OM A - Revision 51

Effective from: 04.12.2023

Table of Contents

FOCA PRA approval

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☒ **OPS**: Manuals based on EU 965/2012 and amendments
☐ **ATO**: Manuals based on EU 1178/2011 and EU 290/2012 and amendments

Proposed Revision / Amendment (PRA)

Reset Form

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The amendment/revision does affect material requiring formal approval by the FOCA. Formal approval will be granted on specific documentation and will be effective only after the operator has received the respective documentation, signed by the FOCA.

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FOCA Formal Approval

The proposed revision / amendment is released for incorporation in the respective documentation with the effective date stated below.

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For revisions not requiring prior approval according ORO.GEN.130 the special form NMR shall be used instead of this PRA.

List of Changes

Title	Type	CR Label	Change Reason
Abbreviations	Changed	CR-OMA-10346	Editorial change - SWC, VAA, VAAC, VAG added
1.6.3 Conversation	Changed	CR-OMA-10887	Editorial change - Confidentiality iso secrecy
1.6.12 Hotel accommodation	Changed	CR-OMA-10959	Further instructions on hotel complaints added
1.6.18.1 Reporting	Changed	CR-OMA-10834	Submission of medical certificate clarified
2.1 Supervision of the operations by Edelweiss	Title Changed	CR-OMA-11024	Editorial change - Title changed
2.1.1 General	Changed	CR-OMA-11025	Editorial change - Format adjusted
2.1.4.1 Documents used for the preparation and execution of a flight	Changed	CR-OMA-10909	Documents to be retained amended FCR/CCR, plotting charts and meteorological information removed.
2.1.4.2 Analysis and retention of documents	Changed	CR-OMA-10916	Editorial change - Reference updated
2.1.4.3.3 Reports	Changed	CR-OMA-10905	FCR removed
2.3.1.4 Operational irregularities	Changed	CR-OMA-10898	Editorial change - Crew control iso crew office
2.5.4 Non-Punitive Safety Reporting System	Changed	CR-OMA-10727	Instruction to only use 2 or 3 letter code added

Title	Type	CR Label	Change Reason
5.2.1.3 Conversion to long haul A/C	Changed	CR-OMA-10780	Minimum requirements for conversion course amended
5.2.1.5 Evaluation of qualification	Changed	CR-OMA-10779	Editorial change - CCQC covered in 5.2.1.3
7.2.5 Fatigue risk management	Changed	CR-OMA-10861	Editorial change - Reference updated
7.3.7 Crew members in an unknown state of acclimatisation	Changed	CR-OMA-10922	Editorial change - Reference updated
7.8 Fatigue management training	Changed	CR-OMA-10917	Editorial change - Reference updated
8.1.3.9.3 Effect of downgraded or failed ground equipment	Changed	CR-OMA-10860	Edge/THR lights - Landing minima CAT III amended
8.1.3.11.1 General	Changed	CR-OMA-9917	Requirements for take-off clarified
8.1.5.4 Policy	Changed	CR-OMA-11205	Consideration of navigation facilities clarified
8.1.5.8.2 RNP/PBN based approach procedures	Changed	CR-OMA-11206	Restriction regarding GPS-jamming/-spoofing added
8.1.10.1 General	Changed	CR-OMA-10918	OFP chapter amended and restructured Please read all chapters from 8.1.10.1 to 8.1.10.5.2 and familiarise yourself with the changes. New and amended subchapters: 8.1.10.1 General 8.1.10.2 eFM fuel calculation (short-haul only) 8.1.10.3 Signatures 8.1.10.4 Contingency procedure

Title	Type	CR Label	Change Reason
			8.1.10.5 Handling of the OFP 8.1.10.5.1 eFM Trip Log 8.1.10.5.2 Hardcopy / ACARS OFP
8.1.10.2 eFM fuel calculation (short-haul only)	Title Changed	CR-OMA-10947	Editorial change - Title changed
8.1.10.2 eFM fuel calculation (short-haul only)	Changed	CR-OMA-10928	Chapter amended and restructured
8.1.10.3 Signatures	New	CR-OMA-11184	New subchapter to 8.1.10
8.1.10.4 Contingency procedure	New	CR-OMA-10948	New subchapter to 8.1.10
8.1.10.5 Handling of the OFP	New	CR-OMA-10949	New subchapter to 8.1.10
8.1.10.5.1 eFM Trip Log	New	CR-OMA-11185	New subchapter to 8.1.10
8.1.10.5.2 Hardcopy / ACARS OFP	New	CR-OMA-11186	New subchapter to 8.1.10
8.1.10.6 Fuel calculation criteria used in the FPM	Title Changed	CR-OMA-10950	Editorial change - Title changed
8.1.10.7 eOFP Description	New	CR-OMA-11085	New chapter describing the eOFP Please read the entire chapter 8.1.10.7 and familiarise yourself with the changes. New subchapters: 8.1.10.7.1 Flight Details Module 8.1.10.7.2 Sign Off Module 8.1.10.7.3 Trip Log Module 8.1.10.7.4 Archiving the flight data

Title	Type	CR Label	Change Reason
8.1.10.7.1 Flight Details Module	New	CR-OMA-11306	New subchapter to 8.1.10.7
8.1.10.7.2 Sign Off Module	New	CR-OMA-11307	New subchapter to 8.1.10.7
8.1.10.7.3 Trip Log Module	New	CR-OMA-11308	New subchapter to 8.1.10.7
8.1.10.7.4 Archiving the flight data	New	CR-OMA-11305	New subchapter to 8.1.10.7
8.1.10.8 Hardcopy OFP Description	Title Changed	CR-OMA-11042	Editorial change - Title changed
8.1.10.8.4.2 Tankering and next leg	Changed	CR-OMA-10912	Need for signature from dispatcher removed
8.1.10.8.7 EDW Notes	Changed	CR-OMA-11019	EDW Notes section on hardcopy OFP amended
8.1.10.8.9 Completion of the OFP	Changed	CR-OMA-11018	EDW Notes section on hardcopy OFP amended
8.1.10.9 ACARS OFP	Changed	CR-OMA-11020	EDW Notes section on ACARS OFP amended
8.1.12.1 Flight documents	Changed	CR-OMA-10903	Editorial change - FCR removed
8.2.1.6 Supervision of Refuelling and Fuel Check	Changed	CR-OMA-10906	Editorial change - NOTAM iso FCR
8.2.4.2 Policy	Changed	CR-OMA-11300	Reference de-icing with open passenger door added

Title	Type	CR Label	Change Reason
8.2.4.5.1 Fluid Application Tables and Holdover Times (HOT Tables)	Changed	CR-OMA-11235	References to brand name HOT tables rearranged
8.2.4.9 Forced Air Technology	Changed	CR-OMA-10709	Editorial change - Reference updated
8.2.4.11 Ice Shedding Procedures	Changed	CR-OMA-11187	Editorial change - Format adjusted
8.2.4.14 Pre-de-icing/anti-icing	New	CR-OMA-11375	New chapter describing pre-de-icing/anti-icing
8.3.2.4 Navigational procedures	Changed	CR-OMA-9876	Editorial change - Wording clarified
8.3.2.6 Use of navigation aids	Changed	CR-OMA-11158	Wording clarified for comprehensibility
8.3.2.11 Maps and charts	Changed	CR-OMA-11160	Editorial change - Wording clarified
8.3.2.15.4 ATC clearances	Changed	CR-OMA-11161	Editorial change - Wording clarified
8.3.3 Altimeter setting	Title Changed	CR-OMA-11181	Editorial change - Title changed
8.3.3.1.1 Altimeter setting policy	Changed	CR-OMA-11162	Wording clarified for comprehensibility
8.3.3.1.1 Altimeter setting policy	Title Changed	CR-OMA-11182	Editorial change - Title changed
8.3.6.4.2 Resolution advisories (RA)	Changed	CR-OMA-10308	Wording clarified for comprehensibility

Title	Type	CR Label	Change Reason
8.3.8.2 Icing conditions	Changed	CR-OMA-11350	Editorial change - Reference updated
8.3.8.5.1 Thunderstorms	Changed	CR-OMA-10783	Editorial change - 20 NM iso 10 NM
8.3.8.15.3 Taxiing	Changed	CR-OMA-9869	One-engine taxi when slippery not recommended
8.3.19.6.4 Taxi lights	Changed	CR-OMA-10349	Taxi lights ON while waiting on an active RWY
8.3.19.14.1 Cockpit / ground communication	Changed	CR-OMA-11197	Editorial change - Reference updated
8.3.19.18.9 Stabilised approach operation	Changed	CR-OMA-11217	Exception for landing checklist added
8.3.20.2 Structured decision making	Changed	CR-OMA-9756	Formatting adjusted
8.3.20.5.1 Hard landings	Changed	CR-OMA-10902	Editorial change - IQSMS iso FCR
8.3.20.5.2 Overweight landings	Changed	CR-OMA-10907	Editorial change - IQSMS iso FCR
8.4.1 Concept	Changed	CR-OMA-9916	Wording clarified and requirements for LVO amended
8.4.2 Low visibility taxi	Changed	CR-OMA-11149	Considering hotspots covered by Smarter Briefing
8.4.3.1 General	Changed	CR-OMA-9915	Definition and specific approval of LVTO clarified

Title	Type	CR Label	Change Reason
8.4.3.2 Minima for take-off	Changed	CR-OMA-11150	Wording clarified for comprehensibility
8.4.3.3 LVTO with RVR below 400m	Title Changed	CR-OMA-11151	Editorial change - Title changed
8.4.3.3 LVTO with RVR below 400m	Changed	CR-OMA-9930	Information on LVTO with RVR < 400m amended
8.4.4 CAT II/III approach	Changed	CR-OMA-11154	Editorial change - Wording clarified
8.4.5.1 CAT II and III approaches	Changed	CR-OMA-11155	RVR requirements fully revised
8.4.6.1 Non precision and CAT I	Changed	CR-OMA-11156	Editorial change - Format adjusted
8.7.1.2 Flight crew qualification requirements	Changed	CR-OMA-11208	Editorial change - Wording clarified
8.7.1.4 Cabin safety procedures	Changed	CR-OMA-11232	Editorial change - Reference updated
8.9.1.5 EFB Policy	Changed	CR-OMA-11076	Flight operations applications clarified
8.9.2.1 Cabin crew devices	Changed	CR-OMA-11075	Cabin crew device must be charged at least 50%
9.1.11.2 Cabin crew	Changed	CR-OMA-10774	Editorial change - Format adjusted
9.2.1 Weapons and munitions of war	Changed	CR-OMA-10786	Editorial change - Wording according to ACSP

Title	Type	CR Label	Change Reason
10.3.9.2 Checklists and Aircraft Security Search Form	Changed	CR-OMA-10904	Editorial change - Distribution ASS forms adjusted
10.3.9.2 Checklists and Aircraft Security Search Form	Changed	CR-OMA-10841	Editorial change - ASS form updated
10.3.9.7.1 Cabin crew duties	Changed	CR-OMA-10908	Editorial change - Distribution ASS forms adjusted
10.3.9.7.1 Cabin crew duties	Changed	CR-OMA-10839	Editorial change - 3rd party aircraft search added
10.3.9.7.3 Ground Handling duties	Changed	CR-OMA-10840	Editorial change - ISS aircraft search added
10.3.9.8.1 Communication of Aircraft Security Search requirement	Changed	CR-OMA-10901	Editorial change - Flypad iso FCR/CCR
10.8.6.5 Completion, storage and distribution of PDR	Changed	CR-OMA-10921	Editorial change - Format adjusted
10.9.2.2 Handling of inadmissible passengers	Changed	CR-OMA-9873	Editorial change - Wording according to ACSP
10.9.4 Transportation restrictions for INAD/DEPU/DEPA	Changed	CR-OMA-9530	Editorial change - DEPO guideline amended
10.11.4.1 Policy	Changed	CR-OMA-11164	Editorial change - Wording clarified
10.13.1.1 General	Changed	CR-OMA-11078	Editorial change - Info on security levels amended
10.13.1.2.1 Layover Security Level 1	Changed	CR-OMA-11079	Editorial change - Security instructions amended

Title	Type	CR Label	Change Reason
10.13.1.2.2 Layover Security Level 2	Changed	CR-OMA-11080	Editorial change - Security instructions amended
10.13.1.2.3 Layover Security Level 3	Changed	CR-OMA-11083	Editorial change - Security instructions amended
10.13.2.2.1 General	Changed	CR-OMA-9925	Editorial change - Wording clarified
10.13.3 Earthquake	Changed	CR-OMA-9931	Editorial change - Format adjusted
1.3.14.2 Cabin Safety Officer	Removed	CR-OMA-10896	Obsolete
1.3.14.1 Flight Safety Officer	Removed	CR-OMA-10897	Obsolete
2.5.2.4 Main Tasks Flight Safety Officer	Removed	CR-OMA-10914	Obsolete
8.3.8.18.2 Use of auto-brake system	Removed	CR-OMA-10314	Obsolete
8.4.1.3.4 LVTO with RVR below 150m but not less than 125m	Removed	CR-OMA-11152	Obsolete - Content in above module
2.5.2.5 Main Tasks Cabin Safety Officer	Removed	CR-OMA-10915	Obsolete
8.4.1.3.5 LVTO with RVR below 125m but not less than 75m	Removed	CR-OMA-11153	Obsolete - Content in above module
8.4.1.6.9 ATC clearance	Removed	CR-OMA-11157	Obsolete

Title	Type	CR Label	Change Reason
8.4.1 General	Removed	CR-OMA-11296	Obsolete
1.3.9 Chief Product Officer	Removed	CR-OMA-10893	Obsolete
8.3.19.20 Landing Check	Removed	CR-OMA-11319	Obsolete

Abbreviations, Terms and Definitions

Abbreviations

A

AC	Altocumulus
ACARS	Aircraft communication addressing and reporting system
ACAS	Airborne collision avoidance system
ACC	Accident
AD	Aerodrome Airworthiness directive
ADDCFS	Additional fuel to fulfil the critical fuel scenario (FPM)
ADDPNR	Additional fuel for the operation to an isolated aerodrome (FPM)
ADF	Automatic Direction Finder
ADR	Aerodromes (Lido)
ADS-B	Automatic dependent surveillance-broadcast
ADS-C	Automatic dependent surveillance-contract
AeMC	Aero-medical centre
AFC	Airport facility chart
AFM	Aircraft flight manual
AGC	Airport ground chart
AGL	Above ground level
AIP	Aeronautical information publication
AIRPROX	Aircraft proximity incident
AIS	Aeronautical information services
ALT	Altitude
AME	Aeromedical examiner
AMM	Aircraft maintenance manual
AOC	Air operator certificate
AP	Autopilot
APCH	Approach
APU	Auxiliary power unit

APV	Approach with vertical guidance
AR	Authorisation required
ATA	Air Transportation Association
ATC	Air traffic control
A/THR	Autothrust
ATIS	Automatic terminal information service
ATM	Air traffic management
ATO	Approved training organisation
ATPL	Airline transport pilot licence
ATS	Air traffic services
AWO	All-weather operations

C

C/C	Cabin crew
CAMO	Continuing airworthiness management organisation
CAT	Commercial air transport; clear-air turbulence
CAT I, II, III	Category I, II, III
CB	Circuit breaker; cumulonimbus
CCA	Cabin crew attestation
CCM	Cabin crew member
CDL	Configuration deviation list
CFI	Chief flight instructor
CFIT	Controlled flight into terrain
CFS Fuel	Critical Fuel Scenario fuel
CHFR	Confidential human factor report
CM1	Crew member 1 (left seat)
CM2	Crew member 2 (right seat)
CMD	Commander
COM	Communication
CPDLC	Controller – pilot data link communications
CPL	Commercial pilot licence

CR	Change request (Yonder)
CRM	Crew resource management
CRS	Certificate of release to service
CSPM	Cabin safety procedures manual
CTKI	Chief theoretical knowledge instructor
CU	Cumulus
CVR	Cockpit voice recorder

D

DA	Decision altitude
DA/H	Decision altitude/height
DEC	Declaration
DG	Dangerous goods
DH	Decision height
DME	Distance-measuring equipment
DP	Decision point

E

EASA	European Aviation Safety Agency
EBT	Evidence-based training
EDW	Edelweiss Air AG
EDTO	Extended diversion time operations
EFB	Electronic flight bag
EFTA	European Free Trade Association
EMK	Emergency medical kit
EMS	Event measurement system
ERO	Emergency Response Organisation
EROPS	Extended range operations
ETOPS	Extended range operation by twin-engined aeroplane
EU	European Union

F

FAA	Federal Aviation Administration (USA)
FAF	Final approach fix
FAK	First aid kit
FCL	Flight crew licensing
FCM	Flight crew member
FCOM	Flight crew operating manual
FD	Flight director
FDM	Flight data monitoring
FDP	Flight duty period
FDR	Flight data recorder
FE	Flight examiner
FIR	Flight information region
FL	Flight level
FLD	Factored in-flight landing distance
FMS	Flight management system
FOCA	Federal office of civil aviation (Switzerland)
FOD	Foreign object damage
FPD	Flight path director
FPV	Flight path vector
FRM	Fatigue risk management
FS+	FlySmart with Airbus
FTL	Flight and duty time limitation

G

GBAS	Ground-based augmentation system
GEN	General
GHS	Globally harmonised system
GLS	GBAS (ground-based augmentation system) landing system
GM	Gross mass
GNSS	Global navigation satellite system

GPS	Global positioning system
GPWS	Ground proximity warning system

H

HF	Human factors

I

IAC	Instrument Approach Chart
IAF	Initial approach fix
IAS	Indicated airspeed
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IFR	Instrument flight rules
ILL	Illness
ILS	Instrument landing system
IMC	Instrument meteorological conditions
INS	Inertial navigation system
IOSA	IATA operational safety audit
IQSMS	Integrated quality and safety management system provided by ASQS (advanced safety and quality solutions) Vienna, Austria
IR	Instrument rating
ISA	International standard atmosphere

L

LDA	Landing distance available
LHG	Lufthansa Group
LIFUS	Line flying under supervision
LMC	Last minute change
LNAV	Lateral navigation
LOC	Localiser
LOSA	Line operations safety audit

LVO	Low-visibility operations
LVP	Low-visibility procedures

M

MAC	Mean aerodynamic chord
MACTOW	Mean aerodynamic chord for take-off
MAPt	Missed-approach point
MCC	Maintenance control centre
MCF	Maintenance check flight
MDA	Minimum decision altitude
MDA/H	Minimum descent altitude/height
MDH	Minimum decision height
MEL	Minimum equipment list
MET	Meteorology
MLM	Maximum landing mass
MMEL	Master minimum equipment list
MNPS	Minimum navigation performance specification
MOCA	Minimum Obstacle Clearance Altitude
MOR	Mandatory occurrence report
MORA	Minimum Off-Route Altitude
MPL	Multi-crew pilot licence
MSA	Minimum safe altitude; minimum sector altitude
MTOM	Maximum take-off mass
MTOW	Maximum take-off weight

N

NAV	Navigation
NAVAID	Navigation aid
NDB	Non-directional beacon
NOALTN	Additional fuel no alternate required (FPM)
NOTAM	Notice to airmen

NPA	Non-precision approach
NPCA	Nominated person continuing airworthiness
NPCT	Nominated person crew training
NPFO	Nominated person flight operations
NPGO	Nominated person ground operations

O

OCC	Operations Control Centre
OEI	One engine inoperative
OFP	Operational flight plan
OFZ	Obstacle-free zone
OHMP	Occupational health medical practitioner
OM	Operations manual
OMCC	Operational manager cabin crew
OMM	Operations management manual
OPC	Operator proficiency check
OPS	Operations
OPS Specs	Operations specifications

P

PA	Planning aerodrome, precision approach, public announcement
PANS	Procedures for air navigation services
PAPI	Precision approach path indicator
PAR	Precision approach radar
PBN	Performance-based navigation
PCN	Pavement classification number
PDP	Predetermined point procedure
PED	Portable electronic device
PF	Pilot flying
PIC	Pilot-in-command

PIREP	Pilot report
PM	Pilot monitoring; Process manual
PNR	Point of no return

Q

QRH	Quick reference handbook

R

R/T	Radiotelephony
RAR	Rules and regulations
RCF	Reduced fuel procedure
RFFS	Rescue and firefighting services
RLD	Required landing distance
RM	Route Manual
RNAV	Area navigation
RNP	Required navigation performance
RT	Recurrent training
RVR	Runway visual range
RVSM	Reduced vertical separation minima
RWY	Runway

S

S/C	Senior cabin crew
SA CAT I	Special authorisation CAT I
SATCOM	Satellite communications
SBAS	Satellite-based augmentation system
SC	Score
SERP	Station emergency response plan
SFC	Surface
SFE	Synthetic flight examiner

SFI	Synthetic flight instructor
SID	Standard instrument departure
SMS	Safety management system
SOP	Standard operating procedure
SR	Safety recommendation; shear rate
SRA	Surveillance radar approach
SRE	Surveillance radar element
SSR	Secondary surveillance radar
STA	Scheduled time of arrival
STAR	Standard Instrument Arrival
STD	Scheduled time of departure
STOPS	Standard operations
SUST	Swiss Transportation Safety Investigation Board
SWC	Significant Weather Chart

T

TAWS	Terrain awareness warning system
TC	Training captain
TCAS	Traffic collision avoidance system
TDZ	Touchdown zone
TI	Technical instructions
TMA	Terminal manoeuvring area
TOC	Top of climb
TODA	Take-off distance available
TRE	Type rating examiner
TRI	Type rating instructor
TRS	Training supervisor
TSA	Transportation Security Administration (USA)

U

UFT	Unfit

UPRT	Upset prevention and recovery training

V

VAA	Volcanic Ash Advisory
VAAC	Volcanic Ash Advisory Centre
VAG	Volcanic Ash Graphic
VASI	Visual approach slope indicator
VFR	Visual flight rules
VHF	Very high frequency
VIS	Visibility
VNAV	Vertical navigation
VOR	VHF omnidirectional range

W

WHO	World Health Organization
WOCL	Window of circadian low

Z

ZFTT	Zero flight time training

Terms and Definitions

Term	Definition
2D	Approach Operation: Is an instrument approach using lateral navigation guidance only.
3D	Approach Operation: Is an instrument approach using both lateral and vertical guidance.
Accelerate-stop distance available (ASDA)	Means the length of the take-off run available (TORA) plus the length of stopway if such stopway is declared available by the state of the aerodrome and can bear the mass of the aircraft under the prevailing operating conditions.

Term	Definition
Adequate aerodrome	Means an aerodrome that is adequate for the operation of a specific aircraft type and at the expected time of use, is available and equipped with necessary ancillary services such as air traffic services (ATS), sufficient lighting, communications, meteorological-reporting, navigation aids and emergency services, considering the applicable aeroplane performance requirements and runway characteristics. Adequate aerodromes for specific aircraft types are published in the Approved Aerodrome List.
Advisory VNAV guidance	Means VNAV guidance provided for advisory information only. The barometric altimeter indication must be used as primary altitude information to meet altitude restrictions along the vertical profile.
Aerodrome operating minima	The limits of usability of an aerodrome for: a. take-off, expressed in terms of runway visual range (RVR) and/or visibility and, if necessary, ceiling b. landing in 2D approach operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the category of the operation c. landing in approach and landing operations with vertical guidance, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, ceiling d. landing in 3D instrument approach-operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the type and/or category of the operation.
Aircraft tracking	Means a ground based process that maintains and updates, at standardised intervals, a record of position reports of individual aircraft in flight.
Aircraft tracking system	Means a system that relies on aircraft tracking in order to identify the lack of a required position report and provides alerts.
Alert height	A height above the runway based on the characteristics of the aircraft and its fail-operational landing system, above which a Category III approach would be discontinued, and a missed approach initiated if a failure occurred in one of the redundant parts of the fail operational

Term	Definition
	landing system, or in the relevant ground equipment.
Alternate aerodrome	Means a weather-permissible aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing.
Anti-icing	Precautionary procedure which provides protection against the formation of frost, slush, snow or ice from forming or accumulating on treated surfaces of an aircraft for a limited period of time (HOT).
Approach procedure with vertical guidance (APV)	Means a performance based navigation instrument approach procedure using RNP APCH with LNAV/VNAV minimum, RNP APCH with LPV minimum or RNP AR APCH with RNP minima expressed as Decision Altitude (DA). Designed for 3D instrument approach operations Type A. EDW does not hold an approval for RNP AR approach procedures.
Augmented flight crew	Means a flight crew which comprises more than the minimum number required to operate the aircraft, allowing each flight crew member to leave the assigned post, for the purpose of in-flight rest, and to be replaced by another appropriately qualified flight crew member.
Automatic dependent surveillance – broadcast (ADS-B)	A means by which aircraft, aerodrome vehicles and other objects can automatically transmit and/or receive data such as identification, position and additional data, as appropriate, in a broadcast mode via a data link.
Automatic dependent surveillance – contract (ADS-C)	A means by which the terms of an ADS-C agreement will be exchanged between the ground system and the aircraft, via a data link, specifying under what conditions ADS-C reports would be initiated, and what data would be contained in the reports.
Block fuel	Block fuel is the sum of minimum required block fuel and discretionary fuel.
Bluetooth	Bluetooth is a wireless technology standard for exchanging data over short distances using short-wavelength, ultra-high frequency (UHF)

Term	Definition
	radio waves (from 2.4 to 2.485 GHz). Bluetooth signals from PEDs are low power transmissions (less than 100mW).
Category I (CAT I)	Means a precision instrument approach and landing using an instrument landing system (ILS), microwave landing system (MLS), GLS (ground-based augmented global navigation satellite system (GNSS/GBAS) landing system), or LPV using a satellite-based augmentation global navigation satellite system (GNSS/SBAS) with minima expressed as Decision Altitude (DA) not lower than 200ft and VIS/RVR of not less than 550m.
Category II (CAT II)	Means a precision instrument approach and landing operation using ILS or MLS with Decision Height (DH) below 200 ft but not lower than 100 ft; and RVR of not less than 300 m. *Note: Due to terrain profile at the minimum, the approach chart DH may be lower than 100 ft.*
Category III (CAT III DH 50-99ft)	Means a precision instrument approach and landing operation using ILS or MLS with DH lower than 100ft but not lower than 50ft above threshold elevation; and RVR not less than 175 m.
Category III (CAT III DH 0-49ft or NO DH)	Means a precision instrument approach and landing operation using ILS or MLS with DH lower than 50 ft. or no DH; and RVR lower than 175 m but not less than 75 m.
Ceiling	The height above the ground or water of the base of the lowest layer of cloud below 20'000 ft covering more than half the sky. A reported vertical visibility value constitutes a ceiling.
Charter flights	Charter flights mean flights which are chartered for a specific journey and on which seats are not marketed and sold by EDW (e.g. as part of a holiday package, flights for business people, VIP’s).
Circling	Means the visual phase of a circling approach operation.
Circling approach operation	Means a Type A instrument approach operation to bring an aircraft into position for landing on a runway/final approach and take-off area (FATO) that is not suitably located for a straight-in approach.

