivers fail or the difference between RA indications is greater than 15 feet. The warning flashes in LAND mode below _200 ft. RA_.
Reference: OM Vol II 10.2.3

75. The minimum height for the use of the Autopilot during a Non-Precision Approach is _DA_, _DDA_, or _MDA_.
Reference: OM Vol I 1.10.1

Minimum Height for Use of the Autopilot	
After Takeoff in SRS mode	**100 feet AGL** (an internal FMGC logic prevents the autopilot from engaging in the 5 seconds after liftoff)
Enroute (all other phases of flight) A319/320 A321	 500 feet AGL 900 feet AGL
Non-ILS Approach	**DA, DDA, or MDA**
ILS Approach (non-autoland with CAT 2, CAT 3 SINGLE, CAT 3 DUAL annunciated on the FMA)	80 feet AGL
ILS Approach (non-autoland with CAT 1 annunciated on the FMA)	160 feet AGL
After a Manual Go Around in SRS mode	100 feet AGL

76. Maximum gear extension speed (VLO) is _250 KIAS_, Maximum gear extended speed (VLE) is _280 KIAS/.67M_, and Maximum gear retraction speed (VLO) is _220 KIAS_.
Reference: OM Vol I 1.4.1

77. A go-around is mandatory during a CAT II/III approach if the FMA does not display a _LAND Green_ below 350 feet RA, the AUTOLAND warning light illuminates during the approach, or the FMA does not display _FLARE_ at approximately 40 feet.
Reference: OM Vol I 2f.6.2

78. In flight, the pilot monitoring (PM) will normally move the landing gear and flap controls upon command of the pilot flying (PF). Prior to moving the landing gear or flap handle, the PM will check the _airspeed_ to ensure that it is in the normal operating range for the aircraft configuration.
Reference: OM Vol I 2.5.3

After checking the airspeed, the PM will
1. Repeat the command,
2. Select the landing gear or flaps to the commanded position, and
3. Ensure the landing gear or flaps move to the commanded position.

After landing gear extension, the PM will ensure no residual brake pressure on the triple indicator.

Note: On Enhanced aircraft, as part of system self-tests, brake pressure indications may be observed on the triple indicator for a brief period after landing gear extension.

79. When flying a VOR/NDB (if ADF installed) approach, the underlying raw data must be monitored during the approach. Once established inbound on the approach, a missed approach must be executed if raw data indicated on the ND differs by more than _5º_ from the charted inbound approach course (except for station passage).
Reference: OM Vol I 2f.9.8

The following restrictions apply only to VOR and NDB approaches:
- tune the underlying VOR/NDB station (if ADF installed) on the RAD NAV page
- the underlying raw data must be monitored during the approach. Select the appropriate bearing pointer to display the raw data on the ND (ROSE NAV or ARC)
- once established inbound on the approach a missed approach must be executed if raw data indicated on the ND differs by more than 5º from the charted inbound approach course (except for station passage)

80. When conducting RNAV visual or FMS/CVFP visual approaches, enter BARO altitude of _300_ on the PERF APPR page.
Reference: OM Vol I 2f.2.8

Go-Around & Landing

81. Either pilot may make a go around callout. If the go around callout is made, the PF must _execute a go-around_.
Reference: OM Vol I 2g.1.1

82. Aircraft must touchdown in the first third of the available landing distance, but in no case more than _3000_ feet down the available landing distance. If this is not accomplished, a go-around must be executed.
Reference: OM Vol I 2g.12.4

Example: On a 9000 foot runway the touchdown must occur no further than 3000 feet down. On a 6000 foot runway the touchdown must occur no further than 2000 feet down.

