OPS – OPERATIONAL DATA
OPS-OPS – OPERATIONAL DATA
REQUIRED EQUIPMENT FOR LTS CAT1, CAT2 AND CAT3

	FMA CAPABILITY →	LTS CAT1 CAT 2	CAT 3 SINGLE	CAT 3 DUAL
	EQUIPMENT ↓			
FMGS MONITORED FOR FMA LDG CAPABILITY	AP	1 AP ENGAGED	1 AP ENGAGED	2 AP ENGAGED
	AUTOTHRUST	0	1	1
	FMA	1	2	2
	A/THR CAUTION	0	1	1
	ELECTRICAL SUPPLY SPLIT	0	0	1
	FAC	1	1	2
	ELAC	1	1	2
	YAW DAMPER/RUDDER TRIM	1/1	1/1	2/2
	HYDRAULIC CIRCUIT	2	2	3
	PFD	2	2	2
	FLIGHT WARNING COMPUTER	1	1	2
	BSCU CHANNEL	1(1)	1(1)	1
	ANTISKID	1(1)	1(1)	1
	NOSEWHEEL STEERING	1(1)	1(1)	1
	RADIO ALTIMETER	1 (displayed on both sides)	2	2
	ILS RECEIVER	2	2	2
	BEAM EXCESSIVE DEVIATION WARNING	1 for PM	2	2
	ATTITUDE INDICATION (PFD1/PFD2)	N° 1 + N° 2	N° 1 + N° 2	N° 1 + N° 2
	ADR/IR	2/2	2/2	3/3
NOT FMGS MONITORED FOR FMA LDG CAPABILITY	AP DISCONNECT PB	2	2	2
	"AP OFF" ECAM WARNING	1	1	2
	"AUTOLAND" LIGHT	1	1	1
	RUDDER TRAVEL LIMIT SYSTEM	1 required for autoland with crosswind higher than 12 kt		
	WINDSHIELD HEAT (L or R windshield)	1 for PF		
	WINDSHIELD WIPERS OR RAIN REPELLENT (if activated)	1 for PF		
	ND	1	2	2
	AUTO CALLOUT FUNCTION	One is required for autoland	1	1
	ATTITUDE INIDICATION (STBY)	1	1	1
	DH INIDCATION	1 for PM		

(1) *For automatic rollout, one is required. For autoland without automatic rollout, none is required.*

Note: *- Flight crews are not expected to check the equipment list before approach. When an ECAM or local caution occurs, the crew should use the list to confirm the landing capability.*
- On ground, the equipment list determines which approach category the aircraft will be able to perform at the next landing.
- Electrical power supply split : This ensures that each FMGC is powered by an independent electrical source (AC and DC).
- Failure of antiskid and/or nosewheel steering mechanical parts are not monitored for landing capability.
- The DH will be displayed on the FMA, and the "Hundred Above" and "Minimum" auto callouts will be announced, provided that the DH value has been entered on the MCDU.

LOW VISIBILITY OPERATIONS

Applicable to: ALL

Take-off Ban

Take-off is banned if any of the following is below the relevant minimum:

1. The RVR assessed by the Commander from the flight deck when lined-up on the runway immediately before takeoff
2. The reported Touchdown Zone (TDZ) RVR or Met Visibility (see Note)
3. The Mid-point RVR, when reported
4. The Stop-end (Rollout) RVR, for operations below 200 m RVR
5. The cloud-ceiling (if specified in the AOM) or:
6. If the runway is indistinguishable from its surroundings.

Note: Pilot assessment of TDZ RVR when practical always overrides the reported TDZ RVR or Met visibility (either to increase or decrease the reported RVR). Pilot assessment may not be practical where runways are humped or the RVR limit is high.

Briefing

The following items should be reviewed prior to making a low visibility approach:

- Autoland Lt Test.
- Crew Qualification.
- Ground and Aircraft Equipment Status.
- Low Visibility Procedures.
- Alternate.
- Downgrade Options.
- Flight Deck Lighting.
- Seat Position.
- PED PA.

Approach Ban

Do not descend below 1 000 ft AAL if at the time of arrival at 1 000 ft AAL:

1. TDZ RVR or Met visibility is below appropriate minimum.
2. Mid-point RVR (when reported and relevant) is below 125 m or the TDZ RVR minimum when that is lower.
3. Stop-end RVR (when reported and relevant) is below 75 m.

Note: 1. RVRs reported below 1 000 ft are advisory only.
2. 'Relevant' in this context means that part of the runway used during the high-speed phase of the landing down to a speed of approximately 60 kt.

Visual Reference Requirements

Lower than standard CAT I (LTS CAT I) / CAT II / Other than Standard CAT II (OTS CAT II) / 3A

A segment of at least 3 consecutive lights being the centreline of the approach lights, or touchdown zone lights, or runway centreline lights, or runway edge lights, or a combination of these.

In addition, for **LTS CAT I or CAT II or Other than Standard CAT II (OTS CAT II)**, the reference must include a lateral element of the ground pattern, i.e. an approach lighting crossbar, or the landing threshold, or a barrette of the touchdown zone lighting.

CAT 3B (with DH)

A minimum of one runway centreline light.

CAT 3B (no DH)

No visual reference requirement.

Failures Above 1 000 ft

Refer to FCOM/PRO NOR SRP 01 - FMS, Failures and Associated Actions Above 1 000 ft for CAT II or CAT III. The approach may be continued only if:

- The reported RVR is acceptable for the new category of approach.
- The FMA displays the corresponding category.
- The appropriate procedure and minima have been included in the approach briefing.
- The decision to downgrade is made prior to 1 000 ft AAL.

Failures Below 1 000 ft

Refer to FCOM/PRO NOR SRP 01 - FMS, Failures and Associated Actions Below 1 000 ft During A CAT II Approach. Below 1 000 ft AAL the occurrence of any of the failures listed below necessitates a go-around, unless visual reference has already been acquired and can be maintained, and RVR is CAT 1 or better.

- Alpha floor activation.
- Autopilot off (cavalry charge).
- Downgrade of CAT (triple click).
- AMBER caution (single chime).
- Engine failure.
- The red Autoland light comes on.
- No LAND mode at 350R.
- No FLARE mode at 30R.

Note: *On a CAT 3 DUAL approach, below 100R a failure of one of the redundant operational systems may be accepted, and the approach and automatic landing completed.*

Immediately After Touchdown

If nosewheel steering or anti-skid have failed, disconnect autopilot at touchdown.