Term	Definition
Clear ice	A coating of ice, generally clear and smooth, but with some air pockets. It forms on exposed objects, the temperatures of which are at, below or slightly above the freezing temperature, by the freezing of super-cooled drizzle, droplets or raindrops. Clear ice is very difficult to detect visually.
CM1	Crew member who is occupying the left hand cockpit seat
CM2	Crew member who is occupying the right hand cockpit seat
Cold soaked surface frost	Frost developed on cold soaked aircraft surfaces by sublimation of air humidity. This effect can take place at ambient temperatures above 0 °C. Cold soaked aircraft surfaces are more common on aircraft that have recently landed. External surfaces of fuel tanks (e.g. wing surfaces) are typical areas of cold soaked surface frost formation, due to very cold fuel that remains in the tanks after landing.
Cold soaked wings	Wings of aircraft that contain very cold fuel. Clear ice and cold soaked surface frost may form on cold soaked wings.
Controller-pilot data link communications (CPDLC)	A means of communication between controller and pilot, using data link for ATC communications.
Commencement of flight	In the context of fuel and flight planning commencement of flight is the moment the first engine of the aircraft is started. Until this point flight planning rules and planning minima apply. After this point in-flight fuel management rules and operating minima apply. In the context of MEL application this means the point when an aeroplane begins to move under its own power for the purpose of preparing for take-off.
Computerised flight planning system	Edelweiss uses CAE Flight Plan Manager (FPM) for flight planning.
Continuous descent final approach (CDFA)	Means a technique, consistent with stabilised approach procedures, for flying the final approach segment (FAS) of an instrument non-precision approach (NPA) procedure as a continuous descent, without level-off, from an altitude/height at or above the final approach fix altitude/height:

Term	Definition
	a. for straight-in approach operations, to a point approximately 50 ft above the landing runway threshold or the point where the flare manoeuvre begins; or b. for circling approach operations, until MDA/H or visual flight manoeuvre altitude/height is reached.
Converted meteorological visibility	Converted meteorological visibility (CMV) means a value, equivalent to an RVR, which is derived from the reported meteorological visibility.
Controlled PED	Controlled PEDs (C-PEDs) are portable electronic devices allocated to a specific person or aircraft and subject to administrative control by EDW.
Critical fuel scenario	Scenario established to identify the most (fuel) critical point on a planned route.
Dead load	Load in compartments.
Decision Altitude (DA) / Decision Height (DH)	Means a specified altitude or height in a 3D instrument approach operation or a 2D approach operation with CDFA technique at which a missed approach procedure must be initiated if the required visual reference to continue the approach has not been established.
De-icing	Procedure by which frost, slush, snow or ice are removed from an aircraft in order to provide uncontaminated surfaces.
Destination alternate aerodrome	Means an alternate aerodrome at which an aircraft would be able to land, should it become either impossible or inadvisable to land at the destination aerodrome.
Distress	A condition of being threatened by serious and/or imminent danger and of requiring immediate assistance.
Distress phase	A situation wherein there is reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger or require immediate assistance.

Term	Definition
Dry operating index (DOI)	The applicable index corresponding to the specific DOM.
Dry operating mass (DOM)	Total mass of the specific aircraft including: a. crew and crew baggage; b. catering and removable passenger service equipment; c. potable water and lavatory chemicals; d. special emergency equipment as required for the route(s).
Emergency phase	A generic term meaning, as the case may be, uncertainty phase, alert phase or distress phase.
Emergency situation	Means a situation in which the safety of the aircraft or of persons on board or on the ground is endangered for any reason.
Endurance	Is the maximum length of time that an aircraft can spend in cruising flight.
En-route alternate (ERA) aerodrome	Means an alternate aerodrome at which an aircraft would be able to land if a diversion becomes necessary while en route.
EROPS	Extended range operations for aircraft with three or more engines.
EROPS en-route alternate aerodrome	Means an alternate aerodrome at which an aircraft with three or more engines would be able to land if a diversion becomes necessary while en route beyond the threshold distance from an ERA aerodrome.
Factored in-flight landing distance (FLD)	The Factored In-Flight Landing Distance includes a safety margin of 15% on the In-Flight Landing Distance. FLD = LD * 1.15
Fail-operational flight control system	Means a flight control system with which, in the event of a failure below alert height, the approach, flare and landing can be completed automatically. In the event of a failure, the automatic landing system will operate as a fail-passive system.
Fail-passive flight control system	A flight control system is fail-passive if, in the event of a failure, there is no significant out-of-trim condition or deviation of flight path or atti-

Term	Definition
	tude but the landing is not completed automatically. For a fail-passive automatic flight control system the pilot assumes control of the aeroplane after a failure.
Final approach segment (FAS)	Means that segment of an instrument approach procedure (IAP) in which alignment and descent for landing are accomplished.
Flight control system	Flight control system in the context of low visibility operations means a system that includes an automatic landing system and/or a hybrid landing system.
Flight Dispatch	Flight Dispatch is the department responsible for flight planning, flight monitoring.
Flight monitoring	Means: a. the receipt in real time of departure and arrival messages by OCC to verify that a flight is operating and has arrived at the destination aerodrome or an alternate aerodrome b. operational monitoring of flights by Dispatch from departure throughout all phases of the flight c. communication of all available and relevant safety information between Dispatch and the flight crew; and d. critical assistance by Dispatch to the flight crew in the event of an in-flight emergency or security issue, or at the request of the flight crew.
Flight Time	Means the total time from the moment an aeroplane first moves for the purpose of taking off until the moment the aeroplane finally comes to rest at the end of the flight.
Foxes	Means security guards who provide additional security on ground to prevent acts of unlawful interference.
Freezing fog	Suspension of numerous minute water droplets which freezes upon impact with ground or other exposed objects, generally reducing the horizontal visibility at the earth's surface to less than 1 km.

Term	Definition
Freezing rain / freezing drizzle	Freezing rain (FZRA) or freezing drizzle (FZDZ) consist of super cooled water droplets with a temperature below 0°C which will freeze immediately on impact with any solid object. Freezing drizzle is freezing precipitation as above, composed of droplets with a diameter generally of less than 0,5 mm. Freezing rain is freezing precipitation as above, composed of droplets with a diameter generally more than 0,5 mm. If reported as light (-FZRA / -FZDZ), this means light intensity (subjectively assessed) of the above-mentioned phenomenon.
Fuel enroute alternate (fuel ERA) aerodrome	Means an ERA aerodrome that is required at the planning stage for use in the calculation of fuel.
Fuel ERA aerodrome critical fuel scenario	Means an ERA aerodrome which may be required by the critical fuel scenario.
Fuel ERA aerodrome 3 %	Means an ERA aerodrome which may be selected for the purpose of reducing contingency fuel to 3 % of trip fuel.
Fuel ERA aerodrome PNR	Means an ERA aerodrome that is required for isolated-aerodrome operations.
Fuel Management	Inflight from starting the first engine until reaching either the destination or any alternate.
Fuel Scheme	The ‘fuel scheme’ consists of the following components: a. fuel planning policy b. route and aerodrome selection policy and c. in-flight fuel management policy. The fuel scheme and any changes to it requires prior approval by FOCA. For details refer to OMM.
Fuel tankering	The carrying of more fuel than required for a flight to reduce or avoid refueling at the destination aerodrome.
GBAS landing system (GLS)	An approach landing system using ground-based augmented global navigational satellite system (GNSS/GBAS) information to provide

Term	Definition
	guidance to the aeroplane based on its lateral and vertical GNSS position. It uses geometric altitude reference for its final approach slope.
Go-around	Means a transition from an approach operation to a stabilised climb. This includes manoeuvres conducted at or above the MDA/H or DA/H, or below the DA/H (balked landings).
Ground Controlled Approach – PAR/SRA	Ground Controlled Approaches (Precision Approach Radar-PAR, Surveillance Radar Approach-SRA) PAR Primary radar equipment used to determine the position of an aircraft during final approach, in terms of lateral and vertical deviations relative to a nominal approach path, and in range relative to touchdown.
Hail	Precipitation of small balls or pieces of ice with a diameter ranging from 5 to >50 mm (0.2 to >2.0 inch) falling either separately or agglomerated.
Holdover time (HOT)	Estimated time for which an anti-icing fluid will prevent the formation of frost or ice and the accumulation of snow on the protected surfaces of an aircraft on the ground, as specified for different weather conditions. The protection ends latest when commencing the take-off roll, and there is no protection from the fluid during flight.
Holiday charter flights	Holiday charter flights mean flights which are part of a holiday travel package. On such flights the entire passenger capacity is hired by one or more charterers for the carriage of passengers who are travelling, all or in part by air, on a round- or circle-trip basis for holiday purposes. The holiday charter mass values apply provided that not more than 5 % of passenger seats installed in the aircraft are used for the non-revenue carriage of certain categories of passengers. Categories of passengers such as company personnel, tour operators' staff, representatives of the press, authority officials, etc. can be included within the 5% without negating the use of holiday charter mass values.
Human-machine interface (HMI)	Means a component of certain devices that is capable of handling human–machine interactions. The interface consists of hardware and software that allow user inputs to be interpreted and processed by machines or systems that, in turn, provide the required results to the

Term	Definition
	user.
Ice crystals / diamond dust	A fall of unbranched ice crystals (snow crystals are branched) in the form of needles, columns or plates.
Ice pellets	Ice Pellets (PL) include two fundamentally different types of precipitation; grains of ice and small hail. Ice pellets are sometimes formed in a temperature inversion. Liquid precipitation freezes as it falls into below-freezing air near the surface. If reported as light (-PL), this means light intensity (subjectively assessed) of the above-mentioned phenomenon.
Incident	An occurrence, other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of the operation.
In-flight security officers	Security guards who provide additional security in flight to prevent acts of unlawful interference.
Instrument approach operation	Means an approach and landing using instruments for navigation guidance based on an instrument approach procedure (IAP). There are two methods for executing instrument approach operations: a. A two-dimensional (2D) instrument approach operation, using lateral navigation guidance only b. A three-dimensional (3D) instrument approach operation, using both lateral and vertical navigation guidance.
Instrument approach procedure (IAP)	Means a series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix or, where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply. IAPs are classified as follows: a. Non-precision approach (NPA) procedure, which means an IAP designed for 2D instrument approach operations Type A

Term	Definition
	b. Approach procedure with vertical guidance (APV) means a performance-based navigation (PBN) IAP designed for 3D instrument approach operations Type A c. Precision approach (PA) procedure means an IAP based on navigation systems designed for 3D instrument approach operations Type A or B.
Instrument runway	Means one of the following types of runways intended for the operation of aircraft using instrument approach procedures: a. 'non-precision approach runway': a runway served by visual aids and at least one non-visual aid, intended for landing operations following a type A instrument approach operation b. 'precision approach runway, category I': a runway served by visual aids and at least one non-visual aid, intended for landing operations following a type B CAT I instrument approach operation c. 'precision approach runway, category II': a runway served by visual aids and at least one non-visual aid, intended for landing operations following a type B CAT II instrument approach operation d. 'precision approach runway, category III': a runway served by visual aids and at least one non-visual aid, intended for landing operations following a type B CAT III instrument approach operation.
Isolated aerodrome	A destination aerodrome for which the alternate and final fuel reserve required to the nearest destination alternate aerodrome is more than fuel to fly for 2 hours at normal cruise consumption above the destination aerodrome, including final reserve fuel.
Land and Hold Short Operations (LAHSO)	Operations which include simultaneous takeoffs and landings and/or simultaneous landings when a landing aircraft is able and is instructed by the controller to hold-short of the intersecting runway/taxiway or designated hold-short point. EDW does not hold an approval for Land and Hold Short Operations.
Landing distance at time of arrival (LDTA)	The LDTA is the landing distance that is achievable in normal operations based on landing performance data and associated procedures

Term	Definition
	determined for the prevailing conditions at the time of landing.
Last minute change (LMC)	A last change/amendment to the mass and balance sheet which does not require the preparation of a new mass and balance sheet if the changes/ amendments to the existing mass and balance sheet do not exceed the limits specified in OM B.
Low Visibility Operation (LVO)	Means approach or take-off operations on a runway with a runway visual range less than 550 m or with a decision height less than 200 ft.
Low Visibility Procedure (LVP)	Means procedures applied by an aerodrome for the purpose of ensuring safety during LVOs.
Low Visibility Take-Off (LVTO)	Means a take-off with an RVR less than 550 m.
Lowest operational use temperature (LOUT)	The lowest temperature at which a fluid has been tested and certified as acceptable in accordance with the appropriate aerodynamic acceptance test whilst still maintaining a freezing point buffer of not less than 10 °C for a Type I fluid or 7 °C for Type II, III or IV fluids.
Maximum approved diversion time	A maximum approved diversion time for the airframe/engine combination or the engine. This maximum approved diversion time is reflected in the aeroplane and engine type certificate data sheets or (S)TC and in the AFM or AFM-supplement.
Manoeuvering Area	Part of an aerodrome to be used for take-off, landing and taxiing of aircraft, excluding aprons.
Maximum approved passenger seating configuration	The maximum passenger seating capacity of an individual aircraft, excluding pilot seats or flight deck seats and cabin crew seats as applicable, as specified in the OM B.
Maximum (structural) landing mass (MLM)	The maximum permissible total aircraft mass upon landing under normal circumstances. This is the maximum structural limit and must not be mistaken with the "MAXIMUM ALLOWED MASS FOR LANDING" which also considers performance limitations.

Term	Definition
Maximum (structural) take-off mass (MTOM)	The maximum permissible total aircraft mass at the start of the take-off run. This is the maximum structural limit and must not be mistaken with the "MAXIMUM ALLOWED MASS FOR TAKE-OFF" which also considers performance limitations for a particular aerodrome.
Maximum zero fuel mass (MZFM)	The maximum permissible mass of an aircraft with no usable fuel. The mass of the fuel contained in particular tanks must be included in the ZFM when it is explicitly mentioned in the Aircraft Flight Manual limitations.
Minimum descent altitude (MDA) or minimum descent height (MDH)'	Means a specified altitude or height in a 2D instrument approach operation without CDFA technique or circling approach operation below which descent must not be made without the required visual reference.
Minimum grid altitude (MGA)	MGA values are shown within each grid formed by charted lines of latitude and longitude.
Minimum sector altitude (MSA)	An MSA is based on a terrain clearance of 1'000 ft above highest terrain obstructions within a radius of 25 NM from the navigation aid as indicated on the IAC. MSA is rounded up to the next 100 ft.
Minimum terrain clearance altitude (MTCA)	The MTCA is based on a specific area on either side of: a. the centreline of all airway segments b. all STAR's.
Minor failure condition	Means a failure condition that would not significantly reduce aircraft safety, and which involves flight crew actions that are well within their capabilities.
Missed approach point (MAPt)	That point in an instrument approach procedure at or before which the described missed approach procedure must be initiated in order to ensure that the minimum obstacle clearance is not infringed.
Missed approach procedure	Means a procedure to be followed if an approach cannot be continued. A missed approach procedure is specified for all airfield and runway Precision Approach and Non-Precision Approach procedures. Only

Term	Definition
	one missed approach procedure is established for each instrument approach procedure. A go-around from an instrument approach should follow the specified missed approach procedure unless otherwise instructed by air traffic control. The missed approach should be initiated not lower than the DA/H in precision approach procedures, or at a specified point in non-precision approach procedures not lower than the MDA/H.
Misuse of substances	Means the use of one or more psychoactive substances by flight crew, cabin crew members and other safety-sensitive personnel in a way that: a. constitutes a direct hazard to the user or endangers the lives, health or welfare of others; and/or b. causes or worsens an occupational, social, mental or physical problem or disorder.
Most (fuel) critical point	Point on the planned route, assumed the most limiting aircraft system failure case occurs, requiring the highest amount of fuel to divert to a STOPS or EROPS alternate.
Non classified aerodrome	An aerodrome not included in the Approved Airport List and classified neither as a base aerodrome nor as a planning or operational aerodrome (e.g. other and emergency aerodromes).
Non-instrument runway	Means a runway intended for the operation of aircraft using visual approach procedures.
Non-precision Approach (NPA) procedures	Means an instrument approach procedure using LOC, VOR/DME, NDB/DME or RNP APCH with LNAV minimum, RNP APCH with LP minimum. Designed for 2D instrument approach operations Type A. *Note: CDFAs with advisory vertical navigation guidance calculated by on-board equipment are considered 3D instrument approach operations, where the MDA/H is used as a DA/H.*
Obstacle clearance altitude (OCA) or Obstacle clearance height (OCH)	Means the lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation, as applicable, used in establishing compliance with the appropriate obstacle clearance criteria.

Term	Definition
Occurrence	An event or phenomenon that differs from the normal routine operation.
Operational credit	Means a credit for operations with an advanced aircraft enabling lower aerodrome operating minima than would normally be established by the operator for a basic aircraft, based upon the performance of advanced aircraft systems utilising the available external infrastructure. Lower operating minima may include a lower decision height/ altitude or minimum descent height/altitude, reduced visibility requirements or reduced ground facilities or a combination of these.
Operational centre of gravity envelope	The operational centre of gravity envelope which further restricts the certified centre of gravity envelope to compensate for errors such as the differences between assumed passenger masses and actual masses, use of one common moment arm for several seat rows, deviations in the distribution of baggage/ cargo/mail in the various compartments, inaccuracies in the actual mass of baggage, deviation caused by gear and/or flap positions, in-flight movements of passengers, cabin crew and pantry equipment (trolleys), deviation in fuel distribution etc. The operational centre of gravity envelope must never be exceeded unless authorised by Flight Operations for special flights.
Operator proficiency check (OPC)	Means a check conducted by the operator and completed by the pilot to demonstrate competence in carrying out normal, abnormal and emergency procedures.
Operator's approved diversion time	Operator's approved diversion time is the maximum time authorised by the Competent Authority that the operator can operate a type of aeroplane at the approved one-engine inoperative cruise speed (under standard conditions in still air) from an ERA aerodrome.
Operational use	Means the use of equipment (incl. software applications) directly related to the tasks performed by the crew member.
Passenger	A person that is transported onboard an aircraft who is not: a. an operating crew member; or b. a supernumerary.

Term	Definition
Pay load	The total mass of the revenue load passenger, cargo and mail.
Performance-Based Communication (PBC)	Performance-Based Communication (PBC) is communication based on Required Communication Performance specifications (RCP) applied to the provision of Air Traffic Services.
Performance-Based Communication and Surveillance (PBCS)	Performance-Based Communication and Surveillance (PBCS) is a concept that applies performance-based communication (PBC) and performance-based surveillance (PBS).
Performance-Based Surveillance (PBS)	Performance-Based Surveillance (PBS) is surveillance based on Required Surveillance Performance specifications (RSP) applied to the provision of Air Traffic Services.
Planning	Preflight, before first engine start.
Portable electronic device (PED)	Means any kind of electronic device, typically but not limited to consumer electronics, brought on board the aircraft by crew members, passengers, or as part of the cargo, that is not included in the configuration of the certified aircraft. It includes all equipment that is able to consume electrical energy. The electrical energy can be provided from internal sources such as batteries (chargeable or non-rechargeable) or the devices may also be connected to specific aircraft power sources.
Pilot flying (PF)	Means the pilot who, for the time being, is manoeuvring the aircraft and is in charge of the controls, irrespective of his function. He is responsible for flight progress.
Pilot-In-Command	In the context of Edelweiss manuals, the pilot-in-command (PIC) means the pilot occupying the left-hand seat on the flight deck, irrespective of the commanders responsibility.
Pilot monitoring (PM)	Means the pilot who is monitoring the flight management and aircraft control actions of the pilot flying iaw the multi-crew coordination concept. It also means a cognitive comparison against the expected values, modes and procedures. It also includes observation of other crew members and timely intervention in the event of deviation.

Term	Definition
Precision approach	An instrument approach using precision lateral and vertical guidance with minima as determined by the category of approach operation. Lateral and vertical guidance refers to the guidance provided either by a ground-based navigation aid or computer-generated navigation data including augmentation by satellite or ground-based systems. Designed for 3D instrument approach operations Type A or B.
Precision Runway Monitor System (PRM) approach operations	A Precision Runway Monitor System is an approach system permitting simultaneous approaches to dual runways with centrelines separated by less than 4'300 ft and equipped with final monitor controllers. Three different approaches can be combined, ILS PRM, LDA PRM or PBN PRM. Note: EDW does not hold an approval for ILS PRM approach operations.
Psychoactive Substances	Substances that can produce mood changes or distorted perceptions in humans, to include, but not limited to, alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens and volatile solvents; coffee and tobacco are excluded.
Required Communication Performance (RCP) specification	Required Communication Performance (RCP) specifications is a set of requirements for air traffic services provision and associated ground equipment, aircraft capability, and operations needed to support performance-based communication.
Minimum block fuel	Means the minimum amount of fuel required to be on board at commencement of flight.
Required Landing Distance	The RLD is the regulatory reference to be used for dispatch landing performance computation. The RLD calculation considers the effect of the MEL/CDL items that affect the landing performance.
Required runway visual range	Means the value of the horizontal visibility of an aerodrome operating minimum expressed as an RVR.
Required Surveillance Perform-	Performance-Based Surveillance (PBS) is surveillance based on Required Surveillance Performance specifications (RSP) applied to the

Term	Definition
ance (RSP) specification	provision of Air Traffic Services.
Re-routing	Re-routing is a route divergence in-flight either imposed by ATC or requested by the flight crew.
Replanning	Means in-flight, when a flight is voluntarily redirected through operations control and the flight proceeds along a route or to a destination other than originally planned, even when the flight could be completed as originally planned.
Rime ice	Small frozen water droplets, spheric opaque/milky granular appearance looking similar to frost in a freezer. Typically rime ice has low adhesion to the surface and its surrounding rime ice particles.
Runway condition assessment matrix (RCAM)	The RCAM published in the respective OM B is a table that contains the correlation between the reported runway surface condition and the equivalent entry for the performance application, as well as the associated maximum allowable cross-wind components.
Runway condition code (RWYCC)	The RWYCC is a number, published in the runway condition report (RCR), that describes the effect of the runway surface condition on aeroplane deceleration performance and lateral control.
Runway condition report (RCR)	The RCR is a comprehensive standardised report relating to the conditions of the runway surface and their effects on the aeroplane landing and take-off performance.
Runway visual range (RVR)	Means the range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.
Safe landing	In terms of fuel and flight planning safe landing means a landing at an adequate aerodrome with not less than the final reserve fuel remaining on board and in compliance with the applicable operational procedures and aerodrome operating minima.
Safety-sensitive personnel	Means persons who might endanger aviation safety if they perform their duties and functions improperly, including flight crew and cabin crew members, aircraft maintenance personnel (licensed mainte-

Term	Definition
	nance staff, apprentices, store room personnel), NOC personnel and flight dispatch.
Scheduled flights	Scheduled flights are regular flights in accordance with the published timetable. This includes special flights due to operational consequences (positioning-, additional flights, etc.).
Senior cabin crew member (S/C)	The S/C shall have responsibility to the CMD for the conduct and coordination of normal and emergency procedures specified in the Operations Manual.
Separate runways	Means runways at the same aerodrome that are separate landing surfaces. These runways may overlay or cross in such a way that if one of the runways is blocked, it will not prevent the planned type of operations on the other runway. Each runway shall have a separate approach procedure based on a separate navigation aid.
Serious incident	An incident involving circumstances indicating that an accident nearly occurred. The difference to an accident lies only in the result.
Simulated autoland approach	Means an execution of an ILS approach applying LVO procedures on a CAT II/III facility when LVO is not in force for obtaining mandatory statistical data which are required to prove aircraft system integrity.
Snow	Precipitation in the form of small ice crystals or flakes.
Snow Pellets	Snow pellets (GS) also called soft hail, "graupel" or tapioca snow. Precipitation consisting of white, opaque, approximately round (sometimes conical) ice particles having a snow like structure, and about 2-5 mm in diameter. Snow pellets are crisp and easily crushed, differing in this respect from snow grains.
SNOWTAM	A special series NOTAM given in a standard format providing a surface condition report notifying the presence or cessation of hazardous conditions due to snow, ice, slush, frost, standing water or water associated with snow, slush, ice or frost on the movement area.
Space-based facilities	Satellites (e.g. GPS).

Term	Definition
Satellite-based augmentation system (SBAS)	Means a wide coverage augmentation system in which the user receives augmentation information from a satellite-based transmitter. The most common form of SBAS in Europe is the European Geostationary Navigation Overlay Service (EGNOS).
Stabilised approach (SAp)	Means an approach that is flown in a controlled and appropriate manner in terms of configuration, energy and control of the flight path from a pre-determined point or altitude/height down to a point 50 ft above the threshold or the point where the flare manoeuvre is initiated if higher.
Standard cabin crew	The standard cabin crew consists of the cabin crew required and, if applicable, additional cabin crew.
Standard flight crew	The standard flight crew is defined by the nominated person in the area of Flight Operations according operational requirements.
Steep approach operation	Approach operations which are using glideslope angles of 4.5° or more and screen heights of less than 60 ft, but no less than 35 ft. Note: EDW does not hold an approval for steep approach operations
Student pilot	Student pilot means a pilot assigned to the flight for familiarisation with flight deck procedures without having a license for the particular type of aircraft and therefore without any responsibility. On commander's discretion, he may be permitted to handle the communications.
Supernumerary	A person in addition to the flight crew that is not a cabin crew member, but is on board of the aircraft during commercial or non-commercial operations, and is not classified as a passenger by Edelweiss or FOCA. Such person is typically any of the following: a. A person assigned to the flight by Edelweiss as necessary for the safety of operations and has certain (operator-required) knowledge and abilities gained through selection and mandato-

Term	Definition
	ry training (e.g. loadmaster, animal handler, dangerous goods handler, cargo handler, security guard) b. An inspector, auditor or observer authorized by Edelweiss and FOCA to be on board the aircraft in the performance of his or her duties (e.g. flight operations inspector, IOSA auditor, LOSA observer) c. A person assigned to a passenger flight by Edelweiss to conduct certain customer service activities (e.g. serving beverages, conducting customer relations, selling tickets) in the cabin; not designated to perform any safety duties d. Any individual that has a relationship with Edelweiss, is not classified as a passenger by FOCA and authorised by Edelweiss and FOCA to be on board the aircraft (e.g. courier, contract coordinator, individual with operator required knowledge and abilities traveling to/from a duty assignment, company employee). *Note: Non-operating crew members (i.e. deadhead crew), company employees and employee dependents occupying passenger seats on passenger flights are typically considered passengers.*
System minima	Lowest permissible DH/MDH defined by the regulator (EASA) for an instrument approach system type.
Take-off alternate aerodrome	Means an alternate aerodrome at which an aircraft would be able to land, if it becomes necessary shortly after take-off and it is not possible to use the aerodrome of departure.
Take-off distance available (TODA)	Means the length of the take-off run available (TORA) plus the length of the clearway.
Take-off run available (TORA)	Means the length of runway that is declared available by the State of the aerodrome and Suitable for the ground run of an aircraft taking off.
Take-off fuel	Is the amount of fuel on board an aircraft at the beginning of take-off roll.
Terrain enroute aerodrome	Means an enroute alternate which is required for performance reason when flying in a high terrain environment.