83. During a go-around, ensure NAV is engaged. Then, if the desired missed approach path cannot be flown in NAV or ATC assigns a heading, utilize HDG. Maintain current heading until reaching _400_ feet AFL.
Reference: OM Vol I 2g.2.5

84. Normally, during a go around above 1000 ft AFL, the best course of action is to initially move the thrust levers to the TOGA detent and then return them to the CL detent when TOGA thrust is not required. This would be accomplished only after verifying that _ MAN TOGA - SRS _ was annunciated on the FMA.
Reference: OM Vol I 2g.2.3

Although the go around dialog box shows the CL thrust option after gear retraction, you may elect to select the thrust levers to the CL detent any time after verifying that MAN TOGA-SRS is annunciated on the FMA. If CL is selected before the thrust has stabilized at TOGA, the appropriate PM callout is "Climb Set."

85. Sufficient clues must exist to continue the approach below DH or MDA/DDA. If visual clues are lost after DH or MDA/DDA due to shallow fog, snow flurries or heavy precipitation, the pilot shall immediately initiate a _ go-around _ and fly the _ published missed approach procedure _.
Reference: OM Vol I 2g.2.4

86. (True or False) On slippery runways, the predetermined deceleration may not be reached due to antiskid operation. In this case, the green DECEL light will not illuminate. This does not indicate the autobrake is not working.
Reference: OM Vol II 14.2.6

The DECEL light illuminates green only if the autobrake function is active and when actual aircraft deceleration corresponds to predetermined rate. (In LO or MED: 80% of the selected rate).

87. Landing with CONF 3 rather than CONF FULL will increase the normal landing roll by approximately _500_ feet, depending upon landing weight.
Reference: OM Vol I 2g.12.9

88. After landing, maintain up to maximum reverse thrust until the airspeed approaches _80_ knots. Then start reducing the reverse thrust so the reverse levers are moving down at a rate commensurate with the deceleration rate of the airplane. Reverse idle should be reached by _60_ knots.
Reference: OM Vol I 2g.12.7

Idle reverse thrust may be used until the aircraft is at a full stop or until the turn off is made, provided taxi speed is obtained. Return the engines to forward idle thrust.

89. Acceptable autoland performance cannot be assured at weights above the certified _Maximum Landing Weight _.
Reference: OM Vol I 2g.12.11

90. During an Automatic Roll Out, with one engine inoperative, the use of the remaining thrust reverser is permitted provided _ not more than idle reverse thrust is used _ and crosswind component is not more than _15_ knots.
Reference: OM Vol I 1.10.2

91. The PM will monitor the pitch attitude on the PFD and call "Pitch" if pitch attitude reaches _10_ degrees for the A319/320 or _7.5_ degrees for the A321.
Reference: OM Vol I 2g.13 / OM Vol I 2g.15.2

Call "Bank" if 7° bank is reached.

92. (True or False) If, during a go around, both thrust levers are set to TOGA detent after touchdown, the autopilots will disengage.
Reference: OM Vol I 2f.6.2

Go-arounds from very low heights may result in the aircraft touching down after the go around is initiated. Even if this touchdown occurs, the autopilots will remain engaged and accomplish a successful go around.

WARNING: If, during a go around, both thrust levers are set to TOGA detent ***after*** touchdown, the autopilots will disengage (prevents takeoff with autopilot engaged following a touch and go landing).

Parking & Post Flight

93. What is the trigger for the Captain's After Landing Flow?
Reference: OM Vol I 2h.2.2

Trigger: After the aircraft has cleared the active runway
- External Lights - As required
- Call for "Flaps - Up" (or as operationally required)

94. Single engine taxi is the standard mode of taxi. Run engines at IDLE for approximately _3_ minutes to allow for engine thermal stabilization before shutting down engine #2.
Reference: OM Vol I 2h.4.3

95. If the brake temperatures do not appear likely to exceed _400°C_, do not utilize brake fans unless required to meet brake temperature limitations for a subsequent takeoff.
Reference: OM Vol I 2h.4.1

If the HOT annunciator on the BRK FAN pushbutton illuminates, monitor brake temperatures. If the brake temperatures do not appear likely to exceed 400°C, do not utilize brake fans unless required to meet brake temperature limitations for a subsequent takeoff (e.g., due to a short turn-around time). If brake fan use is required, brake fan selection should be delayed for a minimum of about 5 minutes, or just prior to turning into the gate (whichever occurs first), to allow thermal equalization and stabilization and thus avoid oxidation of brake surface hot spots. Selecting the brake fans before reaching the gate prevents the brake fans from blowing carbon brake dust on ground personnel. If brake temperatures appear likely to exceed 500°C, use the brake fans, without regard to possible oxidation phenomenon.