Term	Definition
Threshold distance	Is the maximum permissible distance from a ERA aerodrome.
Travel on the flight deck	Means the authorisation to be on the flight deck during all phases of a flight, take-off, landing and visits during cruise included.
Type A instrument approach operation	Means an operation with a MDA/H or a DA/H at or above 250 ft.
Type B instrument approach operation	Means an operation with a MDA/H or a DA/H below 250 ft. Type B instrument approach operations are categorised as: a. Category I (CAT I): a DA/H not lower than 200 ft and with either a visibility not less than 800 m or an RVR not less than 550 m b. Category II (CAT II): a DH lower than 200 ft but not lower than 100 ft, and an RVR not less than 300 m c. Category III (CAT III): a DH lower than 100 ft or no DH, and an RVR less than 300 m or no RVR limitation. *Note: The MDA/H or DA/H as published in OM C Lido Route Manual is applicable.*
Urgency	A condition concerning the safety of an aircraft or other vehicle, or of some person on board or within sight, but which does not require immediate assistance.
Uncertainty phase	A situation wherein uncertainty exists as to the safety of an aircraft and its occupants.
Visual approach operation	Means an approach operation by an IFR flight when either a part or all of an IAP is not completed and the approach operation is executed with visual reference to terrain.
VNAV guidance	Means an aircraft navigation system functionality capable of generating a vertical path information including deviation indication based on a vertical profile stored in the FMS navigation database.
Weather-permissible aerodrome	Means an adequate aerodrome where, at the anticipated time of use, meteorological reports, or forecasts, or any combination thereof, indi-

Term	Definition
	cate that the anticipated meteorological conditions will be at or above the required aerodrome planning- or operating minima, and the runway surface condition reports indicate that a safe landing will be possible.

For General Terms and Definitions, refer to OMM Terms and Definitions.

0 Administration and Control of Operations Manual

0.1 Introduction

The Operations Manual OM A contains operational policies, regulations, and instructions. For details refer to OMM Organisation Documentation, System of Amendment and Revision.

The OM A complies with all applicable regulations and with the terms and conditions of the Air Operator Certificate (AOC).
For details refer to OMM Applicable Regulations, Relevant Standards and Requirements.

0.1.1 Copyright and confidentiality

The OM A is the property of Edelweiss. No part of it may be reproduced without the written permission of the Head of Flight Operations. The content of this manual, by its nature in describing operational policies, regulations and instructions, is confidential and shall be treated accordingly.

0.1.2 User instructions

All affected personnel shall only use manuals and documents issued/distributed by Edelweiss. Only updated manuals and documents are permitted for operational use.

0.1.3 Compliance with operational instructions

Instructions contained in the OM A are to be adhered to by all affected personnel under the jurisdiction of Edelweiss. This implicates that all affected personnel shall be familiar and stay up to date with the respective manual content relevant to execute their duty. If a user is in doubt whether he fully understands part or all of an instruction, he shall ask his superior for clarification at once.

Edelweiss personnel shall at all times comply with the applicable laws, regulations and procedures in all locations where operations are conducted. In case local regulations are in contradiction with company procedures, the more restrictive regulations have the precedence. Such contradictions must be reported via IQSMS.

However, all personnel shall act according their own best judgement during any situation for which the OM A makes no provision.

In case of an emergency, the CMD must take all measures he deems necessary under the circumstances. In the interest of safety he may in such cases deviate from operational policies and procedures.

0.1.4 Explanation and definition of the wording

Refer to OMM Terms and Definitions.

0.2 System of amendment and revision

Refer to OMM Organisation Documentation, System of Amendment and Revision.

In addition to the system described in the OMM the OM A comprises an Appendix which is amended and revised outside the scope of this system.

To ensure an adequate level of operational flexibility, the OM A Appendix will be updated immediately after a change to the respective content is deemed necessary (e.g. Changes in HOT tables). For this reason, the OM A Appendix is revised and published outside the PRA/NMR process.

1 Organisation and Responsibilities

Cabin, Cockpit, Operational Ground Staff

1.1 Organisational structure

1.1.1 Company

Refer to OMM Organigram.

1.1.2 Operations

Refer to OMM Organigram.

1.2 Names of nominated persons

1.2.1 General

The nominated persons positions are held according to EASA by nominated persons accepted by FOCA.

In the overall interest of the safe conduct of Edelweiss operations, nominated persons must have proven competency in civil aviation.

In the context of this Appendix, “competency” means that an individual must have a technical qualification and managerial experience acceptable to the FOCA, as appropriate.

A nominated person by the holder of an AOC must not be nominated as a nominated person by the holder of any other AOC.

Contact details for all personnel may be found on Cosmos.

1.2.2 Nominated persons

- Nominated Person Flight Operations (NPFO): Manuel Burgauer; Deputy: Martin Bühlmann
- Nominated Person Continuing Airworthiness (NPCA): Stefan Meier; Deputy: Fritz Zaugg
- Nominated Person Crew Training (NPCT): Florian Affolter; Deputy: Samuel Berger
- Nominated Person Ground Operations (NPGO): Philipp Federer; Deputy: Philip Kobel

For the detailed description of their function and responsibilities refer to OM A Responsibilities and duties of operation management personnel.

1.2.3 The main functions of the management

1. Determination of the Edelweiss' flight safety policy;
2. Allocation of responsibilities, duties and issuing instructions to individuals, sufficient for implementation of company policy (safe, friendly and on time);
3. Monitoring of flight safety standards;
4. Recording and analysis of any deviations from company standards, identifying root cause and ensuring (develop, implement and evaluate) preventive and corrective action in order to avoid the development of undesirable trends;
5. Liaison with the FOCA and all subcontractors of Edelweiss.
6. The duties in respect to the Quality and Risk System are defined in OM A Management System.

1.3 Responsibilities and duties of operation management personnel

1.3.1 Policy

All flights under the jurisdiction of Edelweiss operations shall be planned and conducted in accordance with the Edelweiss operating policy as follows:

- Mission is the focus and safety is the attitude;
- Depending on the actual situation and with due regard to the seriousness of possible consequences, economy, schedule and passenger comfort have to be weighed carefully against each other.

It must be clearly understood that policies in the OM reflect the minimum requirements in the interest of a safe operation.

The CMD may apply a policy in a more restrictive sense, if the prevailing circumstances so require, or he deems a higher safety standard is justified in a specific situation.

All flight personnel serving with Edelweiss are subject to Edelweiss orders, regulations and to disciplinary action in the case of violations or irregularities.

1.3.2 Applicability

Under routine conditions, a strict compliance is required with all policies, rules, regulations and procedures laid down in the manual instructions.

- No regulation can be a substitute for awareness.
- No regulation can replace the exercise of good judgement and the application of conservative operating practices if conditions so dictate.

For emergency situations, all instructions are guiding principles; it is the CMD's authority to apply them when and as far as the situation so permits.

However, no exceptional situation or emergency may be constructed to divert from the manual instructions, unless the situation at hand is not covered by procedures, or leaves no time to apply them. Flight conditions may necessitate the CMD temporary disregard of instructions in favour of the exercise of his authority, for the sake of safety, according to his own momentary judgement.

1.3.3 Accountable Manager

Refer to OMM Accountable Manager.

1.3.4 General duties of nominated persons and other management personnel

Every manager is responsible in his field for defining the important operational processes and setting the required safety, quality and security standards. They ensure the management of safety risks and security threats to aircraft operations in their respective defined areas.

With the self monitoring system (refer to OMM 5) he assesses the adequacy and efficiency of the defined processes as well as the effectiveness of defined measures.

It is the duty of every manager to generate an overview in his field of responsibility by analysing all the individual reports and sources of the self monitoring system and by performing inspections and a general risk assessment in his department. All findings generate corrective and preventive actions, mitigation measures which have to be implemented and re-evaluated concerning efficiency and effectiveness. Inspections and risk management have to be documented (IQSMS) and the records shall be made available whenever required to the accountable manager, the safety manager, the compliance monitor or the FOCA.

All except the technical pilot participate in the Management evaluation process (SRB) and prepare the required data according OMM 6. All nominated persons are members of the Safety Action Group (SAG).

1.3.5 Nominated Person Flight Operations

Refer to OMM Nominated Person Flight Operations.

1.3.6 Nominated Person Crew Training / Head of Training

Refer to OMM Nominated Person Crew Training / Head of Training.

1.3.7 Chief Flight Instructor (CFI)

Refer to OMM Chief Flight Instructor (CFI).

1.3.8 Chief Theoretical Knowledge Instructor (CTKI)

Refer to OMM Chief Theoretical Knowledge Instructor (CTKI).

1.3.9 Nominated Person Continuing Airworthiness

Refer to OMM Nominated Person Continuing Airworthiness (NPCA).

1.3.10 Nominated Person Ground Operations

Refer to OMM Nominated Person Ground Operations.

1.3.11 Security Manager

Refer to OMM Security Manager.

1.3.12 Head of Safety Assurance

Refer to OMM Head of Safety Assurance (Safety Manager/ SMS Manager).

1.3.13 Flight Safety Manager

Refer to OMM Flight Safety Manager.

1.3.14 Compliance Monitoring Manager

Refer to OMM Compliance Monitoring Manager.

CMD

1.4 Authority, duties and responsibilities of the Commander

CMD

1.4.1 Position of the Commander

The CMD is the legal representative of Edelweiss Air in contact with non-company people as far as his authority is specified in the various regulations.

The liability of the CMD to his company and other persons is fixed in the working contract as well as in governmental regulations.

CMD

1.4.2 Authority of the Commander

The CMD has full authority:

- As to the execution of his flight with regard to aeroplane operation and safety;

- Over all members of his crew on duty as well as off duty when away from home base;
- Over his passengers during flight, i.e. from closing until opening of cabin doors;
- To disembark any person, or any part of the cargo, that may represent a potential hazard to the safety of the aircraft or its occupants;
- To refuse transportation of inadmissible passengers or deportees if their carriage increases the risk to the safety of the aircraft or its occupants.

In emergency situations, the CMD is authorised to follow any course of action deemed necessary in the interest of safety. He may, in such situations, deviate from prescribed methods, procedures or minima to the extent required by considerations of safety. The CMD has the authority and responsibility to declare an emergency situation whenever deemed necessary. When exercising his emergency authority, the CMD shall keep the proper control station fully informed regarding the progress of the flight and actions taken.

CMD

1.4.3 General responsibilities of the Commander

The CMD is responsible for:

- The safety of all crew members, passengers and cargo on board, as soon as the commander arrives on board the aircraft, until the commander leaves the aircraft at the end of the flight;
- The operation and safety of the aeroplane from the moment the aeroplane is ready to move for the purpose of taxiing prior to take-off, until it finally comes to rest at the end of the flight and the engines are shut down;
- The operational control;
- The briefing of all passengers on the location of the emergency exits and the location and use of relevant safety and emergency equipment;
- The safety of his aeroplane, proper servicing, de-icing, fuelling and maintenance of airworthiness while executing his flight within the instructions and limitations of the relevant operating manuals. Decisions with regard to maintenance or airworthiness shall be made only after due consideration of the advice of a technical specialist;
- The compliance with all regulations, operational procedures and checklists in accordance with the operations manual;
- The safe and efficient operation during flight duty in accordance with the company operating policy and common practices of good airmanship;

- The safety of passengers and crew as well as safety and safeguard of the load on board, this means implementation of the “active security measures”; Refer to OM A Security;
- Discipline and order on board during flight. To maintain safety and good order, the CMD may temporarily remove a crew member from his duty or off the aeroplane. If deemed necessary, the CMD may refuse passengers for onward transportation if after several requests they still do not follow the given orders. Persons obviously intoxicated with alcohol, drugs or narcotics shall be refused;
- A timely feedback of accidents, incidents, occurrences and proactive report of hazards generating potential risks to the operations in the future to his superior via any communication channel (e.g. IQSMS, CHFR, mail, phone etc). In general, accidents, serious incidents, death, emergencies and substantial aircraft damages also require a notification to the nearest/local authority, see also OM A General.
- Not allowing a person to enter or to be carried in the aircraft who appears to be under the influence of psychoactive substances to the extent that the safety of the aircraft or its occupants is likely to be endangered;
- Ensuring that any member of the operating crew is removed from duty if suspected of being under the influence of psychoactive substances.

CMD

1.4.4 Supervision and coordination of flight duty by the Commander

- Ensure that standard, emergency as well as security procedures and regulations are adhered to by all members of his crew on the ground and in the air;
- Coordinate and attribute at his own discretion the duties to the various crew members with due regard to the composition of the actual crew and their licenses;
- Delegate at his own discretion, but in a clear manner, part of his responsibilities on ground and in the air to the authorised ground staff and/or his crew members;
- Instruct and correct all crew members, especially his assisting pilots and pilot trainees, and give them fullest possible benefit of his experience;
- Notify his superiors whenever behaviour/performance of a crew member is definitely beyond tolerable limits;
- Ensure that an operational flight plan (OFP) is completed and signed for each intended flight with the following information:
    - aircraft registration;
    - date;
    - flight number;
    - departure and arrival airport;
    - ATD, ATA and flight time.
- Ensure that flight crew names and duty assignments are recorded for each flight;

- Ensure that the aeroplane is checked (exterior inspection) after his final landing at maintenance base and maintenance is informed immediately when maintenance action is required before next rotation.

Note: Pay special attention to wheel and tire conditions, lights and structural damages, bird strike, fluid levels etc.

The CMD shall not commence a flight unless he is satisfied that:

a. The aeroplane is airworthy;
b. The aeroplane configuration is in accordance with the Configuration Deviation List (CDL);
c. The instruments and equipment are in operable condition except as provided in the MEL;
d. Those parts of the operations manual which are required for the conduct of the flight are available;
e. The documents, additional information and forms required to be available on board; Refer to OM A Operational Control and Supervision and OM A Flight Preparation Instructions
f. Current maps, charts and associated documents or equivalent data are available to cover the intended operation of the aeroplane including any diversion which may reasonably be expected;
g. Space based facilities, ground facilities and services required for the planned flight are available and adequate;
h. The provisions specified in the operations manual in respect of fuel, oil and oxygen requirements, minimum safe altitudes, aerodrome operating minima and availability of alternate aerodromes, where required, can be complied with for the planned flight;
i. The load is properly distributed, safely secured and the load sheet content is satisfactory;
j. The mass of the aeroplane, at the commencement of take-off roll, will be such that the flight can be conducted in compliance with performance requirement as applicable; and
k. Any operational limitation in addition to those covered by sub-paragraphs (h) and (j) above can be complied with.

CMD

1.4.5 Political/Military orders for unscheduled landings

In principle, political or military orders via ATC for an unscheduled landing are only compulsory if the given reason is legal. The CMD and the FOO are normally not in a position, however, to judge this legality in due time. In order to avoid repercussions, the CMD is advised to comply with such imperative requests:

- As long as the aeroplane proceeds over the territory of the issuing state; and
- If the safety of operation permits (weight, navigation facilities, runway and Aerodrome conditions).

Edelweiss will initiate the necessary diplomatic steps if the landing request was illegal and thus caused prejudices to passengers or company.

CMD

1.4.6 Diplomatic services

Members of the Swiss Diplomatic Services abroad, who are not in possession of strict orders from the Department of Foreign Affairs at Bern, are not authorised to demand any services from the CMD which are not in accordance with the published schedule of the aeroplane, either in normal times or under special conditions such as political unrest in any country.

Cabin, Cockpit, Operational Ground Staff

1.5 Duties and responsibilities of crew members other than Commander

Cabin, Cockpit

1.5.1 General duties and responsibilities of flight personnel

Cabin, Cockpit

1.5.1.1 General

In order to make Edelweiss Air flights safe, efficient and economical, it is expected that all flight personnel will closely comply with all regulations, instructions and orders issued for the various crew duties.

Flight personnel observing any deviation or departure from prescribed normal or emergency procedures will immediately bring such deviations to the attention of the CMD and the respective superior.

Cabin, Cockpit

1.5.1.2 Knowledge and preparation

All crew members shall:

- Be familiar with the duties to be performed on the respective type of aeroplane;
- Be familiar with the handling of the aeroplane systems for normal and emergency operation, especially also with regard to the differences among aeroplane of the same type;
- Be familiar with emergency equipment and procedures;
- Shall carry all material necessary for the flight duty.

Cabin, Cockpit

1.5.1.3 Cooperation

All crew members shall:

- Cooperate closely with other flight personnel at all times to ensure the highest possible standard of safety and efficiency in the preparation and conduct of a flight;
- Cooperate with all other personnel involved in the actual flight, such as the ground staff, in order to comply with the company operating policy;
- In case of crew shift or relief, give full information to the next crew as to all aspects of the progress of the flight;
- Report any details, in general or particular, which are considered to be unsafe, impractical or inconsistent with company standards or which could be improved. Such reporting, including errors made by crews or individuals, offers the double benefit of company sharing of experience and giving the possibility for adopting corrective measures. Therefore information about such incidents should be as complete as possible. They shall normally be forwarded via established company-channels. Every crew member identifying hazards which could jeopardize the operation in the future brings the emerging potential risks proactive to the attention of his superior. Remember that non-reporting may be detrimental to safety.

The CMD is responsible that significant events related to safety will be reported without delay to the Head of Flight Operations, or in his absence to the OCC, to enable:

- The safeguarding of essential data; and
- Immediate measures for potential corrective and preventive actions.

He shall use any available communication channel such as CUT, HF, Telex, Fax, Mobile Phone, SMS, E-Mail, Intranet etc.

Cockpit

1.5.2 Copilot duties and responsibilities

Cockpit

1.5.2.1 Position of the Copilot

The Copilot shall:

- Act as the CMD's deputy upon delegation or in the latter's absence;
- Act as the main assistant of the CMD and as a monitoring crew member during all phases of the flight;
- Act as CMD in case of CMD's incapacitation.

Cockpit

1.5.2.2 Copilot special duties

The copilot shall:

- Be responsible for collection, completion and dispatch of all paper work, i.e. OFP, AFP, flight data reports, AIREP and technical reports, etc., if this duty is not expressly assigned to other crew members or persons;
- Be especially well familiar with all technical matters;
- Assist the CMD for servicing of aeroplane where no contracted handling agent is available;
- Assist the CMD in instructing and monitoring of co-pilots under training.

Cockpit

1.5.2.3 Copilot duties prior to flight

The Copilot shall:

- Participate in the flight preparation
- Compute the company flight plan if not prepared by a FOO
- File the ATC flight plan as applicable
- Make spot-checks of emergency equipment
- Prepare the cockpit and perform the appropriate checklists.

Cockpit

1.5.2.4 Copilot duties during flight

The copilot shall:

- Perform the flying pilot's or assisting pilot's duty according to the CMD's orders;
- Closely follow up the flight progress and be prepared to take over controls at all times, especially on take-off and approach/landing, or whenever the CMD should issue such an order, or shows signs of incapacitation;
- Inform the CMD automatically and immediately if something in the operation of the aeroplane is considered to become abnormal or if deviations from prescribed procedures, clearances or from the plan of operation show up.

Cockpit

1.5.2.5 Copilot duties after flight

The copilot is responsible that the cockpit is left by the crew in good order (papers collected, other material properly stowed).

Cabin, Cockpit

1.5.3 Senior Cabin Crew (S/C)

Cabin, Cockpit

1.5.3.1 Position of the Senior Cabin Crew

All cabin crews, on duty and also off duty when away from home base, are subordinated to the CMD.

The senior cabin crew takes orders directly from the CMD, or his delegate. The S/C acts as chief of the cabin crew, and has authority over all cabin crew members on duty, regardless of seniority.

In the absence of the CMD on sling stations (i.e. due to different rotations of flight and cabin crew), the cabin crew members are subordinated to the S/C.

Cabin, Cockpit

1.5.3.2 General duties of the Senior Cabin Crew

On the flight, in subordination to the commander, the S/C is responsible for the safety and security of the cabin operation and comfort of passengers, as well as the service on board. For responsibility concerning the safety of passengers, see below. Refer to FAM Service / Catering.

Cabin, Cockpit

1.5.3.3 Special duties of the Senior Cabin Crew

The S/C shall:

- Check if the cabin crew is complete before commencing flight duty;
- Assign particular duties and responsibilities to all cabin crew members;
- Brief the cabin crew before each flight;
- Be responsible for maintaining good discipline of all cabin crew members while on duty;
- Be responsible for observance of the safety and security regulations in the cabin;
- Be responsible for emergency preparations according to CMD and/or special instruction;
- Ensure that passengers are seated where, in the event that an emergency evacuation is required, they may best assist and not hinder evacuation from the aeroplane;
- Ensure that only those persons who appear reasonably fit are seated adjacent to an emergency exit; Refer to CSPM Passenger seating restrictions.
- Make sure that persons likely to impede evacuation are seated where they will not obstruct emergency equipment or exits, or otherwise impede the crew in carrying out their duties.

Persons who are physically or mentally handicapped to the extent that they would have difficulty in moving quickly if asked to do so; or persons whose sight or hearing is impaired to the extent that they might not readily become aware of instructions given to begin evacuating the aeroplane; children and infants, whether or not they are accompanied by an adult; persons in custody and those who are being deported; and persons whose physical size would prevent them from being able to move quickly.

- Report all technical irregularities in the cabin to the flight crew;
- handle all operational cabin irregularities in coordination with the CMD;
- act as speaker for all duty matters pertaining to the cabin crew;
- Ensure the orderly handover of aeroplane to the new cabin crew taking over at transit stations;
- Ensure that the necessary documents are maintained and processed as laid down in the respective regulations;

- Report any important incidents or irregularities occurring during flight to the appropriate office. Reports about matters of mutual interest shall be coordinated between S/C and CMD as to which action will be taken (IQSMS or personal report).

Cabin, Cockpit

1.5.4 Cabin Crew (C/C)

Cabin, Cockpit

1.5.4.1 Position of the Cabin Crew

All cabin crews, on duty and also off duty when away from home base, are subordinated to the CMD.

The cabin crew takes orders from the CMD, or his delegate and the S/C.

In the absence of the CMD on sling stations (i.e. due to different rotations of flight and cabin crew), the cabin crew members are subordinated to the S/C.

Cabin, Cockpit

1.5.4.2 General duties of the Cabin Crew

During the flight in subordination to the S/C and CMD, the C/C is responsible for the safety, security and comfort of passengers, as well as the service on board. For responsibility concerning the safety of passengers, see below. For service related duties refer to FAM Service / Catering.

Cabin, Cockpit

1.5.4.3 Special duties of the Cabin Crew

The C/C shall:

- maintain good discipline while on duty;
- enforce the safety and security regulations in the cabin;
- ensure that passengers are seated where, in the event that an emergency evacuation is required, they may best assist and not hinder evacuation from the aeroplane;
- ensure that only those persons who appear reasonably fit are seated adjacent to an emergency exit; Refer to CSPM Passenger seating restrictions.
- make sure that persons likely to impede evacuation are seated where they will not obstruct emergency equipment or exits, or otherwise impede the crew in carrying out their duties.

Persons who are physically or mentally handicapped to the extent that they would have difficulty in moving quickly if asked to do so; or persons whose sight or hearing is impaired to the extent that they might not readily become aware of instructions given to begin evacuating the aeroplane; children and infants, whether or not they are accompanied by an adult; persons in custody and those who are being deported; and persons whose physical size would prevent them from being able to move quickly.

- report all technical irregularities in the cabin to the S/C and/or CMD;
- handle all operational cabin irregularities in coordination with the S/C and/or CMD.
- take over the position of S/C in case of S/C incapacitation in accordance with CSPM 2 § 4.4.

Cockpit, Operational Ground Staff

1.5.5 Flight Operations Officer duties and responsibility (FOO)

Cockpit, Operational Ground Staff

1.5.5.1 General

The FOO is authorized and responsible to perform all Operations Control Centre and Flight Dispatch functions

Cockpit, Operational Ground Staff

1.5.5.2 Authority and accountability of FOO

The FOO supports, briefs and assists the PIC regarding risk tolerability with respect to the safe and secure conduct of each flight.

The FOO is the only ground person authorised to perform long-haul flight planning as well as preparation and to provide in-flight support to the flight crew.

The FOO has the authority to perform operations control center (OCC) and Flight Dispatch functions as outlined in OM A Operational Control.

Cockpit, Operational Ground Staff

1.5.5.3 Responsibilities of FOO

For flight operational matters, the FOO is the partner of the CMD on ground.

Responsibility for operational control lies fully in the hands of the PIC.

However, it is the responsibility of the FOO to:

- to support, brief and assist the PIC in the safe conduct of each flight

- assist the PIC in flight preparation and to provide the information required
- assist the PIC on preparing the operational and ATS flight plans
- file relevant ATC FPLs with appropriate ATS units
- notifying the appropriate ATS unit when the position of the aircraft cannot be determined by an aircraft tracking capability, and attempts to establish communication are unsuccessful
- furnish the PIC, while in flight, with appropriate information that may be necessary for the safe conduct of the flight (incl. any amendments to the flight plan that may become necessary in the course of the flight)
- in the event of an emergency, initiate relevant procedures as specified in the EDW CERM, while avoiding taking any action that would conflict with ATC procedures

Cabin, Cockpit, Operational Ground Staff

1.6 Crew regulations

Cabin, Cockpit

1.6.1 General

The public's confidence in an airline is highly dependent on its impression of the flight personnel's conduct. Therefore, flight personnel should always remember that they are the object of much public interest.

They shall, on or off duty, act in a disciplined and correct manner at all times. For further regulations, refer to the employee's working contract.

Cabin, Cockpit

1.6.2 Appearance

On duty a clean and smart appearance must always be carefully maintained, closely complying with the instructions concerning uniforms and personal appearance (ref. “Uniformreglement”).

Flight personnel travelling on duty in civilian clothes (e.g. positioning) are expected to dress at least in a smart-casual way as follows:

- Male crewmembers: Long trousers (no jeans), shirt. T-shirts without collar are not permitted.
- Female crewmembers: Dress, skirt or long trousers (no jeans) with blouse or sweater. Tank tops or similar are not permitted.

All crewmembers have to wear shoes fitting to their clothing (no sneakers, no flip flops or similar).

Travelling in worn-out, dirty or torn clothes, in beach attire, shorts or jogging outfit is not permitted.

Cabin, Cockpit

1.6.3 Conversation

Flight personnel shall always be tactful and polite when talking to passengers, authorities, superiors and colleagues. On and off duty, flight personnel should be careful when discussing company matters, especially irregularities. If non-company people pick up part of such discussions, this may break the required confidentiality and lead to misunderstandings detrimental to the company.