Caution: Do not select brake fans ON if any ground personnel are in the area of the wheel wells. If a BRAKES HOT ECAM occurs after gate arrival, coordinate with ground crew before turning brake fans on.

Select brake fans OFF after brakes have sufficiently cooled.

96. As part of the First Officer's After Landing Flow, if the OAT is greater than _38°C/100°F_, place the FLAPS Lever in the 1 detent during taxi and at gate to avoid "AIR L(R) WING LEAK" caution.
Reference: OM Vol I 2h.3.3

97. If non-normal circumstances require operation of the APU, BAT 1 & 2 must remain ON to ensure _Fire Protection_.
Reference: OM Vol I 2h.10.1

98. The captain will taxi the aircraft to the gate. If waiting for guide man, the aircraft may be turned on to the lead-in line, but should not approach closer than approximately _one aircraft length_ from the parking position.
Reference: FM Part I 10.8.4

99. Regarding ramp markings, the lead-in line for all aircraft is yellow. At gates with dual lead-in lines, narrowbody aircraft use the _solid_ line, and widebody aircraft use the _broken_ line.
Reference: PM Part I 10.8.5

100. The _passenger door disarming lever_ is a confirm item on the ground.
Reference: OM Vol I 9.1.3

Confirm items are accomplished the same as standard non-normal checklist items except the action will not be accomplished until the PF guards the non-affected control and states "Confirmed". In cases where physical guarding of controls is not possible, a visual verification by the PF will be an acceptable means of guarding the non-affected control. Confirm items in flight include thrust levers, engine masters, engine fire pbs, cargo smoke DISCH pbs, IR pbs/selectors, and/or IDGs. **The passenger door disarming lever is a confirm item on the ground.** QRH Confirm items have "Confirm" printed between the challenge and response while ECAM Confirm items do not.

ADDITIONAL MEMORY LIMITATIONS (In Bold)

OPERATION LIMITS
Maximum wind for takeoff and landing: **50 knots**
Maximum crosswind for takeoff and landing: **29/G35 knots**
Maximum crosswind (including gusts) for Autoland (Vis ≥ 4000 or 3/4: **20 knots**
Maximum crosswind for landing Vis < 4000 or 3/4: **15 knots**
Maximum tailwind component for takeoff (A320 and A321 with IAE engines): **10 knots**
Maximum tailwind component for takeoff (All A319/321 and A320 with CFM engines): **15 knots**
Maximum tailwind component for landing (non-Sharklet): **10 knots**
Maximum tailwind component for landing (Sharklet): **15 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 taxi speed: 30 knots
Maximum taxi speed for 90 degree turn: 10 knots
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): **10º C or below**
(except during climb and cruise when the temperature is **below –40º C SAT**)

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

FUEL
Operational maximum fuel imbalance will be indicated by an ECAM advisory condition.

HYDRAULICS, BRAKES, & LANDING GEAR
Maximum landing gear extension altitude: **25,000 feet**

FLIGHT CONTROLS
Maximum flap and/or slat extension altitude: **20,000 feet**

AUTO FLIGHT SYSTEM
Autopilot Engaged – Minimum Height: **100 feet AGL** After Takeoff in SRS mode.

Maximum Winds for Automatic Approach, Landing, and Rollout (including gusts)	
Headwind	**30 knots**
Tailwind	**10 knots**
Crosswind for visibility 4000 or ¾ or greater	**20 knots**

RSVM
The maximum allowable in-flight difference between captain and first officer PFD altitude displays for RVSM operations is **200 feet**.

POWERPLANT
Minimum oil quantity for dispatch: 13 quarts