Cabin, Cockpit

1.6.4 Tips

Any donations, tips or presents offered by passengers should be politely refused.

Cabin, Cockpit

1.6.5 Physical condition

Refer to OM A Health Precautions.

Cabin, Cockpit

1.6.6 Flight expense allowance flight crew

Expenses occurring during flight duty will be paid by Edelweiss Air according to the “Allgemeines Spesenreglement”.

Additional expenses not covered therein and occurring in connection with duty are reimbursed according to “Allgemeines Spesenreglement” and must be claimed by using the designated form (to be downloaded from the intranet).

This form must be used for special expenses/allowances, e.g. taxi, telephone and hotel expenses, if paid by the crewmember.

Cabin, Cockpit

1.6.7 Handling of company material

All flight personnel shall:

- Handle with care all material belonging to the company;
- Store all company material securely so that it is not accessible to external persons;

- Maintain their personally allotted manuals, handbooks, working copies, bulletins and circulars well up to date;
- Any loss, damage, or neglect of company material, caused by careless handling, must be paid for and made good by the person so responsible.

Cabin, Cockpit

1.6.8 Personal documents

Cabin, Cockpit

1.6.8.1 Renewal of documents

Each crew member is responsible for each renewal of his license, medical, proficiency certificate, passport, certificates of vaccination and necessary visa in good time. The renewal has to be handled by the respective crew member. Should fines be imposed on the company, due to non-compliance with the above instructions by flight personnel, then these fines will be debited to the fallible person.
Crew Members must send a copy of their medical certificate to medical-admin@flyedelweiss.com.

The passport must be valid at least 6 month; there will be a reminder by ENZIAN 300 days prior expiration date.

Cabin, Cockpit

1.6.9 Cosmos/Yonder

Every crew member shall check Cosmos and Yonder before each flight duty period to get all relevant information concerning Edelweiss' flight operations.

Crew members are required to:

- Check Cosmos for any schedule changes.
- Synchronise the Yonder application and complete all due read & acknowledge tasks.

Note: Changes in manuals or documents which come into effect at a later date must be read before the effective date stated in the manual/document concerned.

Cabin, Cockpit

1.6.10 Custom regulations

All flight personnel shall:

- Pass through customs, immigration, currency control, etc., as prescribed locally;
- Carefully comply with the local customs, currency and other special immigration regulations which are often more restrictive for flight personnel than for passengers.

It must be clearly understood that noncompliance with the customs and currency regulations, and other official controls, is a very serious offence against the company regulations and the laws and regulations of a country. Anybody caught smuggling, or wilfully breaking the currency or other regulations, can expect immediate discharge from the company, as well as heavy fines or even imprisonment from the police.

Cabin, Cockpit

1.6.11 Duty Free Shopping

Customs regulations must be taken into account when shopping in a duty free shop. A departure must never be delayed because the crew is duty free shopping, nor should passengers get such an impression.

Cabin, Cockpit

1.6.12 Hotel accommodation

All flight personnel shall:

- Follow local procedures for accommodation and crew meals;
- Settle all personal bills before leaving the hotel;
- Distribute normal tips according to local procedures and customs.

Justified complaints shall be brought to the attention of the hotel management and forwarded to the company, stating the room number and names of contacted hotel staff.

Writing reviews on online platforms is not allowed for all hotel stays paid by Edelweiss.

Cabin, Cockpit

1.6.13 Crew-Layover Readiness and Reachability of Crewmember

The CMD, or in case of different crew rotations the S/C, leads the entire crew during the layover. He ensures an adequate communication and that the crew is at any time ready for duty within 24 hours.

Whenever a CCM is absent from the crew hotel for more than 24 hours, or stays overnight in another accommodation than the crew hotel, he shall inform the CMD resp. S/C of his whereabouts and leave a contact address and telephone number with the CMD resp. S/C.

The instructions in the SSI of the respective layover station shall be adhered to. During the period of absence, the CCM must assure that communication with the CMD resp. S/C is possible and information must be checked regularly.

During the entire layover the CCM must always be able to return to the crew hotel within 24h for duty.

On all layovers, the CCM shall report back at the hotel from trips outside town at least 24 hours before pick-up or earlier if required by the CMD resp. S/C.

Thereafter the hotel should not be left for extended periods.

Cabin, Cockpit

1.6.14 Medical shipments

Medicines, blood and its products, and human organs are normally transported as manifested cargo. Exceptionally, and in top urgent cases only, these shipments may be accepted unmanifested and handed over to the crew for transport, without responsibility on the part of Edelweiss Air for loss or damage, if the following conditions are fulfilled:

- The security considerations allow a transportation;
- The shipment is approved by Manager Ground Operations and stamped by the respective station;
- The shipment is handed over to the CMD by the respective station agent personally;
- Delivery at destination is organised by the respective station.

Cabin, Cockpit

1.6.15 Postal regulations

Transportation of mail, officially declared on the load-sheet, is allowed for all line flights (sub-charter) and for some charter flights, depending on the agreement for the specific flight/flight series between Edelweiss Air and the respective State authority.

Flight personnel shall not accept any mail (letters, postcards, parcels, etc.) not declared as such on the load-sheet, either free of charge, or against payment for their private account. Company mail or other tour operator mail is exempted from this regulation.

Cabin, Cockpit

1.6.16 Wishes for private transportation

Wishes for private transportation of goods on Edelweiss Air aeroplane have to be submitted to the Head of Flight Operations. On flights operated by Edelweiss Air, the respective crew member has then to contact OCC for handling and fees. Price-reductions will be given according the “FREIFLUGREGLEMENT” respectively according the agreement with SWISS.

Cabin, Cockpit, Operational Ground Staff

1.6.17 Cooperation with Crew assignment and control (OCC)

Cabin, Cockpit, Operational Ground Staff

1.6.17.1 Procedures

All matters pertaining to crew scheduling shall be channelled through OCC. The monthly crew rosters, and all changes, are issued by OCC.

Cabin, Cockpit, Operational Ground Staff

1.6.17.2 Contact address

Flight personnel must report any changes in domicile and/or telephone number to OCC as soon as practicable.

Flight personnel shall inform OCC, respectively the Station, when they wish to leave the Aerodrome during intermediate ground stops.

The layover times at crew sling stations are intended primarily to provide crew rest, in order to start flight duty in the best physical condition.

The hotel should not be left for extended periods without leaving a contact address/ telephone number with the CMD, the S/C or the hotel, in order to guarantee the availability of all flight personnel in case of changes in crew disposition at short notice. CMD also leave their contact address at the hotel desk.

On all crew sling stations, crew members shall be back at the hotel from trips outside the town, at least 24 hours before take-off.

The CMD may grant exceptions to these rules.

Cabin, Cockpit, Operational Ground Staff

1.6.17.3 Reporting of foreseeable irregularities

Flight personnel shall report, as early as possible, any fact that may affect their personal crew roster to OCC on or off duty.

Such irregularities are:

- Illness or accident;
- Unexpected military service;
- Urgent family reasons;
- Possible check-in delays, etc.

At stations abroad, reporting will be made to the CMD or S/C.

Cabin, Cockpit

1.6.18 Procedures in case of illness, unfit or accident

Cabin, Cockpit

1.6.18.1 Reporting

In case of illness (ILL), unfit due to fatigue (UFT-F), or unfit due to other reasons (UFT-O) or accident (ACC), the crew member shall inform crew control as soon as possible and keep them informed about his fitness status.

In case of unfit due to fatigue (UFT-F), the crew member shall optimally use the rest period to recover. In addition, a fatigue report via IQSMS shall be filed. Insurance-wise, it will be treated as ILL.

In case of ILL or UFT, a medical certificate covering the entire period must be provided as per the table below:

Function	Consecutive days of absence	Recipient
FCM	More than 7	Teamleader
CCM	More than 3	OMCC

To comply with insurance requirements, all accidents, even if not resulting in absence, must be reported to HR. Additionally, in case of an absence of more than 2 consecutive days due to an ACC, a medical certificate shall be provided.

If a crew member cannot be reached through their usual contact information during recovery from ILL, UFT-F, UFT-O or ACC, alternative contact data shall be provided to crew control.

Cabin, Cockpit

1.6.18.2 Illness or accident abroad

Cabin, Cockpit

1.6.18.2.1 Minor ailments

Consult one of the physicians below, in the following order of priority:

1. Doctor of the hotel;
2. Medical Service, or designated doctor, of a foreign airline;
3. Any other Physician (ask Edelweiss Air, Handling Agent or residents for advice).

Do not call the doctor to your room if you are able to see him in his office.

Reporting shall be made to the CMD or S/C.

Cabin, Cockpit

1.6.18.2.2 Major ailments

Accidents and cases of sudden disease can happen at places and under conditions beyond our control. First aid must often be given by any medically trained person, due to time constraints, and sometimes even by laymen.

Responsibility of the incapacitated crew member or accompanying person:

a. Inform CMD, and S/C if a Cabin crew member is concerned;
b. Inform OCC, who in turn informs MedAire;
c. Inform the local Edelweiss Air organisation as soon as possible, observing the following priority:
   1. Handling Supervision Organisation;
   2. Handling Agent.

> The CMD, respectively S/C is responsible for informing the authorities detailed above, if the patient is not capable of doing so.

Responsibility of the above mentioned Edelweiss Air representatives:

a. Remain in close contact with the patient;
b. Ascertain that hospital facilities are of an adequate standard;
c. Deposit a possibly required sum of money.

Cabin, Cockpit

1.6.18.3 Information for relatives

The relatives shall be informed by the respective CMD or S/C, after due consultation with the respective Medical Service and, if possible, with the patient.

Cabin, Cockpit

1.6.18.4 Medical treatment at Edelweiss Air expense

In case of medical treatment abroad due to unforeseen illness, the resulting expense, if not paid by the “Krankenkasse”, may be claimed by sending the receipts and a report to the respective crew-chief. Costs offset against a deductible (Franchise, Selbstbehalt) will not be paid by Edelweiss Air.

In case of medical treatment due to an accident, the resulting expense will be paid by Edelweiss Air's insurer. All receipts have to be given to EH and an accident report has to be filled out.

Cabin, Cockpit

1.6.19 Resumption of flight duty for Flight Crew Members

Pilots who are aware of:

- any significant personal injury involving incapacity to function as a member of a flight crew; or
- any illness involving incapacity to function as a member of a flight crew throughout a period of 21 days or more; or
- being pregnant,

shall inform their aeromedical examiner (“Fliegerarzt”) in writing of such injury or pregnancy, and as soon as the period of 21 days has elapsed in the case of illness.

The medical certificate shall be deemed to be suspended upon the occurrence of such injury or the elapse of such period of illness or the confirmation of the pregnancy until clearance to resume flight duties from the contacted aeromedical examiner is received.

After an absence of more than 7 days due to illness or accident, the aeromedical examiner shall be contacted by phone prior resuming flight duty.

Pilots shall without undue delay contact their aeromedical examiner to get advice when becoming aware of:

- hospital or clinic admission for more than 12 hours; or
- surgical operation or invasive procedure; or
- the regular use of medication; or
- the need for regular use of correcting lenses.

If restrictions of flight duty are necessary, the Head of Flight Operations and OCC have to be informed.

Cabin, Cockpit, Operational Ground Staff

1.6.20 Crew planning

Cabin, Cockpit, Operational Ground Staff

1.6.20.1 General

All matters pertaining to vacations, leave of absence and military service must be channelled through the Head of Flight Operations or Head of Cabin Management.

Cabin, Cockpit, Operational Ground Staff

1.6.20.2 Vacations

For general information, refer to the CP/Memo for Flight crew members, respectively the FAM for cabin crew members.

On request of OC/PCO, the vacation must be planned and coordinated well in advance. For vacation, once a year at least 14 days in a row should be requested and planned. Without permission OC/PCO, no vacation balance should be cumulated for the next calendar year.

Cabin, Cockpit, Operational Ground Staff

1.6.20.3 Military service

All crew members must inform OCP/POP as soon as possible about their yearly military service and/or military inspection obligations.

Dispensation, prorogation or postponement of military service, for professional reasons, must first be dealt with OCP/POP.

Change of military unit assignment and/or military rank must be reported to OCP/POP without delay.

Sickness and accidents during military service, which may prohibit flight duty after service or cause partial postponement of military service, must be reported to OCP/POP.

A leave, in order to serve voluntary military duty, can only be granted as an exception, after due consideration of the operational aspects. Such requests must therefore be addressed as early as possible to OCP/POP.

Cabin, Cockpit, Operational Ground Staff

1.6.20.4 Unpaid Leave

If a flight crew member wishes unpaid leave, application must be made to the Head of Flight Operations respectively to the Head of Cabin Management. Administrative and financial arrangements have to be made with the respective department.

Cabin, Cockpit, Operational Ground Staff

1.6.21 Crew transportation

Cabin, Cockpit, Operational Ground Staff

1.6.21.1 General

Transportation is paid by Edelweiss Air:

- If the crew member must travel from home base Zurich Airport to another place or v.v. to resume/continue/end flight duty
- If the transportation takes place at stations abroad for reasons of duty.

The means, dates and reservations for crew transportation are fixed and organised in advance by OCC. The respective patterns have to be respected.

Exceptionally and in urgent cases only, changes are possible with consent of the FOO and the Head of Flight Operations respectively Head of Cabin Management. Suggestions how to improve crew transportation is always welcome.

Cabin, Cockpit, Operational Ground Staff

1.6.21.2 Positioning

Positioning means travelling by aeroplane, coach/bus, train or car without any function on board for commencing a duty, within a crew rotation or at the end.

The Crewoffice is responsible:

- To issue and provide tickets where necessary;
- To make the corresponding entries in the monthly crew schedule;
- To make hotel reservations and to organise transport between airport and hotel and vice versa;
- To arrange for the insertion of dead heading crew members in the General Declaration;

For deadheading flights crew members shall follow passenger procedure (e.g. for security regulation, limitations regarding carry-on-baggage).

Cabin, Cockpit, Operational Ground Staff

1.6.21.3 Ground transportation

Ground transportation means surface transport for commencing or terminating a duty or within a crew rotation.

OCC or the respective station is responsible for organisation/payment of ground transportation. If crew members have to pay the ground transportation, the ticket expenses may be claimed by the expense form.

Cabin, Cockpit, Operational Ground Staff

1.6.21.4 Off-loading of Flight Personnel

As a general rule, Edelweiss Air flight personnel on duty or travelling as dead heading crew cannot be off-loaded, for reasons of economy, at intermediate stations on flights operated by Edelweiss Air.

In exceptional cases, the CMD may request permission from OCC to off-load a crew member.

Such permission can, however, only be granted for supernumerary crew members.

The Edelweiss Air representative, the Handling Agent or OCC, must ensure acceptable accommodation and onward transportation for off-loaded crew members.

Cabin, Cockpit, Operational Ground Staff

1.6.22 Mishandled/damaged crew baggage

Cabin, Cockpit, Operational Ground Staff

1.6.22.1 General

The CMD shall submit a detailed report via IQSMS about any case of mishandled/missing crew baggage for further evaluation.

In case of damage to crew baggage, the respective crew member shall contact administration as soon as possible.

Whenever crew baggage is missing, the CMD shall solve the matter with the station personnel concerned.

Cabin, Cockpit, Operational Ground Staff

1.6.22.2 Missing crew baggage at stations abroad

Where distribution of toilet and/or overnight kits is not feasible, e.g. non-availability, length of stay, etc., the CMD may consider buying replacements. After due consideration of the circumstances, he shall decide the amount of money that may be spent by the crew members.

The CMD will forward the expenses account to the Head of Flight Operations.

Cabin, Cockpit, Operational Ground Staff

1.6.23 Transportation of PAD

PAD (Passengers available for Disembarkation) travelling on discounted tickets (booked or on standby basis) are transported according their travel priority. These priorities are available in the check-in system. For longhaul flights there is normally a PAD list with their respective transport priorities available on the Flypad.

The crew is not allowed to alter this transport priority. If errors are suspected in the travel priority of PAD an IQSMS report has to be written.

This policy is not applicable for the distribution of vacant jumpseats. These may be distributed according to CSPM Distribution of vacant jump-seats on flight deck and cabin.

2 Operational Control and Supervision

Cabin, Cockpit, Operational Ground Staff

Cabin, Cockpit, Operational Ground Staff

2.1 Supervision of the operations by Edelweiss

Cabin, Cockpit, Operational Ground Staff

2.1.1 General

In accordance with ORO.GEN.110 (c) Edelweiss will do all possible to maintain a high level of safety in its operation. This will be achieved in part by:

- Proper instruction of all operations staff (awareness of responsibilities, relationship of their duties to the operation as a whole)
- Supervision and control
- Monitoring and re-evaluation

Cockpit, Operational Ground Staff

2.1.2 Licence and qualification validity

Cockpit

2.1.2.1 Flight crew

Edelweiss Air gives attention to handling of licenses in accordance with the regulations laid down by the federal authorities.

The internal handling and control is delegated to OT, however, the individual flight crew member is responsible that the license can be renewed in due time.

Edelweiss Air will only deal with category of licenses required for its own operations. Within Edelweiss Air, only persons authorised by the FOCA are allowed to certify the hours on the experience report.

OG, in his absence OC is entitled from FOCA for signing the experience report.

Cockpit

2.1.2.2 Types of licenses

- ATPL;
- CPL;

- IR only valid in connection with a current pilot's license.

For the issue or renewal of a license, the following conditions depending on the type of license are required:

1. Professional performance

   A recent proficiency check
2. Physical Fitness

   A periodic medical examination

Cockpit

2.1.2.3 Proficiency check

A recent and successful check is required for the renewal of the IR.

Cockpit

2.1.2.4 License issue

The ATPL will be granted after an applicant is fulfilling the following requirements:

- He shall be at least 21 years of age;
- He shall held a valid class 1 medical certificate;
- He shall have received theoretical knowledge instruction on an approved course at an approved flying training organisation (ATO);
- He shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of an ATPL;
- Applicants for the issue of an ATPL shall have fulfilled the requirements for the type rating of the aircraft used in the skill test;
- The ATPL skill test may serve at the same time as a skill test for the issue of the licence and a proficiency check for the revalidation of the type rating for the aeroplane used in the test and may be combined with the skill test for the issue of a multi-pilot type rating;
- He shall be the holder of a CPL, a multi-engine instrument rating and have received instruction in multi-crew co-operation.
- He shall have completed as a pilot of aeroplanes at least 1'500 hours of flight time of which a maximum of 100 hours may have been completed in a flight simulator, including at least:
  - 500 hours in multi-pilot operations on aeroplanes type certificated in accordance with the JAR/FAR-25 Transport Category or the JAR/FAR-23 Commuter Category, or BCAR or Air 2051;

  - 500 hours as pilot-in-command under supervision; or
  - 250 hours either as pilot-in-command or at least 70 hours as pilot-in-command and 180 hours as copilot performing, under the supervision of the pilot-in-command the duties and functions of a pilot-in-command provided that the method of supervision is acceptable to the authority;
  - 200 hours of cross-country flight time of which at least 100 hours shall be as pilot-in-command or as copilot performing under the supervision of the pilot-in-command the duties and functions of a pilot-in-command, provided that the method of supervision is acceptable to the authority;
  - 75 hours of instrument time of which not more than 30 hours may be instrument ground time; and
  - 100 hours of night flight as pilot-in-command or as copilot;
- The experience required shall be completed before the skill test.

Refer to OM D Skill Test / LPC and Skill test for issue of an ATPL.

Cockpit

2.1.2.5 Validity of licences and ratings

The validity of the licence is determined by the validity of the ratings contained therein and the medical certificate.

The licence will be reissued by the authority:

- After initial issue or renewal of a type-rating;
- For any administrative reason.

The revalidation of the type rating including the instrument rating is entered by the SFE/TRE after the successful completion of the corresponding check program.

Cockpit

2.1.2.6 Validity of medical certificate

A class 1 Medical certificate shall be valid from the date of the initial general medical examination for 12 months except that for holders who have passed their 60th birthday the interval is reduced to 6 months. Medical examination may be arranged during a period of 45 days before the expiration date; otherwise the date of examination will mark the beginning of a new validity period.

It is the responsibility of each crew member to arrange the periodic medical examination so that the validity can be extended in due time. Medical examinations shall, if practicable, always be carried out by the same authorised physician selected by the flight crew member.

The FOCA or Edelweiss Air may order the re-examination of a license holder by the Medical Service (Vertrauensarzt Luftamt) at any time if there is a doubt regarding either his medical or professional fitness.

After each reception of a new medical certificate, the pilot makes a copy and hands it over to the crew office, before the first flight duty after a medical check.

Cockpit

2.1.2.7 Flight time / block time

Flight time, synonymous with the term “Block time”, is logged by means of Edelweiss Air computer program and credited on an individual flight time record at the end of each month.

The individual pilot is responsible to log everything he might need in the future to extend or keep his licence.

Flight time and flight legs will be credited to all crew members on board except if travelling as dead heading crew member, as “Observer” or as enlarged crew while not at controls. Simulator time will be credited to crew members serving at the controls.

2.1.2.8 Recording of Flight time

Flight time is logged by Edelweiss and credited on an individual flight time record at the end of each month.
Flight time and flight legs will be credited to all crew members on board except if travelling as dead heading crew member, as "Observer". Simulator time will be credited to crew members serving at the controls.

Additionally, every pilot shall keep a reliable record of the details of all flights flown in a form and manner established by FOCA GM. For electronic flight logging, FOCA provides a digital pilot logbook (FOCA dLogbook; dlog.bazl.admin.ch).

Logging of PIC flight time (CMD equals PIC for CAT operations):

- the holder of a licence may log as PIC time all of the flight time during which he or she is the PIC (refer also to OM A Designation of the commander - General);
- the holder of an instructor certificate may log as PIC all flight time during which he or she acts as an instructor in an aircraft;
- a co-pilot during PICUS training may log as PIC flight time flown as PICUS when all the duties and functions of the PIC on that flight were carried out in such a way that the intervention of the PIC in the interest of safety was not required and provided that such PICUS time is countersigned by the PIC;
- Furthermore, all requirements according to OM D PICUS Training Programme have to be fulfilled to log PICUS time;
- if the holder of a licence carries out a number of flights upon the same day returning on each occasion to the same place of departure and the interval between

successive flights does not exceed 30 minutes, such series of flights may be recorded as a single entry.
- when the PIC acts under the supervision of another pilot (supervisor), both the pilot and the supervisor may log the flight time as PIC.

Co-pilot flight time:

- the holder of a pilot licence occupying a pilot seat as co-pilot may log all total flight time. The function time as co-pilot shall only be recorded, when occupying the pilot seat.

When acting as a cruise relief pilot:

- A pilot, other than the CMD (e.g. CRP), occupying a pilot seat during cruise shall log all total flight time. The function time shall only be recorded when occupying a pilot seat.

Instructor flight time:

- instructor time should be recorded as appropriate and also entered as PIC.

Operational Ground Staff

2.1.2.9 Operations control staff

Flight operations officer (FOO)

No licence is required for operations control staff. For training and qualification refer to OM D Flight Operations Officer (FOO) Training.

Cabin, Cockpit, Operational Ground Staff

2.1.3 Competence of operations personnel

Cockpit

2.1.3.1 Flight crew

Refer to OM A Flight Crew

Cabin

2.1.3.2 Cabin Crew

Refer to OM A Cabin crew

Operational Ground Staff

2.1.3.3 FOO - Flight Operations Officer

In the interest of safety as well as an economic operation, a high level of skill and proficiency shall be maintained.

To monitor this, the NPGO shall:

- Make ad hoc assessments by supervising a particular shift
- Collect and assess occurrence reports by crew and/or other relevant sources
- Keep respective statistics
- Discuss occurrences with the staff involved with the aim of improving and maintaining a high level of safety. Refer to OM A Flight Operations Officers (FOO).

Cockpit, Operational Ground Staff

2.1.4 Control, analysis and storage of records, flight documents and additional data

Cockpit, Operational Ground Staff

2.1.4.1 Documents used for the preparation and execution of a flight

- Documents to be carried on flight:
  - OFP
  - Technical Log
  - Fuelling order
  - ATC flight plan
  - NOTAM / AIS briefing documents
  - Meteorological information
  - Mass and balance documents
  - Notification of special passengers
  - Notification of special load (NOTOC)
  - Maps, charts and associated documents
  - Passenger and cargo manifests, if required by the states concerned
  - Forms to comply with the reporting requirements of the authority and Edelweiss Air

  Documents to be retained for the archive:

- OFP
- ATC clearances (recorded on OFP or ACARS log)
- ATIS of departure and destination aerodrome (recorded on OFP or ACARS log)
- NOTAM (FPM)
- Company NOTAM, if any (FPM)
- Meteorologic information used for the planning of the flight, such as TAF, SIGMET, SWC etc. (FPM, OFP or ACARS log)
- Mass and balance documents (hardcopy)
- Notification of special passengers and/or load (NOTOC hardcopy)

Cockpit, Operational Ground Staff

2.1.4.2 Analysis and retention of documents

Flight operations support shall regularly check the accuracy and completeness of any of the above reports delivered to them.

Refer to OMM Record Keeping and Archiving.

2.1.4.3 Documents storage periods

2.1.4.3.1 General

The following tables list the documents which have to be retained, the storage period and who is responsible for the archival process.

Confidential documents have to be protected from unauthorized access.

After the stipulated period, the documents may be disposed of. Confidential documents have to be destroyed by paper shredder or permanently deleted (EDP).

2.1.4.3.2 Information used for the Preparation and Execution of a Flight

Document	Storage period	Stored by	Location
OFP	3 months	OG	CAE / Electronic file
Technical Log	36[1] months	T	Electronic file
NOTAM and Company Notam	3 months	OG	CAE / Electronic file
Mass & Balance	3 months	Handling Agent	Trip file,hard copy
Notification of special loads including NOTOC	3 months	Handling Agent	Trip file,hard copy

[1] 36 months from the date of the last entry

2.1.4.3.3 Reports

Document	Period Month	Stored by	Location
Duty exceedance	3	OC	IQSMS
Reduced Rest Time	3	OC	
Air Traffic Incident	24	OC	
Bird Strike	24	OC	
Dangerous Goods Occurrence Report	24	OC	
Accident Report	60	OC	

2.1.4.3.4 Records

Document	Period	Stored by	Location
Safety and Quality Management Records	5 years	OS	IQSMS
Dangerous Goods Transport Document	3 months after completion of the flight	Station	Hard copy
Dangerous Goods Acceptance Checklist	At least 5 years	SwissWorld Cargo	Hard copy

2.1.4.3.5 Crew Records

Document	Period	Stored by	Location
Flight- Duty and Rest Time	24 months	OP	Electronic file
Licence / Medical Certificate / Type Qualification / Attestation	1	OC	Electronic file
Conversion Training and Checking	3 years	OT	Individual training (in paper form)
Command Course, incl. Checking	3 years	OT	Individual training (in paper form)

Document	Period	Stored by	Location
Recurrent Training and Checking (LPC, OPC, Line Check, ESET)	3 years	OT	Individual training (in paper form) / electronic file
Training and Check to operate in either Pilot's Seat	3 years	OT	Individual training (in paper form)
Recent Experience	15 months	OC / ENZIAN	Check form
Route and Aerodrome Competency	3 years	OT	Electronic file
Training and qualification for specific operations (e.g. LVP, RVSM, ACAS, EGPWS)	3 years	OT	Individual training (in paper form)
CRM / Security / Dangerous Goods Training Records	3 years	OT	Electronic file

1) As long as the Crew Member is exercising the privileges of the licence / attestation for Edelweiss

2.1.4.3.6 Flight Data

Document	Period	Stored by	Location
Flight-Data Records	1 year	OS	EMS Server

2.1.4.3.7 Cabin Crew Records

Document	Periods	Stored by	Location
Flight- duty and rest time	15 months	OP	Electronic file
Cabin Crew Attestation (CCA)	1	PCT	HR file
All training and checking records	2	PCT / HR	Hard copy
Dangerous goods training record	3 years	PCT	Electronic file
Medical examination or assessments records	3	HR	Hard copy
Security training records	3	PCT	Electronic file

1) Until 12 month after the Cabin Crew Member has left the employ of Edelweiss Air, but at least 5 years.

2) As long as the C/C is employed by Edelweiss Air, but at least 3 years.

3) Until 12 month after the Cabin Crew Member has left the employee of Edelweiss Air.

2.1.4.3.8 FOO records

Document	Period	Stored by	Location
Initial training and competency check	1	OG	Hard copy / MINT
Recurrent training and competency checks	3 years	OG	
Flight deck familiarisation flight records	1 year	OG	
Dangerous goods training records	3 years	OG	

1) As long as the FOO is employed by Edelweiss Air.

2.1.4.3.9 OSY records

Document	**Periods**	**Stored by**	Location
Aircraft security search	at least 24 hours after off block of the flight	at the respective station	
Sealing checklist			

2.1.4.4 Preservation of documentation

Edelweiss Air ensures that:

- Any original documentation, or copies thereof, that Edelweiss Air is required to preserve is preserved for the required retention period even if Edelweiss Air ceases to be the operator of the aeroplane; and
- Where a crew member, in respect of whom Edelweiss Air has kept a record in accordance with OM A Documents storage periods, becomes a crew member for another operator, this record is made available to the new operator.

2.2 System of promulgation of additional operational instructions and information

2.2.1 Types of information

- Semi-permanent; normally in the form of a booklet of leaflet.
- Ad-Hoc; having a high degree of urgency, requiring expeditious distribution.

2.2.2 System of promulgation

Instruction / Information	Responsible for Promulgation	By means of
Dress Regulations	PC, OC	Booklet
Regulations concerning Immigration, Health, Visa, Customs, General Declaration, Passenger Manifest	OG	-open-
List of Authorised Aerodromes (incl. Commanders Competency)	OC	OM
List of Ground Handling Agents	OG	GOM
List of Maintenance Agents	T	-open-
Radio Frequencies of Handling Agents (CUT)	OG	Airport Briefing / CCI / Flypad
Fuel price comparison	F	OFP
List of Traffic Rights for individual Routes (where necessary)	OG	Yonder / Company Notam
Monthly Crew and Ground Personnel Schedules	OG	Leaflet
Ad-Hoc Revocation of A/D Authorisation or change of Commander's Competency qualifications	OC	Circular (Memo)
Changes in Information pertaining to Ground Handling	OG	Company Notam
Changes in Fuel availability and/or Supplier, ad-hoc Tanking Suggestions	OG, F	Company Notam
Technical Information, Aeroplane Type related	T, TO	Flypad, FOSI and TO Technical Information
Technical Information, individual A/C related	T, TO	

Instruction / Information	Responsible for Promulgation	By means of
Changes in Information pertaining to Maintenance	T	
Short term Information on Traffic Rights, Immigration, Visa, Health Requirements	OG	Company Notam
Re-Scheduling of Crew	OG	Verbal
Change of A/C Routing or Schedule	OG	Telex, Fax
Operationally Significant Weather-Information an NOTAMS	OG	Radio, Telex, Mobil
Changes of Approach Procedures, Aerodrome Operating Minima, SID, STAR and Missed Approach Procedures	OG	Notam
Runway Length Reductions and/or Installation of Obstacles	OG	Notam
Other Significant Aeronautical Information	OG	Company Notam
Industrial Agreements	<u>E</u>, F	Booklet

Where more than one department is shown, the responsible one is underlined.

Cabin, Cockpit, Operational Ground Staff

2.3 Operational Control

Operational control is defined as the exercise of authority by the operator over the initiation, continuation, diversion, termination or cancellation of a flight in the interests of safety and security of the aircraft and its occupants, as well as in the interest of regularity and efficiency of the operation.

Edelweiss has a non-shared system. The responsibility for operational control is assigned to the CMD which will be supported and assisted by the FOO:

- Operational control in the interest of regularity and efficiency is executed by Operations Control Centre (OCC) and Flight Dispatch;
- Operational control in the interest of safety is executed solely by the CMD and is expressed by the full and unrestricted CMD's authority which supersedes operational control executed by OCC for regularity and efficiency.

Cabin, Cockpit, Operational Ground Staff

2.3.1 Operations Control Center (OCC)

OCC is responsible and has the authority to exercise operation control over the Edelweiss operation up to seven days before departure until termination of the single flight.

OCC operates 24 hours 7 days a week.

Cabin, Cockpit, Operational Ground Staff

2.3.1.1 Responsibilities

OCC is responsible to supervise and initiate appropriate actions after coordination and in liaison with involved centers of expertise (e.g. flight dispatch, maintenance control, WK Technic Pikett, MET office, station, OC Duty Officer, OPS Pikett, CMD, etc.) for any case of deviations caused by:

- booking figures (passenger and cargo/mail);
- weather phenomena en-route and at destinations;
- technical status of the fleet;
- equipment or facilities on aerodromes and en-route;
- ATS performance;
- crew availability;
- punctuality;
- operation performed by other carriers on behalf of Edelweiss (wet lease-in);
- political actions/curfews/strikes;
- incidents/accidents/hijacking of aircraft or persons;
- bomb threats/black-mailing;
- missing aircraft position report.

Cabin, Cockpit, Operational Ground Staff

2.3.1.2 Authority

OCC has the authority to:

- initiate, cancel, consolidate, delay or advance flights;
- exchange aircraft or aircraft versions;
- decide on fuel-stops pre-flight;
- divert or re-route flights pre-flight;
- initiate meetings of the political crisis group;
- organise the emergency committee.

OCC may not:

- divert flights in-flight which is in the authority of the CMD.

Cabin, Cockpit, Operational Ground Staff

2.3.1.3 Operational Control Tasks

The following operational control tasks will be done by OCC:

- assist the CMD whenever a flight runs into operational problems;
- inform the onward CMD in due time of irregularities;
- aircraft assignment;
- aircraft changes;
- preparation of flight documentation for short-haul flights[1];
- ensure that short-haul flight preparation and aircraft assignment is in accordance with the safety and security restrictions
- ensure a common set of flight documents is used;
- ATS slot handling;
- ATS flight plan filing of the short-haul flights (Europe and North Africa);
- aircraft tracking in accordance with FOSI Aircraft Tracking;
- Flight Following (MVT Control).
- Flight Monitoring in accordance with OM A Flight Monitoring
- Crew control function outside of the crew office opening hours in accordance with OM A Flight Time Limitations;
- handling of post flight documentation;
- publication of time critical company NOTAM for stakeholders (e.g. Flight OPS, Safety division, Security division etc.);
- RAIM prediction on request of the PIC;
- initializing, amending, completing and sending of the daily OPS report.

[1] Shorthaul flights will be planned by the CMD. The FOO may change the OFP if required due to SLOT, ATS restriction, NOTAM, Safety or Security issues and on request of the PIC.

Cabin, Cockpit, Operational Ground Staff

2.3.1.4 Operational irregularities

All operational irregularities are handled by OCC.

The OPS Pickett, maintenance department and crew control shall be consulted before initiating any action involving non-scheduled night operation flights, overnight stays of aircraft and crew members or long delays. Appropriate company offices and departments, as well as station supervisors and ground handling agents, shall be informed about actions taken.

Cockpit, Operational Ground Staff

2.3.2 Flight Dispatch

Flight dispatch is responsible and has the authority for the pre-flight planning of long-haul flights.

Pre-flight planning has to be executed in accordance with following operational specifications, limitations, regulations and company policies and procedures:

- Edelweiss AOC;
- Edelweiss Operations Specification;
- Foreign Operations Specifications;
- Edelweiss Operation Manuals (OM A, OM B, OM C incl. OM C Appendix and Lido Route Manual);
- Local Station Information (LSI) Dispatch.

Cockpit, Operational Ground Staff

2.3.2.1 Responsibilities

Flight Dispatch is responsible for all tasks in its area of expertise:

- preparation of the OFP
- ensure that the route is planned in accordance with the safety and security restrictions
- ensure a common set of flight documents is used
- filing of the ATS flight plan
- ATS slot handling
- seasonal payload offer
- overflight permissions
- adaptation of OFP according to MEL/CDL
- adaptation of OFP according to performance restrictions
- assurance of completeness of required flight documentation
- support of training flights
- support of test flights.

Note: The final acceptance of the OFP lies with the CMD.

Cockpit, Operational Ground Staff

2.3.2.2 Authority

Flight dispatch has the authority to:

- select the best available routing in terms of safety, security, cost and operational efficiency;
- select suitable airports for the STOPS / EROPS scenario.

Cockpit, Operational Ground Staff

2.3.3 Flight Monitoring

Edelweiss provides Flight Monitoring from departure through all phases of the flight including:

- Provision of critical assistance to the flight crew in the event of an in-flight emergency or security issue, or upon request from the flight crew; and
- Communication of all available and relevant safety or security information between the flight crew and OCC, such as:
    - Aircraft technical failure
    - Unforeseen hazards
    - Air traffic
    - Meteorological conditions
    - Aerodrome, runway status, navigation aid status and availability of communication
    - Terrain and obstacles
    - Safety and security information
    - Update of operational flight plan if fuel reserves would be affected
    - Position reporting

The flight monitoring function at Edelweiss is divided into short-haul and long-haul and is performed by the following organisational units:

- Short-haul: Edelweiss OCC
- Long-haul: SWISS Mission Support (contracted) supported by Edelweiss OCC for certain tasks (e.g. issuing of a new OFP).

All operational control responsibilities remain within Edelweiss as described in OM A Operational Control.

Cockpit, Operational Ground Staff

2.3.3.1 Flight Monitoring Short-haul flights

Flight monitoring for short-haul flights is conducted as described below:

Description	FCM	OCC
Aircraft technical failure		
Technical failure of aircraft affecting flight planning or operation in general	Inform OCC Request assistance if required	Provide assistance if neccessary
Air traffic		
SLOT and Delay (ETD) information	Information automated via INIT message	Backup: Information to FCM by OCC if ACARS u/s or Crew did not receive information
Information of ATC constraints (capacity, strike, radar failures, long arrival routings), which were not available pre-flight	Inform OCC Request assistance if required	Inform FCM if flight is affected Provide assistance upon request
Meteorological conditions		
Weather Reports / Forecast (METAR / TAF / SIGMET)	Retrieval by crew through ACARS	Backup: Information to FCM if WX retrieval does not work or no valid data is available
Adverse and potentially hazardous weather / atmospheric conditions, which were not available pre-flight	Inform OCC Request assistance if required	Inform FCM if flight is affected Provide assistance upon request
Aerodrome, runway status, Navigation aid status and Availability of communication		
NOTAM watch Important changes to the NOTAM on planned aerodromes (e.q aerodrome closure, runway closure, failure or downgrade of navigation aids, failure or interference of communication capabilities) which were not available pre-flight	None	Forward relevant NOTAM to FCM
Experience of safety critical navigation aid failure or malfunction in-flight	Report to OCC	Provide information to other affected flights

Description	FCM	OCC
Critical communication failure, malfunctions, interferences or interruption in-flight	Report to OCC	Provide information to other affected flights
Terrain and obstacles		
Diversion to an unplanned aerodrome	Inform OCC	Provide geophysical information such as volcanic eruption, earthquakes or any other adverse and potentially hazardous weather/atmospheric conditions
Inflight Re-planning	Request new OFP from OCC	Send new OFP to FCM
Safety and Security Information		
Safety or security information relevant for a safe and secure conduct of flight	Inform OCC Request assistance if required	Inform FCM Provide assistance if requested by crew
Update of Operational flight plan if fuel reserves are affected		
Closure of airspace	Inform OCC (if Info received from ATC)	Inform FCM Calculate and provide a new OFP to FCM
Diversion to an unplanned aerodrome	Inform OCC	Calculate and provide a new OFP to FCM
Significant in-flight change of the flight route compared to the route in the flight planning	Inform OCC	Calculate and provide a new OFP to FCM
Significant deviation from the planned fuel consumption	Inform OCC	Calculate and provide a new OFP to FCM
Diversion to an en route alternate (ERA) aerodrome, a destination alternate, or a take-off alternate aerodrome	Inform OCC	Calculate and provide a new OFP to FCM, if required

Description	FCM	OCC
Position Reporting		
Automated Position Reporting	No action required	Monitor in Netline Ops++ and Flight Explorer. In case of failure of these systems, position reports are available via Outlook/SITA.
Outage of automated position reporting	Provide information to OCC upon request	Refer to FOSI Aircraft Tracking

Cockpit, Operational Ground Staff

2.3.3.2 Flight Monitoring Long-haul flights

Flight monitoring for long-haul flights is conducted as described below:

Description	FCM	OCC
Aircraft technical failure		
Technical failure of aircraft affecting flight planning or operation in general	Inform OCC Request assistance if required	Provide assistance if neccessary
Air traffic		
SLOT and Delay (ETD) information	Information automated via INIT message	Backup: Information to FCM by OCC if ACARS u/s or Crew did not receive information
Information of ATC constraints (capacity, strike, radar failures, long arrival routings), which were not available pre-flight	Inform OCC Request assistance if required	Inform FCM if flight is affected Provide assistance upon request
Meteorological conditions		
Weather Reports / Forecast (METAR / TAF / SIGMET)	Retrieval by crew through ACARS	Backup: Information to FCM if WX retrieval does not work or no valid data is available

Description	FCM	OCC
Adverse and potentially hazardous weather / atmospheric conditions, which were not available pre-flight	Inform OCC Request assistance if required	Inform FCM if flight is affected (by SWISS Mission Support) Provide assistance upon request
Aerodrome, runway status, Navigation aid status and Availability of communication		
NOTAM watch Important changes to the NOTAM on planned aerodromes (e.q aerodrome closure, runway closure, failure or downgrade of navigation aids, failure or interference of communication capabilities) which were not available pre-flight	None	Forward relevant NOTAM to FCM (by SWISS Mission Support)
Experience of safety critical navigation aid failure or malfunction in-flight	Report to OCC	Provide information to other affected flights
Critical communication failure, malfunctions, interferences or interruption in-flight	Report to OCC	Provide information to other affected flights
Terrain and obstacles		
Diversion to an unplanned aerodrome	Inform OCC	Provide geophysical information such as volcanic eruption, earthquakes or any other adverse and potentially hazardous weather/atmospheric conditions
Inflight Re-planning	Request new OFP from OCC	Send new OFP to FCM
Safety and Security Information		
Safety or security information relevant for a safe and secure conduct of flight	Inform OCC Request assistance if required	Inform FCM Provide assistance if requested by crew
Update of Operational flight plan if fuel reserves are affected		

Description	FCM	OCC
Closure of airspace	Inform OCC (if Info received from ATC)	Inform FCM Calculate and provide a new OFP to FCM
Diversion to an unplanned aerodrome	Inform OCC	Calculate and provide a new OFP to FCM
Significant in-flight change of the flight route compared to the route in the flight planning	Inform OCC	Calculate and provide a new OFP to FCM
Significant deviation from the planned fuel consumption	Inform OCC	Calculate and provide a new OFP to FCM
Diversion to an en route alternate (ERA) aerodrome, a destination alternate, or a take-off alternate aerodrome	Inform OCC	Calculate and provide a new OFP to FCM, if required
Position Reporting		
Automated Position Reporting	No action required	Monitor in Netline Ops++ and Flight Explorer. In case of failure of these systems, position reports are available via Outlook/SITA.
Outage of automated position reporting	Provide information to OCC upon request	Refer to FOSI Aircraft Tracking

Cockpit, Operational Ground Staff

2.3.3.3 Means of communication

For the provision of flight monitoring, the following means of communication may be used:

- ACARS
- SATCOM (A340 only)
- HF (Stockholm Radio)

If one or multiple systems are not available the contingency procedure according to OM A Contingency Procedure has to be applied.

Cockpit, Operational Ground Staff

2.3.3.4 Contingency Procedure

In case flight monitoring can no longer be ensured for technical or personnel reasons, either partially or completely, the following contingency procedure shall be applied:

<table>
<tr><th>Failure</th><th>Contingency Procedure</th></tr>
<tr><td>ACARS unavailable</td><td>A320
HF (Stockholm Radio) shall be used
A340
Use SATCOM if available
If SATCOM is not available, HF (Stockholm Radio) shall be used
HF frequencies according to Lido Route Manual Gen Part 1.6.13 (Stockholm Radio) shall be tuned in</td></tr>
<tr><td>ACARS & SATCOM (A340 only) & HF unavailable</td><td rowspan="2">Planning minima
Planning minima according to OM A Alternate planning minima in case of unavailable flight monitoring elements shall be applied.
Contingency fuel
The contingency fuel shall be either the higher of provision (a) or provision (b) below:
• Provision (a), lowest of:
◦ 5% of the planned trip fuel or, in the event of in-flight replanning, 5% of the trip fuel for the remainder of the flight; or
◦ an amount of fuel sufficient for 20-minutes flying time based upon the planned trip fuel consumption
• Provision (b):
◦ an amount to fly for 5 min at holding speed at 1500 ft above the destination aerodrome in standard conditions.</td></tr>
<tr><td>OCC is unable to ensure flight monitoring for personnel or technical reasons (e.g. lack of staff, IT system outage)</td></tr>
</table>

The crews shall be notified by OCC when the contingency procedure is discontinued and flight monitoring can be fully ensured.

If the contingency procedure is applied, an IQSMS report shall be completed by the FCM in case of aircraft system related problems and by the FOO in case of personnel or technical problems in the OCC.

Cockpit, Operational Ground Staff

2.3.4 Common set of flight documents

A common set of flight documents consists of the operational flight plan, NOTAM and Company NOTAM. The common set of flight documents is stored and available through the following means:

- The operational flight plan used by the crew is stored electronically and available via CAE FPM and ACARS. After the flight, it is available in the stored flight documents.
- The NOTAM and Company NOTAM are stored electronically in CAE FPM under each flight and are available for the crew in the eFM.
- Planning WX data is not stored at EDW Ops. WX forecasts, valid at the time of planning, can be requested at the MET Office ZRH Airport if deemed necessary.

Cockpit

2.4 Powers of authority

Cockpit

2.4.1 General

The competent aviation authorities, whilst performing their duties to supervise and inspect flight operations or maintenance activities, have the power to inspect flight or maintenance activities in our company.

Cockpit

2.4.2 Inspections of flight operations/visits to the flight deck

Those members of the aviation authority who can identify themselves as flight inspectors shall be granted access to the flight deck and may remain on the flight deck unless, in the opinion of the CMD, the safety of the aeroplane would thereby be endangered.

Cockpit

2.4.3 Inspection of documentation and records

Those members of the aviation authority who can identify themselves as competent and are tasked with inspections of the flight operational or maintenance activities must be granted access to all documents which are relevant to flight safety and maintenance.

Whenever such an inspection, including visits of the offices, should be requested by a member of the authority, he shall be accompanied by a competent member of the flight operations or the maintenance department.

Unless justified by accident / incident investigations in the event of judicial inquiries the authorities may, however, not enter the company offices without prior arrangements.

The appropriate authority is empowered to direct the preservation, for a 60 days period, of data recorded by flight recorder.

Cockpit

2.5 Accident prevention and flight safety program

Cockpit

2.5.1 Introduction

The Accident Prevention and Flight Safety Program (APP) of Edelweiss Air was introduced on 01st August 2003. This APP, in addition to OM A 2, is a document that defines standards, policies, agreements as well as measures taken to prevent aircraft accidents. It also ensures the steady improvement of Flight Safety.

The Head of Safety Assurance and the Flight Safety Manager are in charge of the APP. They ensure the independent monitoring of flight safety standards on a confidential basis with emphasis on preventing incidents / accidents. He shall always be informed about flight safety relevant decisions made by the Management.

The primary purpose of the program is to achieve and maintain risk awareness of all persons involved in all operational areas, including Management, to accomplish the highest aviation safety standards accepted by the world's civil aviation authorities.

A further purpose of the APP is the evaluation of relevant information relating to occurrences; accidents or incidents and the exchange and or publication of such.

Cockpit

2.5.2 Organisational Structures

Cockpit

2.5.2.1 General

The Head of Safety Assurance (OS) has the responsibility over the safe airline operation (e.g. the Safety Management System and Risk management) meanwhile the Flight Safety Manager (OSF) has the responsibility over the topics of the safe aircraft operation (e.g. Flight data monitoring and cabin safety).

The Head of Safety Assurance is the safety conscience of the organisation and reports directly to the Accountable Manager.

The Head of Safety Assurance and the Flight Safety Manager are trusted by and will be given full support of Management, crews and employees.

The Head of Safety Assurance acts independently of other line management to make recommendations that will be seen by all as having a high level of integrity and impartiality.

The Head of Safety Assurance is the responsible individual and focal point for the development and maintenance of an effective Safety Management System (SMS) according to regulation.

The Flight Safety Manager ensures independent monitoring of Edelweiss's flight safety standard with emphasis on preventing incidents/accidents.

The Head of Safety Assurance and Flight Safety Manager are entitled to contact any person within Edelweiss Air directly or indirectly.

For organisational chart refer to OM A Organisation and Responsibilities

Cockpit

2.5.2.2 Main Tasks Head of Safety Assurance (Safety Manager/SMS Manager)

Refer to OMM Head of Safety Assurance (Safety Manager/ SMS Manager).

Cockpit

2.5.2.3 Main Tasks Flight Safety Manager

Refer to OMM Flight Safety Manager.

Cockpit

2.5.3 Flight Data Monitoring

Cockpit

2.5.3.1 Statement

Flight Data Monitoring (FDM) is the pro-active and non-punitive use of digital flight data from routine operations to improve aviation safety.

FDM is used for detecting exceedances, such as deviations from FCOM limits, standard operating procedures or good airmanship. It is also used for routine measurements, incident investigation, continuing airworthiness and safety and trend analysis.

The purpose of flight data monitoring is to run an andragogical tool for identifying incident precursors and assisting the crews in learning from exceedances of the normal flight operation envelope or from incidents.

Accident and incident data requirements take precedence over the requirements of the FDM program. In these cases, the Flight Data Recorder (FDR) data should be retained as part of the investigation data and may fall outside of the de-identification agreements.

Cockpit

2.5.3.2 Protection of FDM Data

The integrity of the Edelweiss Air FDM program depends entirely upon the protection of the FDM data. Only authorized persons have access to the Event Measurement System (EMS). An agreement with the pilot union (Aeropers) regulates the access in detail, evaluation and use of all data recorded with flight data monitoring equipment on board the aircraft operated by Edelweiss, as well as all data that can be sent or requested via data link (if available). The flight crew may ask for a specific evaluation by contacting Flight Safety directly on a confidential basis (see “ADAS Vereinbarung” between Aeropers and Edelweiss).

Cockpit

2.5.3.3 Data Acquisition

Aircraft Operation Flight Data is obtained from the Flight Data Interface Unit (FDIU) or Flight Data Interface and Management Unit (FDIMU) (depends on aircraft type) and is then routed to the crash-protected Digital Flight Data Recorder (DFDR). A second information stream is generated and stored in the Digital AIDS Recorder (DAR). Each EDW aircraft is equipped with a DAR which allows an “all flights measurement”. The capturing rate and quality of the flight data are regularly verified and checked by OSF.

Cockpit

2.5.3.4 Flight Recorders

The following recorders are in use on board of Edelweiss Air aeroplane:

- Digital Flight Data Recorder (DFDR);
- Cockpit Voice Recorder (CVR);
- Digital AIDS Recorder (DAR)

> Note: Edelweiss aircraft are not equipped with flight recorders which can take images of the flight crew compartment.

Handling of flight recorder and usage of flight recorder data are as follows:

Cockpit

2.5.3.4.1 Digital Flight data recorder (DFDR)

The Flight Crew shall not permit a flight data recorder to be disabled, switched off or erased during flight nor permit recorded data to be erased after flight. In the event of an accident/incident subject to mandatory reporting refer to OM A Handling of flight recorders in case of an accident or incident.

The DFDR recordings shall not be used for purposes other than for the investigation of an accident or an incident which is subject to mandatory reporting, unless such recordings meet any of the following conditions:

- are used by the operator for airworthiness or maintenance purposes only;
- are de-identified;
- are disclosed under secure procedures.

As DFDR data are mainly used by the investigating authority, they are not the source for Flight Data Monitoring (FDM).

Cockpit

2.5.3.4.2 Cockpit voice recorder (CVR)

The CVR shall not be disabled or switched off during flight. Recorded data shall not be manually erased during or after flight. In the event of an accident/incident subject to mandatory reporting refer to Handling of flight recorders in case of an accident or incident.

The CVR and its transcripts shall not be used for purposes other than for the investigation of an accident or an incident which is subject to mandatory reporting, unless such recordings meet any of the following conditions:

- are used by the operator for airworthiness or maintenance purposes only;
- are de-identified;
- are disclosed under secure procedures.

Note: When a CVR recording is inspected for ensuring the CVR serviceability, SWISS Maintenance shall ensure the privacy of the CVR recording and the CVR recording shall not be disclosed or used for other purposes than ensuring the CVR serviceability. FCMs must be informed of the planned data readout prior to their flight duties via means of NOTAM.

Parts of the CVR recording file that contain information with a privacy content shall be deleted to the extent possible, and it shall not be permitted that the detail of information with a privacy content is transcribed.

Edelweiss should retain and when requested, provide to the competent authority:

- information on the use made (or the intended use) of the CVR recording; and
- evidence that the persons concerned consented to the use made (or the intended use) of the CVR recording file.

Cockpit

2.5.3.4.3 Digital AIDS Recorder (DAR)

The DAR is an on-board device which captures and records data on a wide range of in-flight parameters. Data is systematically downloaded from the recording device via a secure wireless system (AID acts as a router) when the aircraft is on ground (connection via GSM) into the SWISS data warehouse, where the data is held securely to protect the sensitive information. Data recorded by the DAR is used for the Flight Data Monitoring (FDM) and for maintenance purposes.

Cockpit

2.5.3.5 Handling of flight recorders in case of an accident or incident

In case of an accident or incident which is subject to mandatory reporting the Flight Crew Member shall deactivate the flight recorders (DFDR and CVR by pulling the respective circuit breakers) immediately after completion of the flight and inform maintenance personnel that the recording of the flight recorders shall be preserved for the investigating authority. In such a case, entries in the aircraft technical log shall be made, e.g., “Remove DFDR for investigation” and “Remove Cockpit Voice Recorder for investigation”. Refer to QRH/QL/”Incident-Accident Guide”.

Cockpit

2.5.3.6 Preservation and production of recordings

Following an accident, a serious incident or an occurrence identified by the investigating authority, Edelweiss Air shall preserve the original recorded data of the flight recorders for a period of 60 days or until otherwise directed by the investigating authority. Edelweiss Air shall, within a reasonable time after being requested by the authority, produce any recording made by a flight recorder which is available or has been preserved.

Cockpit

2.5.3.7 Data Flow

Data Flow should be optimised to minimize the delay between flight and data analysis in order to have a timely recognition of serious incidents that may need prompt action. It also increases the likelihood of the crew recalling the circumstances surrounding the respective event.

Cockpit

2.5.3.8 Analysis Program Specification - Exceedance Detection

Flight Data is transferred to the SWISS data warehouse (LX FDM server) on a secured line. There it is tested and analysed according to Edelweiss Air specifications on the

Event Measurement System (EMS) software, provided by "GE Digital". Trigger events will be continuously enhanced in order to meet aircraft and operator specific requirements.

Flights where exceedances have been detected will be automatically forwarded to the attention of OSF. In general, OSF analyses the flights within 72 hours after the data were obtained from the Fight Data Monitoring system. Notwithstanding that, OSF has also direct access to the EMS server for verification of the delivered data or for further investigations. The EMS as a “state of the art” software, also features the possibility to create statistics and offers trend information.

Cockpit

2.5.3.9 Data Validation - Crew Debriefing

Interpretation and verification of the basic FDM data is critical. Therefore, the SWISS (LX) Flight Operation Quality Assurance Program (FOQA), adapted to the needs of Edelweiss Air, is used to set up a parameter database for data evaluation and validation.

OSF early in their assessment will, if deemed necessary and justified, call upon a crew for a crew briefing on a confidential basis to obtain additional information on the circumstances of the event.

Cockpit

2.5.3.10 Analysis and Follow-up

FDM events exceeding a specific severity level (in general “Warning” and “Alert” events) will be risk rated according to the Lufthansa Group “Event Severity Classification (ESC)” matrix.

De-identified data are used for a semi-annual Risk Assessment during the Safety Review Board (SRB) to provide an overview of emerging trends and hazards. If a trend becomes evident, the Safety Manager can at any time suggest implementing measures to the Accountable Manager or the management units concerned.

Moreover monthly meetings (e.g., “FDM Review Call”) are held which are attended by operation- and training line management staff. The objective is to provide line management with a general overview of the status of flight operations and, where applicable, to give recommendations for specific improvements regarding documentation, Standard Operation Procedures (FCOM), simulator and line training program or additional training of a specific Flight Crew Member (FCM).

Data collected thru the FDM program are confidential. Therefore, data are de-identified which means no information will be given by OSF to the member of the “FDM Review Call” concerning the following parameters:

- Date of flight
- Flight number
- Name of crew

Cockpit

2.5.4 Non-Punitive Safety Reporting System

To achieve the safest possible flight operating standards, it is imperative that Edelweiss has a safety reporting system that permits feedback from personnel regarding hazards and safety-related concerns as well as all incidents and occurrences which may compromise the safe conduct of Edelweiss Air operations.

To this end, employees in all operational areas are responsible for communicating any information that may affect the integrity of flight safety. Edelweiss Management is sensitive to assuring a positive safety culture that generates the trust necessary for a successful reporting system. Specifically, this means an error-tolerant system which is perceived as being fair in treating unintentional errors or mistakes.

Reporting of unpremeditated or inadvertent errors will not result in disciplinary or punitive action against the reporter or other individuals and must be free of any form of reprisal. This policy shall not apply to information received by the company from a source other than the employee or if it can be proven that such errors were the result of illegal activity, gross negligence or wilful misconduct or wilful disregard of regulations or procedures.

The trust of employees in their reporting system is fundamental to the quality, accuracy and substance of data reported. In addition to the formal reporting system, Edelweiss has set up the Confidential Human Factor Report (CHFR) to facilitate the collection of information on actual or potential safety deficiencies. This system is based on confidentiality. Confidentiality is achieved by de-identification, often by not recording any identifying information of the occurrence. The primary aim is to protect the identity of the reporter. Confidentiality exceptions are given in case of grossly negligent behaviour or criminal intentions.

Edelweiss's method of collecting, recording and disseminating information obtained from reports has been developed to protect, to the extent permissible by law, the identity of any employee who provides flight safety information.

Due to data protection, only the 2- or 3-letter codes and not the names of any crew members involved are to be noted in reports.

All information and reports received will be reviewed and analysed to determine whether there is a real safety issue. If corrective or preventive action is necessary, the information will be forwarded to the post holder of the relevant operational area to implement action.

Cockpit

2.5.4.1 Reporting with IQSMS Reporting Module

The IQSMS Reporting Module offers the possibility to write reports in a confidential way which are only visible to OSF. The following list shows the “TYPE OF OCCURRENCE” with their designated addressee:

TYPE OF REPORT	AREA OF OCCUR-RENCE	TYPE OF OCCUR-RENCE	ADDRESSEE
Flight Crew	Flight Operations	FDM Info	OSF
Flight Crew	Flight Operations	FDM Request	OSF
Flight Crew	Crew and Passenger	CHFR	OSF

“FDM Info” shall be used to inform OSF in a proactive way about events which may have an impact on FDM or if the crew feels it is necessary to report for e.g. “*Speed 300kts below FL100 according to ATC*” or “*slight overbank (appr. 35°) during visual approach when turning from base to final*”.

All events which can be validated through the Flight Data Monitoring System (EMS) shall be categorised as “FDM Info”. For example: Long landing, short landing, unstabilised approach etc. OSF will analyse the parameters and decide whether the exceedance is “safety-relevant” and therefore needs to be handled as a “Mandatory Occurrence Report (MOR)” according to EU376 or not. If OSF deems it necessary to change a report from “FDM Info” to “MOR”, OSF will contact the involved crew.

If a significant risk-bearing incident is detected through FDM and no IQSMS report is on file, OSF will urge the involved crew to submit a retrospective “Mandatory Occurrence Report (MOR)”.

“FDM Request” can be used to request a FDM analysis for a specific flight e.g. “*Due to a strange wind change during the take-off rotation, I kindly request the flight data on the initial climb*” or “*No Safetymailer received, please send the data*”.

Besides the reporting with IQSMS, the CHFR can be found on the Intranet. This report in pdf-format can be filled out in a “conventional way” and submitted via email to safety@flyedelweiss.com or via comail to OSF.

> Important: All “TYPE OF OCCURENCES” on IQSMS marked with a hashtag (#) are so-called Mandatory Occurrence Reports (MOR). These kinds of reports are visible to other operational personnel in order to submit the report to the FOCA. In any case, the reporter's name will be removed so no personal data will be submitted to the regulator.

Cockpit

2.5.5 Incident and Accident Investigation

Investigation is a process conducted in order to prevent flight accidents, that includes gathering and analysis of information, conclusions, preparation, finding causes and, if necessary, elaboration on the recommendations aiming at flight safety assurance.

The aim of incident and accident investigation is to prevent such events from recurring in the future and is not to attribute a guilt or responsibility to whomever. In general, incidents and accidents are investigated by the national Air Accidents Investigation Branch (AAIB) (e.g. in Switzerland SUST).

General jurisdiction is regulated according to the Crises and Emergency Response Manual (CERM).

If testing is possible regarding the location and timely notification of an accident or serious incident, Edelweiss ensures that the involved crew members are tested for psychoactive substances following an accident or serious incident.

Cockpit

2.5.5.1 Internal Investigation

Each FDM event and each event which a Mandatory Occurrence Report (MOR) is required will be rated according to the Lufthansa Group ESC (Event Severity Classification) matrix. If the ESC value reaches a significant severity level, an internal investigation is necessary. Nevertheless an internal investigation can always be requested by E, T, O, OT, OC and OS regardless of the ESC value. OS leads the internal investigation according to the investigation process.

Cockpit

2.5.6 Follow up of Flight Safety Performance

Based on the results of the flight data monitoring program, the risk assessment reports and the reports of occurrences in other operational areas, the Head of Safety Assurance sets and publishes biannual goals as a means of establishing an indication of flight safety performance and generating the safety awareness of all appropriate staff.

Cockpit

2.5.7 Education and Publication

Dissemination of flight safety information is a fundamental principle of aviation safety to help reduce accident rates or prevent such events from recurring in the future. Therefore, OSF promulgates safety-related information to operational staff members.

OSF publishes events, which occurred within operations and for which the approval of the Flight Crew is given, in the Flight Safety Bulletin (FSB) to all pilots on a regularly basis. The FSB also contains an overview of the events triggered and investigated by OSF.

In addition, the Cabin Safety Officer publishes on a regular basis a “Cabin Safety Bulletin” (CSB) and an “Occurrence Review Cabin” for Flight- and Cabin Crew.

3 Management System

3.1 Safety Policy

Refer to OMM Safety Policy.

3.2 Safety Management

Refer to OMM Safety Management.

3.3 Compliance Monitoring

Refer to OMM Compliance Management.

3.4 Duties and Responsibilities

Refer to OMM Organisation Structure, Duties, Respons. and Accountabilities.

3.5 Key Management System Processes

Refer to Process Manual PM.

4 Crew Composition

Cabin, Cockpit, Operational Ground Staff

4.1 Crew composition

Cabin, Cockpit, Operational Ground Staff

4.1.1 General

Cabin, Cockpit, Operational Ground Staff

EDW uses Airbus A320 and A340 aircraft for operations according the valid AOC.

4.1.2 Minimum Crew Requirements

Cockpit, Operational Ground Staff

4.1.2.1 Minimum Flight Crew

Cockpit, Operational Ground Staff

4.1.2.1.1 General

Cockpit, Operational Ground Staff

The standard flight crew is equal to the minimum flight crew. Under normal circumstances the CMD, copilot and third crew member will occupy only the seats to which they are qualified and assigned. For the CMD this is the left hand seat for the copilot the right hand seat. For augmented crew refer to OM A Augmented flight crew below.

4.1.2.1.2 Operational Multi-Pilot Limitation (OML)

Cockpit, Operational Ground Staff

By monitoring with the Enzian/MINT system, EDW will ensure that the holder of a pilot license who has attained the age of 65 years will not act as a pilot of an aircraft engaged in EDW commercial air transport. (Ref: FCL.065)

By monitoring with the Enzian/MINT system, EDW will ensure that pilots with an OML on their medical certificate are only assigned to flight duty when the other pilot is fully qualified on the relevant type of aircraft, is not subject to an OML and has not attained the age of 60 years (Ref: AMC1 ORO.FC.100(c).

For augmented crew the following criteria apply:

- combination of OML / OML / 3rd FCM - not allowed
- combination of OML / > 60 years of age / 3rd FCM - not allowed
- combination of >60 years of age / > 60 years of age / 3rd FMC - allowed

CMD, Operational Ground Staff

4.1.2.1.3 Commander

All flights shall be planned and carried out with a qualified CMD.

FO, Operational Ground Staff

4.1.2.1.4 Copilot

All flights shall be planned and carried out with a minimum of 1 qualified copilot. With prior approval by the Head of Flight Operations, the copilot may be replaced by a right hand seat qualified CMD. In order to be considered qualified as copilot; the following requirements must be met:

- Commercial flights:
  - Any copilot with a current license on the aeroplane type concerned and qualified for route operation.
  - Type Rating Instructors, Line Check Pilots and CMD (if right hand seat qualified) may occupy the copilot's seat during any stage of the flight.
- Non Revenue Flights:
  - Refer to OM A Non-revenue Flights

Cabin, Cockpit, Operational Ground Staff

4.1.3 Cabin Crew Composition

Cabin, Cockpit, Operational Ground Staff

4.1.3.1 General

Cabin crew member means any crew member, other than a flight crew member, who performs, in the interest of passenger safety, duties in the cabin of an aeroplane assigned to him/her by the operator or the commander. At least one of the assigned cabin crew members shall have a minimum experience of 3 months.

Cabin crew members shall wear a uniform to make them clearly identifiable to passengers.

Other personnel who undertake tasks in the cabin shall not:

- Wear a uniform which might identify them to passengers as cabin crew members.
- Occupy required cabin crew assigned stations.
- Carry out any safety/security tasks.
- Impede operating cabin crew members in their duties.

The standard cabin crew will be assigned by Edelweiss crew planning according to these rules and recommendations issued by the Head of Flight Operations and Head of Cabin Crew Management.

Cabin, Cockpit, Operational Ground Staff

4.1.3.2 Standard operation

Flights with passengers shall be planned and carried out with the following number of cabin crew, who are emergency qualified for the respective type of aeroplane irrespective of other personnel assigned to perform a special duty on the flight:

Aeroplane type	Number of cabin crew
A320	4
A340	8

For flights ex ZRH this corresponds to the minimum crew.

Cabin, Cockpit, Operational Ground Staff

4.1.3.3 Cabin crew irregularities away from home base

In case of cabin crew irregularities away from home base, e.g. sudden degradation of medical fitness or unavailability of a cabin crew member during layover, the following minimum number of cabin crew are authorised:

Aeroplane type	Number of cabin crew	Seating restrictions
A320	3	Max. 150 PAX above 2 years of age[1]
A340 (more than 300 seats installed)	7	None

A special briefing by the CMD to allocate emergency duties is compulsory (refer to CSPM Assigned emergency stations) and a report has to be filed via IQSMS.

[1] People on jump-seats are not counted as they must comply with the conditions for using the jump-seats acc. to CSPM Conditions to use the jump-seats.

Cabin, Cockpit, Operational Ground Staff

4.1.3.4 Non revenue flights

Refer to OM A Non-revenue Flights

Cabin, Cockpit, Operational Ground Staff

4.1.3.5 Special operations

Where there are crew members, other than cabin crew members, who carry out their duties in the passenger compartment of an aeroplane, these:

- are not confused by the passengers with the cabin crew members (e.g. no wearing of uniform);
- do not occupy required cabin crew assigned stations;
- do not impede the cabin crew members in their duties;
- do not perform any cabin crew related tasks.

Cabin, Cockpit, Operational Ground Staff

4.1.4 Supernumerary Crew Members

A supernumerary crew member is a crew member that is not part of the flight or cabin crew. He is assigned to the flight normally by Edelweiss Air (or in exceptional cases by a state authority as FOCA) to fulfil certain duties on board the aircraft. Most common examples for supernumerary crew members are:

- Flying station engineer FSE (assigned by T);
- Loadmaster (assigned by OG);
- Inspector (assigned by FOCA);
- Tiger (assigned by FEDPOL in coordination with OSY).

Depending on their function supernumerary crew members might assist the working crew but must never interfere nor impede the flight or cabin crew in performing their duties.

4.1.5 Experience, Recency and Qualification of the Crew Members

For experience, recency and qualification of the crew members refer to OM A Qualification Requirements

Cabin, Cockpit, Operational Ground Staff

4.1.6 Designation of the Senior Cabin Crew Member (S/C)

Refer to CSPM Senior cabin crew member (S/C).

Cockpit, Operational Ground Staff

4.2 Designation of the commander

Cockpit, Operational Ground Staff

4.2.1 General

For each flight, EDW will designate one pilot in the crew to be the CMD. In the crew composition of a flight the CMD is listed in the first place as “PIC”. If for any reason, the CMD of the flight is not already designated in the crew roster, it is assumed that the pilot with the higher experience is acting as CMD.

The handling of an aeroplane or conduct of flight may be delegated by the CMD to another suitable qualified pilot who he deems competent and fit for duty.

The designated CMD of a flight may hand over the command of a specific leg to another qualified CMD (e.g. on augmented flights). Under normal circumstances such a change of command should only be performed during a ground stop between two sectors. Every change of command must be reported to crew control in order to update the crew composition.

The CMD is the flight crew member holding overall responsibility for the safety of the aeroplane, its crew, its passengers and its load.

On training flights with a commander during line training until after the final line check, the instructor is the CMD of the flight. See as well OM A Qualification Requirements.

EDW will nominate a pilot as CMD only if he meets the minimum qualification and if he fulfils the requirements laid down in OM A Qualification Requirements.

Cockpit

4.2.2 Relief of a flight crew member in flight

A flight crew member may be relieved in flight of his duties at the controls by another suitably qualified flight crew member.

Cockpit

4.2.3 Relief of the commander

The CMD may be relieved by:

- Another qualified CMD; or
- For operations only above FL200, a pilot qualified as detailed below.

Cockpit

4.2.4 Minimum requirements for a pilot relieving the CMD

To operate in the role of a CMD in cruise only and not below FL200. The CMD may be relieved by a copilot with left hand seat training according OM D.

The following requirements must be fulfilled:

- Valid Airline Transport Pilot Licence;
- Conversion training and checking including type rating training as prescribed in OM A Qualification Requirements
- All recurrent training and checking as prescribed in OM A Qualification Requirements
- Recent experience as prescribed in OM A Qualification Requirements
- Route competence qualification as prescribed in OM A Qualification Requirements

Cockpit

4.2.5 Relief of the copilot

Refer to OM A Relief of the Copilot

Cockpit

4.2.6 Minimum requirements for cruise relief copilot

Refer to OM A Training programme for CRP

Cockpit

4.2.7 Augmented flight crew

The policy of Edelweiss Air is to augment the flight crew by a qualified CMD or CRP. The CMD or CRP will alternatively relieve both flight crew members on duty.

The function of a CMD to carry out the role as copilot on the right hand seat is restricted to flights in cruise only above FL 200. A briefing for the CMD occupying the right hand seat during cruise has to be established before each flight including decompression, oxygen masks and emergency descent.

Excepted from this rule are only CMD with right hand seat qualifications (e.g. TRI).

Cockpit

4.2.7.1 Calculation of function time for augmented crew

The calculation of function time for all flight crew members is as follows:

- for augmentation by 1 pilot: total flight time multiplied by 2⁄3
- for augmentation by 2 pilots: total flight time multiplied by 1⁄2

Cockpit

4.3 Flight crew incapacitation

Cockpit

4.3.1 Succession of command

If the CMD (in case of enlarged flights: all CMD) should become incapable of holding command, the F/O assumes command. This succession continues, in emergency, throughout the flight crew. The responsibility for assuming command passes normally to the next senior pilot.

Cockpit

4.3.2 Procedure

If the CMD is taken ill or otherwise indisposed and cannot continue his command of the flight, the flight will not depart from the aerodrome where it has landed or, if occurring during flight, from the next aerodrome at which it lands, unless another pilot who has been checked out by Edelweiss Air as CMD of the aeroplane type involved is included in the crew.

- A flight may only be continued at CMD's decision if there is the minimum flight crew complement on board and available for duty.
- If the flight cannot be continued, OCC must be notified immediately. They shall arrange for another flight crew member to be sent so the flight may be continued with the minimum delay possible.

Cabin, Cockpit, Operational Ground Staff

4.4 Operation on more than one type

Operational Ground Staff

4.4.1 General

EDW considers A320 and A340 as different types.

Cockpit, Operational Ground Staff

4.4.2 Flight crew scheduling

Operation on more than one type during a specific flight duty time shall be avoided whenever possible.

If this cannot be avoided, adequate time for preparation has to be provided before flying on another type.

Cabin, Cockpit, Operational Ground Staff

4.4.3 Cabin crew scheduling

All duties within a specific flight duty time should basically be performed on the same type of aeroplane. Duties on more than one type of aeroplane within the same flight duty time may only be performed as a result of operational irregularities occurring on the day of operation.

5 Qualification Requirements

Cabin, Cockpit, Operational Ground Staff

Cockpit

5.1 General

Cockpit

5.1.1 Contents

Edelweiss Air is holding an AOC with ATO Approval. All training and checking programmes for operations personnel are to be found in the OM D Training Syllabi and Checking Programmes.

This chapter contains the description of required licenses, ratings, qualifications and competency as well as required training, checking and recency for operations personnel to conduct their duties.

For the purpose of training requirements the term flight hours or flight time in paragraphs OM A Policy for admission (CMD) and OM A Training programme for CRP of this chapter shall be seen as synonymous with the EASA wording total flight time. Flight hours in gliders, ultra-lights, SEP below 5700 kg, helicopters with piston engines and hot air balloons are not considered for admission requirements regarding minimum flight experience.

Cockpit

5.1.2 Prerequisites for flight crew

All flight crew members accepted for employment by EDW must:

- hold valid Part-FCL licenses.
- hold or have held a valid multi-engine IR.
- hold valid class 1 medical certificates.
- demonstrate a level of proficiency in the English language to ensure understanding of all documentation and to ensure effective communication during the performance of duties.
- After completion of training have the ability to conduct safe, proficient and comfortable flight operations within the specified frame of operations and to reach the specified standards of performance.
- provide a confirmation of an advanced UPRT Course. This applies to copilots only.
- All flight crew members must be tested for psychoactive substances before employment and must undergo a psychological assessment before commencing line flying.

Cockpit

5.1.3 Standards of performance

The standards of performance define the required professional quality. They consist of two major parts:

- Personality:
  - Overall standard;
  - Stability and balance of personality;
  - reliability;
  - willingness for discipline;
  - development capability;
  - sociability;
  - ability to work in a team;
  - loyalty;
  - ability to differentiate;
  - leadership;
  - physical and mental fitness.
- Performance:
  - The ability of each flight crew member to fulfil the requirements as listed above is subject to regular assessments and tests. Training and qualification is carried out by the respective EDW personnel.

Cockpit

5.1.4 Qualification and grading for flight crew

Cockpit

5.1.4.1 Policy

Qualifications shall be established via the respective MINT qualification-form by the responsible instructor and shall be treated confidentially.

Qualifications serve the following purposes:

- To give the flight crew member a feedback on his general behavior, attitude to work and leadership.
- To show the flight crew member the quality of his work in relation to the required standard, with special emphasis on points that should be improved.

- To record the performance of a flight crew member.

Since flight crew members must be in good physical and mental condition for flight duty, no subsequent claim of indisposition as an excuse for a course / check grading can be accepted.

Issued qualifications may be commented by the flight crew member and are considered as accepted by the flight crew member if returned to the training department without any comments.

In general, a qualification consists of two parts:

- A competency-grading including critical observable behaviors.
- A wording describing demeanor, attitude, personal behavior and overall impression.

All qualifications are treated according to the EDW-low grade policy. Refer to OM D Low grade policy for mixed EBT

Recurrent Training is conducted as Mixed EBT, non-Recurrent Training is not under the scope of Mixed EBT.

Refer to OM D EDW qualification system.

The low grade policy (OM D Low grade policy for mixed EBT) and the chapter “Procedure in case of failure” (OM D Procedures in case of failure) define precisely whether the requirements for passing a test, a course, a check or a renewal of licence as required by Edelweiss and by FOCA are fulfilled.

Training Records

For all non-recurrent training (e.g. Type rating course, renewal training, additional training, LIFUS), the training progress shall be recorded via the respective MINT form (if applicable, also on the printed training record).

If all respective training and checking standards have been fulfilled, the trainee will be proposed for promotion to the respective flight crew member function.

Cockpit

5.1.4.2 Definition of grading

The overall gradings are defined as follows:

- Passed (EBT: competent)
  The required company standard or EASA requirements are achieved regarding the defined pilot competencies, overall performance, and behaviour. Errors and weak points, which, if accumulated, could lead to serious problems, have to be recorded and treated according to the respective policy. A marginal performance is acceptable only temporarily.

- Failed (EBT: not competent)
  The required standard is not reached; the overall result is not acceptable.

Cockpit

5.1.4.3 Training and checking Events: Consequences in case of failure

Whenever marginal or unsatisfactory performance is recorded, the actions according to the referenced tables will be taken:

- OM D Operator Conversion Course (OCC)
- OM D Type Conversion Course
- OM D Command Course
- OM D CRP Course
- OM D Recurrent Checking

Important notes applicable for all courses and education:

- After all courses and educations, the minimum standards according to OM A/OM D have to be met.
- A special Qualification Meeting (SQM) may be called up during every stage of a course and is mandatory in all failure cases as stated in the referenced tables above.
- There is no general right of admission to an LPC/OPC/Skilltest/ linecheck or any other kind of test.
- If circumstances indicate that there is a realistic chance for success, one repetition of a course will be granted.

Cockpit

5.1.4.4 Waiting times

After the following events, the waiting time before participating to a CMD-, CRP course or a CCQC (type rating course) is 12 calendar months. During this period, the flight crew member should be supported in developing the lacking competences according OM D Training Philosophy:

1. Prof Check failed
2. Skill Test failed
3. EBT Module failed according to EBT Low Grade Policy
4. Line Check failed according to EBT Low Grade Policy
5. CRP Check failed
6. Course failed (OCC, Type Rating, CRP, CMD)
7. Grading «1» (in any competency and in any event/session/module).
8. Grading «2» within 12 months after a grading «1» or «2» (in any competency and in any event/session/module).

Cockpit

5.1.4.5 Annual qualification policy

Personal qualifications for all flight crew members shall be recorded for every calendar year and compiled in an annual qualification. It is the responsibility of the Head of Flight Operations to establish the annual “Mitarbeitergespräch” (MAG) until the end of the following March.

The annual qualification of pilots with marginal performance shall be discussed by the Head of Flight Operations and the Head of Training.

The annual qualification shall take into consideration:

- the qualifications of checks, conversion course(s), command course etc.;
- the impression of the flight crew member's work on routine flights;
- special incidents during the year.

A flight crew member who has taken notice of his annual qualification shall confirm this by signing the qualification form.

Cockpit

5.1.5 Proficiency checks

Cockpit

5.1.5.1 General

License and operation proficiency checks serve a dual purpose:

- to cover the requirements (including the revalidation of low visibility operations) established by the FOCA.
- to verify that the professional skill does not fall below a required level.

Cockpit

5.1.5.2 Programme

Refer to OM D Training Syllabi and Checking Programmes

Cockpit

5.1.5.3 Validity

The period of validity of a proficiency check shall be as following:

- Operator Proficiency Check (OPC): 6 months;

- Licence Proficiency Check (LPC): 12 months.

If issued within the final 3 months of validity of a previous proficiency check, the period of validity shall be extended from the date of issue until 6 calendar months from the expiry date of that previous proficiency check.

Cockpit

5.1.6 Line Checks

Cockpit

5.1.6.1 General

EDW line checks serve the purpose to evaluate the performance of flight crew members concerning their line operation.

Cockpit

5.1.6.2 Programme

Refer to OM D Training Syllabi and Checking Programmes.

Cockpit

5.1.6.3 Validity

The period of validity of a line check shall be 12 months. If issued within the final 3 calendar months of validity of previous line check, the period of validity shall be extended from the date of issue until 12 calendar months from the expiry date of that previous line check.

Cockpit

5.1.7 Recurrent Ground Course (RGC)

Cockpit

5.1.7.1 General

Recurrent RGC training serves the purpose to train and check on the location and use of all emergency and safety equipment carried on board.

Cockpit

5.1.7.2 Programme

Refer to OM D Training Syllabi and Checking Programmes.

Cockpit

5.1.7.3 Validity

The period of validity of an RGC training shall be 12 months. If issued within the final 3 calendar months of validity of a previous RGC check, the period of validity shall be extended from the date of issue until 12 calendar months from the expiry date of that previous RGC check.

The yearly RGC program must be fulfilled by each flight crew member.

Cockpit

5.1.8 Theoretical knowledge instruction

Cockpit

5.1.8.1 General

The entire content of theoretical knowledge instruction is covered by different means, like;

- Bulletins
- Self studies
- Simulator Briefings
- Classroom Instruction (preferably on the same day as RGC and CRM Training)

Cockpit

5.1.8.2 Programme

Theoretical knowledge instruction shall contain the following:

- Aeroplane systems;
- Technical and operational procedures and requirements including ground de-/anti-icing and pilots incapacitation;
- accident/incident and occurrence review.

Cockpit

5.1.9 CRM Training

Cockpit

5.1.9.1 General

Crew Resource Management (CRM) is the effective utilisation of all available resources (e.g. crew members, aeroplane systems, supporting facilities and persons) to achieve safe and efficient operation.

The objective of CRM is to enhance the communication and management skills of the flight crew member concerned. The emphasis is placed on the non-technical aspects of flight crew performance.

Cockpit

5.1.9.2 Programme

Refer to OM D Training Syllabi and Checking Programmes.

Cockpit

5.1.9.3 Validity

All major modular CRM topics have to be trained within a period not exceeding 3 years.

Cockpit

5.1.10 Training for transportation of Dangerous Goods (DG)

Cockpit

5.1.10.1 General

The objective of the training requirement is to ensure that the personnel concerned is able to accept and handle Dangerous Goods correctly.

Training must be to a depth sufficient to ensure that an awareness is gained of the hazards associated with Dangerous Goods and how they should be carried on an aeroplane.

Cockpit

5.1.10.2 Programme

Refer to OM D Training for Transportation of DG.

Initial Training takes place in the EDW classroom as part of the respective course.

Recurrent Training takes place during the RGC-day at SAT.

Cockpit

5.1.10.3 Validity

The period of validity of DG training shall be 24 months.

If issued within the final 3 calendar months of validity of a previous DG training, the period of validity shall be extended from the date of issue until 24 calendar months from the expiry date of that previous DG validity.

Cockpit

5.2 Flight Crew

CMD

5.2.1 Commander

CMD

5.2.1.1 Standard of performance

The CMD must be able to:

- satisfy all requirements of the general standard of performance, under the stress of assuming complete responsibility for the flight;
- be head of the whole crew and therefore manage the whole flight;
- make appropriate decisions and enforce them;
- represent the company adequately towards passengers and, where necessary, authorities; thereby displaying a high level of a customer oriented attitude;
- behave towards our customers in a friendly, open and professional manner;
- plan a flight according to the respective regulations;
- fly the aeroplane safely during all phases of normal and abnormal situations according to relevant regulations and with due consideration of passenger comfort, punctuality and economy;
- handle the specific duties, which may arise during partial augmentation with an additional captain;
- reliably fulfil the duties of the pilot non-flying when the copilot is flying the aeroplane;
- monitor the activities of the copilot according to the “closed loop” principle and draw his attention to possible mistakes;
- terminate a flight in case of copilot's incapacitation;
- know and apply all procedures and regulations expediently and economically according to the relevant documents for normal and abnormal operations as well as in case of an emergency;

- be aware of the high level of exposure towards the passengers and therefore display the highest possible degree of customer oriented behaviour and knowledge of himself, and promote this attitude in the entire crew;
- give the crew members the fullest benefit of his experience;
- guide, train and qualify the copilot undergoing training;
- understand the duties of the cabin crew members to an extent enabling him to make the respective decisions;
- make announcements - routine and non-routine - in German and English and be able to make routine and basic non-routine announcements in French.
- be fully conversant with the operation of all aeroplane systems under all conditions defined in the technical manuals;
- know the critical limits of the aeroplane and its systems;
- perfom additional DG tasks as described in OM D Flight Crew.

In cruise only and not below FL 200 a qualified CMD may occupy the RH flight deck seat if the flight is conducted with enlarged crew.

CMD

5.2.1.2 Policy for admission

In order to be eligible for initial command course, the candidate must have:

- Satisfactory personal qualifications.
- Minimum experience of 4500 flight hours at the beginning of the command course. A maximum of 800 hours can be credited in combination of simulator as instructor and office duty (one office day or simulator as instructor counts as 4 flight hours). Office hours may be credited if there is a relation of these duties with flight operations.
- At least 1000 flight hours in EDW operation
- At least 30 years of age
- Experience in long haul operations.
- EASA Part-FCL Licence: ATPL(A)

If a candidate has had excessive periods of absence from line flying, the case will be given special consideration by the Head of Flight Operations.

For waiting times after weak performance refer to OM A Waiting times.

CMD

5.2.1.3 Conversion to long haul A/C

To be eligible for the conversion to a long-haul A/C as a CMD, the candidate must fulfil the following requirements

Minimum requirements:

- Hold satisfactory personal qualifications.
- Hold a valid type rating on the previously flown Airbus type.
- Have a minimum total experience as CMD (500 flying hours) on the previously flown Airbus type.
- Pass an evaluation of qualifications by OC/OT.
- If an operation on more than one type shall be conducted, the requirements of OM A Operation on more than one type have to be fulfilled.

Additional requirements:

- Minimum total flight experience as a commander of 24 months after passing the final line check. Exemptions may be stipulated by the Head of Flight Operations.

For direct entry CMD (according to OM A Direct entry CMD) with inadequate or missing long-range experience, the additional requirement counts after the final line check at EDW. Further training requirements apply according to OM D LIFUS for CCQC A320 / A340.

If a candidate has had excessive periods of absence from line flying, the case will be given special consideration by the Head of Flight Operations.

For waiting times after weak performance, refer to OM A Waiting times.

CMD

5.2.1.4 Direct entry CMD

In order to be eligible as direct-entry CMD, the candidate must have:

- An ATPL (Part-FCL licence).
- At least 5000 flight hours preferably including experience in long-range operations[1].
- At least 1000 flight hours as CMD in line flying turbojet aircraft of similar size and complexity as EDW aircraft.
- Passed a command training programme comparable[2] to the EDW initial command course.

[1] For missing or inadequate long-range experience refer to OM A Conversion to long-haul A/C.

[2] The comparability is evaluated during the assessment process by means of a history check and/or adapted assessment steps.

CMD

5.2.1.5 Evaluation of qualification

Whenever a need for an initial command course (A320) arises, the qualifications of all pilots concerned shall be evaluated.

To develop a thorough and correct picture of the candidates, this evaluation of qualifications shall be performed by a meeting consisting of the Head of Flight Operations (chairman), the Head of Training, the Fleet Chief and the Chief Flight Instructor(s).

CMD

5.2.1.6 Decision for admission

The final decision for admission to command and conversion courses is up to the Head of Flight Operations.

Only pilots whose general qualifications are without problems in terms of performance, qualification or behaviour can be admitted for a command course, a CRP course or for a conversion course to A320/A340.

Rejected pilots will receive an oral and written notification, stating the reasons for rejection and the possibility for further consideration for command course.

CMD

5.2.1.7 Syllabus

Refer to OM D Training Syllabi and Checking Programmes.

CMD

5.2.1.8 Responsibility for command during training and checking

- The commander under training or performing a line check has a command licence. He is responsible for piloting the aeroplane on the ground and in the air.
- The TC/TRI is responsible for all operational aspects of the flight.

Cockpit

5.2.2 Cruise Relief Pilot

Cockpit

5.2.2.1 Policy for admission

The minimum requirements for a Cruise Relief Pilot (CRP) are the following:

- Satisfactory personal qualifications; and
- EASA Part-FCL Licence: ATPL(A);and
- Pass an evaluation of qualification by OC/OT; and
- Minimum flight experience of either a, b or c:

	Total Experience[1]	Long Haul Experience	Additional Requirements
a	3000 flight hours	800 flight hours wide body long haul	1000 flight hours on A3XX
b	4000 flight hours	400 flight hours wide body long haul	3000 flight hours on A3XX
c	5000 flight hours	not required	2000 flight hours on A3XX as PIC

1) A maximum of 300 hours can be credited to the total experience from simulator as instructor or office duty (one office day or simulator as instructor counts as 4 flight hours). Office hours may be credited if there is a relation of these duties with flight operations.

If the minimum flight experience (including ATPL) is fulfilled at completion of a CCQC or OCC, the evaluation of qualification by OC/OT will take place earliest after the next subsequent OPC/LPC.

For waiting times after weak performance, refer to OM A Waiting times.

Cockpit

5.2.2.2 Relief of the CMD

The CMD may delegate conduct of the flight above FL 200 to:

- an EDW CMD qualified on type.
- a CRP qualified on type.

A cruise relief pilot (CRP) is a pilot relieving the CMD during operation with an augmented flight crew.

Copilots having passed the respective training for CRP as outlined in OM D CRP (Cruise Relief Pilot) Training may operate as CRP in the role of a PIC during operations above FL 200.

The CRP shall call the CMD in an appropriate moment when doubts arise, that the mission cannot be continued safely or when a decision is pending to divert to an intermediate alternate.

Cockpit

5.2.2.3 Relief of the Copilot

The copilot may be relieved by

- a copilot qualified on the type; or
- a CMD qualified on the type and holding the right hand seat qualification.
- a CMD qualified on the type (above FL 200 only).

Cockpit

5.2.2.4 Training programme for CRP

CRP training serves the purpose to qualify the pilot for specific duties and responsibilities in case of irregularities or malfunctions while acting as PIC in the left-hand seat during augmentation until the resting CMD is again present to take over on the flight deck.

The training programme is specified in OM D CRP (Cruise Relief Pilot) Training

A pilot relieving the CMD as PIC shall demonstrate, concurrent with the OPC, drills and procedures which would normally be the relieved pilots' responsibility.

Where the differences between left and right hand seats are not significant (e.g. because of use of autopilot) the practice may be conducted in either seat.

CRP training is repetitive and integrated in the recurrent training.

Cockpit

5.2.3 Copilot

Cockpit

5.2.3.1 Standard of performance

The copilot must be able to:

- be fully conversant with the operation of all aeroplane systems under all conditions defined in the technical manuals;
- know the critical limits of the aeroplane and its systems;
- support the CMD as a team member in all matters and act as his deputy whenever necessary;
- plan a flight according to the respective regulations;
- fly the aeroplane safely within the operation envelope during all phases of normal operations, according to relevant regulations and with due consideration of passenger comfort, punctuality and economy;

- fly and land the aeroplane safely under aggravated conditions or with technical malfunctions, e.g. execute an 1-engine-out 3D approach (2D approach if trained and qualified accordingly) and missed approach;
- reliably fulfil the duties of the PM;
- monitor the PiC activities according to the "closed loop" principle and draw his attention to possible mistakes;
- terminate a flight in case of the CMD's incapacitation;
- intervene and take over control in case of uninformed excess of defined limits by commander;
- know the application of all documentation required pre-flight and in-flight;
- apply all procedures and regulations according to the relevant documents for normal and abnormal operations;
- co-operate with all crew members;
- perform the administrative duties assigned to him reliably;
- understand the duties of the cabin crew members;
- develop skill and knowledge for a customer oriented attitude;
- after promotion to senior first officer make routine announcements in German, French and English;
- perfom additional DG tasks as described in OM D Flight Crew.

Cockpit

5.2.3.2 Policy for admission

In order to be eligible for admission to an operator conversion course onto one of the aircraft types operated by EDW, the candidate must hold:

- EASA Part-FCL License: CPL(A) or MPL(A) or ATPL(A)
- Hold or have held a valid multi-engine IR
- Certificate of MCC course
- Certificate of Advanced UPRT course
- ATPL Theory ("frozen ATPL")
- An applicant who is a graduate from an ATP(A) integrated course: at least 150 flying hours.
- Other applicants: at least 200 flying hours.

Cockpit

5.2.3.3 Conversion to long haul A/C

In order to be eligible for a conversion to long-haul A/C, the candidate must fulfil the following requirements:

Minimum requirements:

- Satisfactory personal qualifications;
- Hold a valid type rating on the previously flown Airbus type;
- Have a minimum total experience as copilot (500 flying hours) on the previously flown Airbus type
- Pass an evaluation of qualifications by OC/OT;
- If an operation on more than one type will be conducted, the requirements of (refer to OM A Operation on more than one type) have to be fulfilled.

Additional requirements:

- minimum total flight experience of 18 months after the final linecheck as a first officer. Exemptions may be stipulated by the Head of Flight Operations.

For waiting times after weak performance, refer to OM A Waiting times.

Cockpit

5.2.3.4 Syllabus

Refer to OM D Training Syllabi and Checking Programmes.

Cockpit

5.2.4 Pilot under supervision

A pilot under supervision holds a current license on the respective aircraft type, but the validity of the line check has either expired or the pilot is conducting the LIFUS-phase after his type conversion course.

Such a pilot has to be supervised by a TC (or a TRI, see OM D LIFUS) until the line check has been conducted. No line operations in standard crew composition are permitted.

Cockpit

5.2.5 System panel operator

Not applicable for EDW.

Cockpit

5.2.6 Operation on more than one type

Before a flight crew member exercises the privileges of 2 license endorsement he must have completed following requirements:

- He must have completed two consecutive LPC and must have 500 hours in the relevant crew position in commercial air transportation with the same operator.
- Before commencing training for and operation of another type or variant, flight crew members must have completed 3 month and 150 hours flying on the base aeroplane which must include at least 1 Line Proficiency Check.
- In the case of a pilot having experience with an operator and exercising the privileges of 2 licence endorsements, and then being promoted to command with the same operator on one of those types, the required minimum experience as commander is 6 months and 300 hours, and the pilot must have completed 2 consecutive operator proficiency checks before again being eligible to exercise 2 licence endorsements.
- A conversion course on the applicable type according OM D Training Syllabi and Checking Programmes.
- After completion of the initial line check on the new type, 50 hours flying or 20 sectors must be achieved solely on aeroplanes of the new type rating.

Cockpit

5.2.7 Recent experience requirements

Cockpit

5.2.7.1 General requirements

A pilot shall not operate an aircraft unless he fulfills the recent experience requirements.

If a pilot does not comply with the recent experience requirements, he shall complete a training flight with a TRI or TRE qualified to instruct for the respective aircraft type. The training flight shall be performed in the aircraft or an FFS of the aircraft type to be used and shall include at least the requirements described in OM A Recent experience requirements for single fleet flying (SFF) pilots, OM A Recent experience requirements for mixed fleet flying (MFF) pilots or OM A Recent experience requirements for cruise-relief pilots CRP before he can exercise his privileges. After prolonged absence from line flying, additional requirements according to OM D Requalification (Renewal) Training apply.

A takeoff, approach and landing as PF will be counted towards the recent experience requirements.

Takeoffs and landings must be performed in multi-pilot operations.

A takeoff, approach and landing as PM or on an observer seat may not be counted towards the recent experience requirements.

EDW planning administration keeps a record of flight legs flown by the flight crew members. However, the individual flight crew member is responsible for the actual fulfilment of the recency requirements and for alerting the planning staff and Crew Control on time if he foresees that this requirement would not be met.

Cockpit

5.2.7.2 Recent experience requirements for single fleet flying (SFF) pilots

A pilot operating only one aircraft type (SFF) shall not operate an aircraft as PIC or co-pilot unless he has carried out:

- at least 3 takeoffs, approaches and landings as pilot flying in an aircraft of the same type or an FFS representing that type in the preceding 90 days.

The 90-day period may be extended up to a maximum of 120 days, as long as the pilot undertakes line flying under the supervision of a type rating instructor or examiner.

Cockpit

5.2.7.3 Recent experience requirements for mixed fleet flying (MFF) pilots

A pilot operating two aircraft types (MFF A320 and A340) shall not operate an aircraft as PIC or co-pilot unless he has carried out:

- at least 3 takeoffs, approaches and landings as pilot flying in either A320 or A340 in the preceding 90 days; and
- 1 takeoff and landing as PF in each type every 45 days.

This may be done in an aircraft or in an FFS representing that type.

Cockpit

5.2.7.4 Recent experience requirements for cruise-relief pilots CRP

For cruise-relief pilots, OM A Recent experience requirements for single fleet flying (SFF) pilots or OM A Recent experience requirements for mixed fleet flying (MFF) pilots is also applicable.

Under special circumstances and with approval by the Head of Flight Operations, a pilot may operate an aircraft as CRP if he has carried out:

- at least 3 sectors as a cruise relief pilot on the same type of aircraft in the preceding 90 days; or
- recency and refresher flying skill training in an FFS in the preceding 90 days. This refresher training may be combined with the Edelweiss CRP refresher training prescribed in OM D CRP (Cruise Relief Pilot) Training.

Cockpit

5.2.8 Cat II/III Recency Requirements

The EDW LVO Recurrent Training and Checking Programmes as described in OM D Low Visibility Operations Training and Checking will ensure that the legal recency requirements for LVO are satisfied.

Cockpit

5.2.9 Crewing of inexperienced Flight Crew Members

EDW considers that a flight crew member is inexperienced, following completion of a Type Rating or command course, and the associated line flying under supervision, until he has achieved on the Type either:

a. 100 flying hours and flown 10 sectors within a consolidation period of 120 consecutive days; or
b. 150 flying hours and flown 20 sectors with no time limit.

Inexperienced crew members shall not be planned together on the same flights.

Cockpit

5.2.10 Security and Emergency Training

Specific training is part of recurrent training according to OM D Training Syllabi and Checking Programmes.

Cockpit

5.2.11 Dangerous Goods

Training for transportation of DG is described in OM D Training for Transportation of DG.

Cockpit

5.2.12 Qualification to fly in either pilot's seat

Commanders whose duties also require them to operate in the right-hand seat and carry out the duties of a copilot, or commanders required to conduct training or examining duties from the right-hand seat, shall complete additional training concurrent with the operator proficiency checks.

This additional training must include at least the following:

- A rejected take-off
- An engine failure during take-off;

- A one engine inoperative approach and go-around; and
- A one engine inoperative landing.

When these engine-out manoeuvres are carried out in an aeroplane training flight, the engine failure must be simulated.

When operating in the right-hand seat, the checks required by OPS for operating in the left-hand seat must, in addition, be valid and current.

For details refer to OM D Training Syllabi and Checking Programmes.

Cockpit

5.2.13 Area and Route Competency

Cockpit

5.2.13.1 General

Area and route competency includes knowledge of:

- terrain and minimum safe altitudes, including escape routes in case of decompression,
- seasonal meteorological conditions,
- meteorological, communication and air traffic facilities, services and procedures,
- search and rescue procedures where available, and
- navigational facilities associated with the area or route along which the flight is to take place.

Cockpit

5.2.13.2 Competency elements

An area or route can contain less complex and/or more complex elements, as shown in the table below:

Terrain and minimum safe altitudes	Seasonal meteorological conditions	Meteorological, communication and air traffic facilities, services and procedures	Search and rescue procedures where available	Navigational facilities associated with the area or route along which the flight is to take place
<u>Less complex:</u>				
		• Warnings on RFC • HF* • IFBP*	• SAR Procedures	• Security • SLOP*
<u>More complex:</u>				
EDW operation within Europe (fulfilled during any flight):				
• High terrain • Mountain waves	• Thunderstorms • Hail • CAT/ microburst/ wind shear • Temp changes at high altitude • Snow • Icing	• CPDLC • Wake turbulence • High traffic density		
EDW LH operation outside Europe – fulfilled during each longhaul flight				
		• Challenging ATC		• EROPS • LH progress monitoring • Oceanic/ remote

Terrain and minimum safe altitudes	Seasonal meteorological conditions	Meteorological, communication and air traffic facilities, services and procedures	Search and rescue procedures where available	Navigational facilities associated with the area or route along which the flight is to take place
				contingencies
EDW LH operation outside Europe – only fulfilled during specific longhaul flights				
• Escape routes	• Cyclones • ITCZ	• NAM procedures		• NAT contingencies

* hands-on training during CCQC and LIFUS is required, additionally to theoretical instruction.

Cockpit

5.2.13.3 Area and Route Competency Training

For initial, recurrent, revalidation and renewal training of area and route competency refer to OM D Route and Area Competence Training.

Cockpit

5.2.13.4 Recency requirements

The less complex elements can be maintained through self-study of the route documentation (LIDO documentation, RFC and Route Manual chapters PFL, ADR, MET, COM, NAV, RAR and SAI) and, if available, by means of programmed instruction aid (e.g. ILIAS). By signing the OFP prior flight, the CMD and CRP certify that they have made themselves familiar with those parts.

The more complex elements require hands-on experience every 12 months. Elements which are fulfilled while operating in Europe or on each longhaul flight will remain current on a regular basis. Elements which are only fulfilled during specific longhaul flights, namely escape routes, cyclones, ITCZ, NAM procedures and NAT contingencies, will be individually tracked.

Prior to operation, each EDW route will be analysed for the applicable elements. Planning will assign flights in cases where the 12-month period becomes limiting. Should the 12-month period be exceeded, training according to OM D Route and Area Competence Training is required.

The 12-month period will be counted from the last day of the month during which the latest operation in the area or on the route took place, or the respective training was undertaken.

When the operation took place within the last 3 calendar months of that period, the new 12-month period will be counted from the original expiration date.

Cockpit

5.2.14 Aerodrome Competency

Cockpit

5.2.14.1 Minimum Experience Requirements

For designated aerodromes (refer to OM C Appendix AAL - Approved Airport List), EDW has defined a minimum experience requirement for CMD and F/O as follows:

- For CMD:
  - Minimum 12 months flight experience within EDW; and
  - Minimum 12 months experience as CMD on the respective type (A330 experience within EDW equals A340 experience).
- For F/O*:
  - Not inexperienced according to OM A Crewing of inexperienced Flight Crew Members;
  - SH operations as PF: Minimum 800 flight hours on the respective type.
  - LH operations as PF: Minimum 500 flight hours on the respective type (A330 experience within EDW equals A340 experience).

* Not applicable if CMD holds TRI qualification and is occupying a pilot's seat.

Cockpit

5.2.14.2 Recency Requirements

After the commander’s initial familiarisation training of of an category C aerodrome, this knowledge shall be maintained by operating at least once on the route to the aerodrome within a 12-month period or according to state regulation (e.g. LPMA), whichever is shorter.

The 12-month period will be counted from the last day of the month when the familiarisation training was undertaken; or of the latest operation of the aerodromes, facilities and procedures to be used.

When the operation is undertaken within the last 3 calendar months of that period, the new 12-month period will be counted from the original expiration date.

Cockpit

5.2.14.3 Aerodrome Competency Training

For initial, recurrent, revalidation and renewal training of aerodrome competency refer to OM D Aerodrome Competence Training.

Cockpit

5.2.15 Low Visibility Operation

Each flight crew member undergoes the following line flying under supervision

- a minimum of 2 autolands;
- only 1 autoland during LIFUS is required when the training has been carried out in a flight simulator qualified usable for zero flight time conversion;
- No autoland is required during LIFUS when the training has been carried out in a flight simulator qualified for zero flight time (ZFT) conversion and the flight crew member successfully completed the ZFT type rating conversion course. In this case, the flight crew member, is qualified to operate during the conduct of LIFUS to the lowest approved DA(H) and RVR as stipulated in the Operations Manual.

Category III operations

Before commencing Category III operations, the following additional requirements are applicable to commanders who are new to the aeroplane type:

- 50 hours or 20 sectors on the type, including LIFUS; and
- 100 m must be added to the applicable Category II/III RVR minima unless he has previously qualified for Category II or III operations with a Community operator, until a total of 100 hours or 40 sectors, including LIFUS, has been achieved on the type.
- The Authority may authorise a reduction in the above command experience requirements for flight crew members who have Category II or Category III command experience. Prior to conducting Low Visibility Take-Off, Category II and III operations, each flight crew member must carry the respective license endorsement.

Cockpit

5.2.16 MNPS

Specific training elements are part of the conversion training. These elements are part of class room and/or simulator training. Refer to OM D Training Syllabi and Checking Programmes.

Cockpit

5.2.17 RNP

Specific training elements are part of the conversion training. These elements are part of class room and/or simulator training. Refer to OM D Training Syllabi and Checking Programmes.

Cockpit

5.2.18 RVSM

Specific training elements are part of the conversion training. These elements are part of class room and/or simulator training. Refer to OM D Training Syllabi and Checking Programmes.

Cabin

5.3 Cabin crew

Cabin

5.3.1 General requirements

The standards of performance define the professional qualities required for cabin crew members. They consist of two major parts: Personality and performance:

- Personality:
  - overall standard;
  - stable and balanced personality;
  - self responsibility;
  - sociability;
  - willingness to serve;
  - frankness;
  - approach to customers;
  - ability to work in a team;
  - physical and mental fitness.
- Performance:

Each cabin crew member must fulfil all requirements as listed above. His ability to do so is subject to regular qualifications. Qualification is carried out by the teamleader (line check cabin crew member).

- EDW ensures that each cabin crew member:
    - is at least 18 years of age.
    - has successfully completed initial training course and holds a cabin crew attestation.
    - has completed the required training as outlined in the OM D Training Syllabi and Checking Programmes.
    - is competent to perform his/her duties in accordance with procedures specified in the Operations Manual.
    - maintain familiarity with laws, regulations and procedures pertinent to the performance of their duties.
    - has been tested for psychoactive substances before employment.

Cabin

5.3.2 Medical requirements

Each new cabin crew member shall undergo a medical assessment to ensure the medical fitness before being first assigned to duties on an aircraft.

A copy of the medical report shall be handed over to crew control.

The medical examination interval is 5 years.

Medical examinations must always be carried out by a FOCA approved AME. At the discretion of the AME additional tests may be indicated. Additional medical examinations may also be necessary following a prolonged period of illness or if there is any doubt about the fitness of the C/C.

The following medical requirements are applicable:

- Good health
- Free from any physical illness which might lead to incapacitation or inability to perform C/C duties
- Normal cardiorespiratory function
- Normal central nervous system
- Adequate visual acuity 6/9 with or without glasses
- Adequate hearing
- Normal function of ear, nose and throat

Cabin

5.3.3 Senior Cabin Crew Member

EDW will nominate a senior cabin crew member (S/C) whenever more than one cabin crew member is assigned. For operations when more than one cabin crew member is assigned, but only one cabin crew member is required, EDW will nominate one cabin crew member to be responsible to the commander.

The S/C has the responsibility to the commander for the conduct and co-ordination of normal and emergency procedures and for discontinuing non-safety-related duties for safety or security purposes.

During turbulence, in the absence of any instructions from the flight crew, the S/C shall be entitled to discontinue non-safety related duties and advise the flight crew of the level of turbulence being experienced and the need for the fasten seat belt signs to be switched on. This should be followed by the cabin crew securing the passenger cabin and other applicable areas.

EDW will not appoint a person to the post of S/C unless that person has at least one year's experience as an operating cabin crew member and has completed an appropriate course as laid down in the OM D Training Syllabi and Checking Programmes.

In order to qualify as a S/C, the following criteria have to be met:

- Satisfy all personal qualification requirements; represent the company towards passengers;
- be aware of the high level of exposure towards the passengers and therefore display the highest possible degree of customer-oriented behaviour and knowledge;
- show communication skills in order to sustain professional communication with flight crew, cabin crew and superiors;
- accept the responsibility of being head of cabin crew;
- handle the specific duties which may arise during all phases of a flight;
- train all categories of cabin crew members and give them fullest benefit of their knowledge and experiences;
- coach, train and qualify all categories of cabin crew members;
- know and apply all procedures and regulations for normal and abnormal (emergency situations) in-flight operations;

A S/C who passed the classroom training is qualified according to the aeroplane qualification irrespective of area of operation.

Cabin

5.3.4 Cabin Crew Member

Cabin

5.3.4.1 Training

The training modules for cabin crew are described in OM D Cabin Crew.

This training is carried out by suitably qualified instructors as described in the OM D Training Syllabi and Checking Programmes.

On the job training is carried out by line introduction cabin crew members and by senior cabin crew members.

All cabin crew members shall complete safety related training according to the CSPM.

Cabin

5.3.4.2 Qualifications

Personal qualifications for all cabin crew members shall be performed by a line check cabin crew member at least once a year, recording this in written form.

Line-and Training Management look upon the evaluated results as a potential that allows them to acknowledge and identify traits in performance development. The performance assessment is limited to a specific flight.

Cabin

5.3.4.3 Failure to pass Training or Check

Refer to OM D Procedures in case of failure.

Cabin

5.3.5 Line Checks

Line checks for cabin crew serve the purpose to evaluate the performance of cabin crew members concerning their line operation. Line checks for cabin crew members will be conducted on regular line or other commercial flights.

The programme of a line check covers at least the following points:

- Appearance, Uniform ;
- Customer Care;
- Team Behaviour;
- Attitude;
- Knowledge of Emergency Procedures and Equipment;

- Knowledge of Medical Items;
- Knowledge of all revisions issued within one year period;
- Check if the manuals are complete and up to date;
- Sales on Board;
- Inflight Service;
- General Knowledge;
- Public Address;
- Flight Time Limitations.

The OMCC and OPK are responsible for the planning of the line checks.

The period of validity of a line check shall be 12 months. If issued within the final 3 calendar months of validity of previous line check, the period of validity shall be extended from the date of issue until 12 calendar months from the expiry date of that previous line check. However, as these checks are part of the internal quality system and not part of a legal requirement, a cabin crew member will not be suspended from line operation if the validity date of the previous line check has expired. In this case, a line check must be completed within 3 calendar months of the expiry date. Deviations from this requirement must be explained in written form by the OMCC to PC and PCT.

The result of a line check is held down on specific forms for C/C and S/C.

Cabin

5.3.6 Initial Training Course

The initial training comprises emergency procedures training which is not aeroplane type related, medical and first aid training as well as crew resource management training.

Each cabin crew member must successfully complete initial training before undertaking conversion training.

For training programme, refer to OM D Training Syllabi and Checking Programmes.

Cabin

5.3.7 Aircraft type specific training /operator conversion training

Operator conversion training, and if necessary aircraft type specific training, includes the use of all safety equipment and all normal and emergency procedures applicable and involves training and practice on either a representative training device or on the actual aeroplane.

Each cabin crew member shall have completed the appropriate conversion training and aircraft specific training, as well as the associated checks, before:

- being assigned first by the EDW to operate as a cabin crew member; or

- being assigned by EDW to operate another aircraft type; or
- being assigned on a variant of an aeroplane type currently operated; or
- operating with different safety equipment, safety equipment location or normal emergency procedures on currently operated aeroplane types or variants.

Differences training is in addition to aircraft specific training and operator conversion training. It will be completed before operating:

- on a variant of an aeroplane type currently operated; or
- with different safety equipment, safety equipment location, or normal and emergency procedures on currently operated aeroplane types or variants.

For training programme, refer to OM D Training Syllabi and Checking Programmes.

Cabin

5.3.8 Recurrent training

The recurrent training (RT) serves a dual purpose:

- to cover requirements in accordance with Air OPS CAT; and
- to maintain knowledge at a level sufficient to handle the emergency equipment as well as potential emergency situations.

The yearly RT program must be fulfilled by each cabin crew member.

The period of validity of recurrent training and the associated checking shall be 12 calendar months in addition to the remainder of the month of issue. If issued within the final 3 calendar months of validity of a previous check, the period of validity shall extend from the date of issue until 12 calendar months from the expiry date of that previous check.

For training programme, refer to OM D Training Syllabi and Checking Programmes.

Cabin

5.3.9 Familiarisation

Cabin

5.3.9.1 General

Following completion of conversion training, each cabin crew member undertakes familiarisation prior to operating as one of the required minimum number of cabin crew.

Each new entrant cabin crew member having no previous comparable operating experience should:

- Participate in a visit to the aeroplane to be operated; and
- Participate in familiarisation flights as described below.

A cabin crew member assigned to operate on a subsequent aeroplane type with the same operator should either:

- Participate in a familiarisation flight as described below; or
- Participate in an aeroplane visit to the aeroplane to be operated.

Cabin

5.3.9.2 Familiarisation flights

- During familiarisation flights, the cabin crew member should be additional to the minimum number of required cabin crew.
- Familiarisation flights are conducted under the supervision of the senior cabin crew member.
- Familiarisation flights should be structured and involve the cabin crew member in the participation of safety related pre-flight, in-flight and post-flight duties.
- Familiarisation flights are operated with the cabin crew member in the operator's uniform.
- Familiarisation flights are part of the training record for each cabin crew member.

Cabin

5.3.9.3 Aeroplane visits

The purpose of aeroplane visits is to familiarise each cabin crew member with the aeroplane environment and its equipment. Accordingly, aeroplane visits should be conducted by suitably qualified persons. The aeroplane visit should provide an overview of the aeroplane's exterior, interior and systems.

For detailed programme, refer to OM D Familiarisation.

An aeroplane familiarisation visit may be combined with the conversion training.

Cabin

5.3.10 Operation on more than one type or variant

Each cabin crew member operates on no more than three types of aeroplanes.

For these purposes, variants of an aeroplane type are considered to be different types if they are not similar in all the following aspects:

- emergency exit operation
- location and type of portable safety and emergency equipment
- type-specific emergency procedures.

When determining similarity of doors/exits EDW assesses the following factors:

- door/exit arming and disarming
- direction of movement of the operating handle
- direction of door/exit opening
- power assist mechanisms
- assisting evacuation means.

When determining similarity of location and type of portable safety and emergency equipment, EDW assesses the following factors:

- all portable safety and emergency equipment is stowed in the same, or in exceptional circumstances, in substantially the same location
- all portable safety and emergency equipment requires the same method of operation
- portable safety and emergency equipment includes:
    - fire-fighting equipment
    - protective breathing equipment (PBE)
    - oxygen equipment
    - crew life-jackets
    - torches
    - megaphones
    - first-aid equipment
    - survival and signalling equipment
    - other safety and emergency equipment, where applicable.

The type-specific emergency procedures include at least the following:

- land and water evacuation
- in-flight fire
- non-pressurisation, slow and sudden decompression
- pilot incapacitation.

Cabin

5.3.11 Requalification after absence

Each cabin crew member who has been absent from all flying duties for more than 6 months and still remains within the period of validity of the previous check, refresher training will be substituted by recurrent training according to OM D Training Syllabi and Checking Programmes.

When a cabin crew member has not been absent from all flying duties, but has not, during the preceding 6 months, undertaken duties on a type of aeroplane as a cabin crew member, before undertaking such duties on that type, the cabin crew member either completes recurrent training on the type or operates two refamiliarisation sectors as defined in OM D Training Syllabi and Checking Programmes.

When a cabin crew member has been absent from all flying duties for more than 6 months and the period of validity of the last recurrent training and checking has expired, conversion training according to OM D Training Syllabi and Checking Programmes is required.

Cabin

5.3.12 Recency

Each cabin crew member shall have operated within the preceding 6 months on the aircraft type, otherwise OM A Requalification after absence applies.

Additional EDW company restrictions are as follows:

- Each cabin crew member should undertake flying duties on the A320 and A340 (if qualified on type) every 4 months.
- Each senior cabin crew member should undertake flying duties on the A320 every 2 months and on the A340 (if qualified on type) every 4 months.

If these additional restrictions cannot be followed OM A Requalification after absence applies.

Cabin, Cockpit

5.4 Training, checking and supervision personnel

Cockpit

5.4.1 Flight Instructors

Refer to OM D Training and Checking Personnel.

Cockpit

5.4.2 Ground Instructors

Refer to OM D Training and Checking Personnel.

Cockpit

5.4.3 Line Check Pilots (Training Commanders)

Refer to OM D Training and Checking Personnel.

Cockpit

5.4.4 Synthetic Flight Instructors (SFI)

Refer to OM D Training and Checking Personnel.

Cockpit

5.4.5 Type Rating Instructors (TRI)

Refer to OM D Training and Checking Personnel.

Cockpit

5.4.6 Examiner for flight crew (SFE/TRE)

Refer to OM D Training and Checking Personnel.

Cockpit

5.4.7 Instructor or Examiner changing fleet

As a guiding principle, an instructor or examiner changing the type of aeroplane loses all the privileges of the respective function.

The training steps for regaining the privileges and the reappointment have to be approved by the FOCA.

Cabin

5.4.8 Cabin crew instructors

Refer to OM D Training and Checking Personnel.

Cabin

5.4.9 Line Introduction C/C

Refer to OM D Training and Checking Personnel.

Cabin

5.4.10 Line Check Cabin Crew Members

Refer to OM D Training and Checking Personnel.

Operational Ground Staff

5.5 Other Operations Personnel

Operational Ground Staff

5.5.1 Flight Operations Officers (FOO)

All safety sensitive personnel must be tested for psychoactive substances before employment. Refer to OM D Operations Personnel other than crew.

Operational Ground Staff

5.5.1.1 Flight Operations Officer (FOO)

In Switzerland, no regulatory requirements for FOO's exist. However, in order to ensure flight safety through an acceptable level of standardization and proficiency, the following are a company requirement and shall be recognized for all personnel engaged in operational control functions.

Prior to be accepted for employment as Flight operation officers by Edelweiss, the applicant must pass an internal selection and shall fulfil the requirements as outlined in OM D Flight Operations Officer (FOO).

Operational Ground Staff

5.5.1.2 FOO Qualifications

Knowledge verification will be required throughout the training programs. Practical competency will be determined by a qualified evaluator. Initial FOO courses shall be completed before being assigned to duty with operational control by tests using either multiple choice questions or straight question/answer type. Upon completion of the yearly dispatch refresher course, a competency check shall be performed by each individual FOO. Any personnel failing such a check, will be re-instructed in the relevant areas/subjects before being assigned to duty with operational control.

The qualification process for FOOs is laid down in OG section of the Process Manual:

- meets minimum age of 21, knowledge, experience and skill requirements as laid down in the OM D Selection process FOO;
- has demonstrated knowledge and/or proficiency in the relevant areas of operational control;

- has demonstrated the ability to analyze weather, create accurate flight plans and provide assistance to flights;
- training needs in transportation of dangerous goods is described in OM D Flight Operations Officer (FOO);
- completes a flight deck familiarization flight every 12 month.

Operational Ground Staff

5.5.1.3 FOO Training

No regulatory training requirements for FOO's exist in Switzerland. However, it is an EDW policy not to assign any personnel to operational control functions, unless training has been performed, according to OM D Flight Operations Officers (FOO) standard, irrespective whether the particular individual has been newly hired, has newly joined the OG department, or was absent for more than 12 consecutive months.

The initial and recurrent training for FOOs is clearly defined in the OM D Flight Operations Officers (FOO).

6 Health Precautions

Cabin, Cockpit, Operational Ground Staff

6.1 Health precautions

Cabin, Cockpit, Operational Ground Staff

6.1.1 General

Cabin, Cockpit

Safety Sensitive Personnel	Are persons who might endanger aviation safety if they perform their duties and functions improperly, including flight crew and cabin crew members, OCC personnel and flight dispatch.
Psychoactive substances	Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, with the exception of caffeine and tobacco.

A crew member must start the flight duty in good physical and mental condition, so that the fatigue, which will accumulate during the assigned flight duty, does not affect safety. The stipulated minimum rest time just prior to starting flight duty must, therefore, be spent accordingly for recovery.

A crew member shall not perform duties on an aeroplane:

- while under the influence of psychoactive substances, narcotics, any drugs, sleeping tablets, anti-depressants or pharmaceutical preparations that may affect his/her faculties in a manner contrary to safety;
- following deep sea diving except when a reasonable time period has elapsed;
- following blood/bone marrow donation except when a reasonable time period has elapsed;
- if applicable medical requirements are not fulfilled, or if he/she is in any doubt of being able to accomplish his/her assigned duties; or
- if he/she knows or suspects that he/she is suffering from fatigue, or feels unfit to the extent that the flight may be endangered.

It is the responsibility of each crew member to act whenever they suspect a colleague involved in safety sensitive activities to be under the influence of psychoactive substances while on duty. Any suspicion shall be verified with a second crew member according to the four-eyes principle. This crew member should ideally be the CMD or S/C. If the suspicion is confirmed the highest ranking crew member not under suspicion shall ensure that the duty officer/OMCC is informed and that the suspect is relieved of any safety sensitive duty immediately.

Decrease of fitness under the influence of mental stress may also occur. It is the responsibility of the crew member himself/herself to decide whether or not he is fit for flight duty under such mental stress.

A crew member shall make constant efforts to keep fit for flying by the regular exercise of sport, by a reasonable way of living, and by close co-operation with both private physician and the AME (Aviation Medical Examiner).

Crew members who are identified as engaging in any kind of problematic use of alcohol or psychoactive substances are removed from safety-critical functions.

Re-instatement to safety-critical duties is possible after cessation of the problematic use and upon determination that continued performance is unlikely to jeopardise safety. Final decision to be made by OC/PC together with E, EH, OS and OT on a case-by-case basis.

a. Licence holders shall not exercise the privileges of their licence and related ratings or certificates at any time when they:
    1. are aware of any decrease in their medical fitness which might render them unable to safely exercise those privileges;
    2. take or use any prescribed or non-prescribed medication which is likely to interfere with the safe exercise of the privileges of the applicable licence;
    3. receive any medical, surgical or other treatment that is likely to interfere with flight safety.
b. In addition, licence holders shall, without undue delay, seek aero-medical advice when they:
    1. have undergone a surgical operation or invasive procedure;
    2. have commenced the regular use of any medication;
    3. have suffered any significant personal injury involving incapacity to function as a member of the flight crew;
    4. have been suffering from any significant illness involving incapacity to function as a member of the flight crew;
    5. are pregnant;
    6. have been admitted to hospital or medical clinic;
    7. first require correcting lenses.
c. In these cases holders of Class 1 and Class 2 medical certificates shall seek the advice of an AeMC or AME. The AeMC or AME shall assess the medical fitness of the licence holder and decide whether they are fit to resume the exercise of their privileges;
d. Cabin crew members shall not perform duties on an aircraft and, where applicable, shall not exercise the privileges of their cabin crew attestation when they are aware

of any decrease in their medical fitness, to the extent that this condition might render them unable to discharge their safety duties and responsibilities.

e. In addition, if in the medical conditions specified in (b)(1) to (b)(5), cabin crew members shall, without undue delay, seek the advice of an AME, AeMC, or OHMP as applicable. The AME, AeMC or OHMP shall assess the medical fitness of the cabin crew members and decide whether they are fit to resume their safety duties.

Cabin, Cockpit, Operational Ground Staff

6.1.2 Use of Alcohol and other Psychoactive Substances

Cabin, Cockpit

6.1.2.1 Crew members

A crew member shall not consume alcohol of any nature within 8 hours of scheduled check-in time, within 8 hours of the commencement of reserve duty and while on active duty.

A crew member shall not commence a flight duty period with a blood alcohol limit in excess of 0.2 per mil (Promille) or the national limit whichever is lower.

A crew member shall not consume alcohol of any nature in excess, i.e. drink to such an extent that their physical condition is obviously impaired.

A crew member shall not consume any psychoactive substances, which do not comply with Swiss law.

A crew member shall not consume alcohol while in uniform.

Dead heading crew members may consume alcohol if civilian jacket / plain-clothes are worn.

Cabin, Cockpit, Operational Ground Staff

6.1.2.2 Other operations personnel

It lies within the responsibility of the Head of Ground Operations not to assign any safety critical functions to any FOO or other Ground Operations staff when a problematic use of alcohol or psychoactive substances is known or noticeable by such personnel.

FOO shall not commence their assigned duty with a blood alcohol limit in excess of 0.2 per mil (Promille) and/or while under influence of any kind of psychoactive substances. FOO who are identified as engaging in any kind of problematic use of psychoactive substances are removed from safety-critical functions. Re-instatement to safety-critical duties is possible after cessation of the problematic use and upon determination continued performance is unlikely to jeopardize safety.

It is the responsibility of each employee to act whenever they suspect a colleague involved in safety sensitive activities to be under the influence of psychoactive substances while on duty.

Any suspicion shall be verified with a second person according to the four-eyes principle. This person should ideally be the direct superior. If the suspicion is confirmed the direct superior shall ensure that the suspect is relieved of any safety sensitive duty immediately.

Cabin, Cockpit

6.1.2.3 Procedures in case of assumed intoxication of a crew member

Suspected intoxication of an active crew or ground staff member is a serious issue and has to be dealt with in a discrete and mindful manner. In any case the flight operations duty officer has to be involved and briefed. After check-in, a crew member with assumed intoxication by alcohol or other psychoactive substances shall be separated from the crew and return to the operations control premises (OCC). A standby crew member shall be assigned to the flight as far as necessary.

The concerned crew member shall wait in OCC until the flight operations duty officer or operational manager cabin crew has organised medical follow-up actions. At home base the crew member will normally be sent to Zurich airport medical center for investigation. At outstations the duty officer will organise appropriate arrangements in coordination with local station representatives.

In case of positive drug or alcohol testing results during ramp checks at outstations, the CMD shall strictly follow the instructions issued by local authorities.

Cabin, Cockpit

6.1.3 Pregnancy

As soon as a crew member knows that she is pregnant EH has to be informed immediately.The decision about the time of termination of flight duty lies with the crew member, however not later than the 16th week for cabin crew member and not later than the 26th week for flight crew member. The maximum radiation dose according OM A Pregnancy has to be respected.

Cabin, Cockpit

6.1.4 Use of pharmaceutical products by crew members

General principle: Do not take medication just to be fit to fly. If in doubt, seek expert aero-medical advice!

6.1.4.1 General

Taking pharmaceutical products (medicine) in any form is generally not compatible with flight duty and is therefore not authorised for at least 24 hours before the start of and during the entire period of flight duty. There are medicines that stay more than 24 hours in the body. If you are unsure seek expert aero-medical advice!

Even readily available "over the counter" medication or allergy retardants are prohibited, as they can produce harmful side effects, such as vertigo, dizziness, blurring of vision, etc. If medication has to be taken at all while on flight duty, seek expert aero-medical advice! This applies to all over the counter medication as well as for those prescribed by a doctor. Hormonal contraceptives: These usually have no adverse effects and are compatible with flying duties.

6.1.4.2 Use of sleeping pills by crew members

The only authorised sleeping pill that may be used on rare occasions and only more than 12 hours before flight duty is the short-acting Zolpidem (no extended release or controlled release). This medication requires a prescription from a doctor. To prevent any undesirable or unexpected individual reaction, the medicine must be tried out on a day before a day off, latest 2 nights before the next flight duty. Before the first use of Zolpidem, seek expert aero-medical advice! In case of frequent, regular or continuous use of Zolpidem, medical advice must be sought.

6.1.4.3 Emergency medicines 24 hours before flight

Should crew members unexpectedly experience medical symptoms 24 hours before the flight duty which require medical treatment, they may use emergency medicines only when all the questions below are answered with yes. If you have to answer one of the questions below with no, then refrain from taking the medicine, seek expert aero-medical advice or don’t fly!

1. Do I feel fit to fly?
2. Do I really need to take medication at all?
3. Have I given this particular medication a personal trial before on the ground to ensure that it will not have any adverse effects on my ability to fly?
4. Is the nature of the medical problem only mild and there is no risk of deterioration during the flight?
5. Does the medication belong to one of the below mentioned groups of medicines which are clearly accepted to be taken during flight duty?

If you are taking a medication that does not belong to the mentioned groups of medicines below, you must seek expert aero-medical advice!

The following are some widely used medicines with a description of their compatibility with flying duties:

- Common pain killers such as paracetamol, commonly used to treat pain or headaches, may be compatible with flying duties. However, the pilot or cabin crew member should give affirmative answers to the five basic questions listed above before using the medication and carrying out flying duties.

- Nasal decongestants with no effect on alertness may be compatible with flying duties. However, as the underlying condition requiring the use of decongestants may be incompatible with flying duties, expert aero-medical advice should be sought. For example, oedema of the mucosal membranes causes difficulties in equalising the pressure in the ears or sinuses.

- Nasal corticosteroids are commonly used to treat hay fever and are compatible with flying duties.

- Cough medicines often contain codeine, dextromethorfan or pseudoephedrine which are not compatible with flying duties. However, mucolytic agents (e.g. carbocysteine) are well-tolerated and are compatible with flying duties.

- Antihistamines can cause drowsiness. They are widely used in 'cold cures' and in treatment of hay fever, asthma and allergic rashes. They may be in tablet form or a constituent of nose drops or sprays. In many cases, the condition itself may preclude flying, so that, if treatment is necessary, expert aero-medical advice should be sought so that non-sedative antihistamines, which do not degrade human performance, can be prescribed.

6.1.4.4 Emergency medicines during flight

Should crew members unexpectedly experience medical symptoms on board which require medical treatment, they may use medicines contained in the first aid kit. To allow monitoring for possible side effects:

- the FCM taking the medicine shall inform the other FCMs; and
- the CCM taking the medicine shall inform the S/C and CMD in addition to at least one other CCM on duty in the same cabin section.

Consider contacting MedAire to seek advice at any time.

Cabin, Cockpit, Operational Ground Staff

6.1.5 Immunisation/vaccination

Cabin, Cockpit, Operational Ground Staff

6.1.5.1 General

Many countries prescribe vaccination of crew members and passengers against defined diseases, often specifying that such immunisation is only required upon entry "after leaving or crossing infected areas".

It is in every crew members own responsibility to keep the vaccination record up to date. Be aware of the fact, that a vaccination is not only a personal protection for yourself but also preventing a transmission from you to another person. The vaccination against yellow fever has to be done latest 10 days before a long-haul flight.

Cabin, Cockpit, Operational Ground Staff

6.1.5.2 Vaccinations

Active Immunisation: Formation of specific protective antibodies by the immune system, triggered by vaccine or pathogen.

Passive Immunisation: Administration of specific antibodies (serum)

- in case of suspected infection of a non-immune person
- must be given as soon as possible
- available only for a few diseases/pathogens (i.e. rabies)

If the vaccinations are arranged by SWISS medical services, Edelweiss Air accepts the cost of the following vaccinations:

- Di - Te (Diptherie - Tetanus);
- Polio;
- Yellow fever;
- Hepatitis A - 2nd vaccination;
- Hepatitis A/B - 3rd vaccination.

SWISS Medical Services conducts vaccinations during office hours. Refer to FAM SWISS Medical Services.
Bring your international vaccination record.

The vaccination against yellow fever has to be done latest 10 days before a longhaul flight.

Disease	**Period of effectiveness**	**Possible side effects**	**Remarks**
Yellow fever	Lifelong	Occasional local reaction, flu-like symptoms	OBLIGATORY 1 injection Not for “Crew only A320”
Tetanus combined with diptheria	10 years (<20 & >60) 20 years (aged 20-60)	Sometimes local reaction for a few days	Highly recommended, 1 injection
Pertussis (Keuchhusten)	10 years	Sometimes local reaction or fever	Recommended for people aged 25-29 years and those older than 30 with frequent contact with newborn babies,

Disease	Period of effectiveness	Possible side effects	Remarks
			vaccine available in combination with Tetanus only
Polio	10 years	Sometimes local reaction or fever	Highly recommended, 1 injection
Mumps Measles German measles (=Rubella) Combines	lifelong	Sometimes local reaction, flu-like symptoms	Highly recommended for people born after 1963, 2 injections
Hepatitis A	lifelong	Sometimes local reaction for a few days	Highly ecommended; 1 injection, 1 booster injection after 6-12 months
Hepatitis B	lifelong	Sometimes local reaction for a few days	Recommended 3 injections
Twinrix (Combination of Hepatitis A and B)	lifelong	Same as mentioned for Hepatitis A and B	Recommended only for persons who wish to be vaccinated against Hepatitis A and B; 3 injections
Typhoid fever	Only partial protection, approx. 50% 1 year	May cause mild diarrhoea or slight abdominal pain	Recommended only for areas with poor hygienic conditions; taken orally

Cabin, Cockpit

6.1.6 Blood donation

Flight personnel shall not take a flight earlier than 48 hours following a blood donation. EH, OC and PC must be contacted in advance if a bone marrow donation is being considered. Following a bone marrow donation, re-instatement to safety-critical duties will be taken in close co-operation with both the private physician and the AME (Aviation Medical Examiner).

Cabin, Cockpit

6.1.7 Deep diving

Flying in pressurised aeroplane after deep diving can result in the bends (decompression sickness). Therefore the following policy applies:

- A crew member shall not practice any deep diving within 24 hours before a flight assignment.

Cabin, Cockpit

6.1.8 Meal precaution prior and during flight

Cabin, Cockpit

6.1.8.1 Policy

Whenever possible, crew meals should be taken on ground. In flight, crew meals shall normally be taken at the working station. A crew member shall have regular meals while on duty. It is recommended that they take light refreshments between meals.

Cabin, Cockpit

6.1.8.2 Food on the Flight Deck

If meals or refreshments are served in the flight deck, the following will apply:

a. The flight crew members occupying the pilot's seats must not have any meals simultaneously.
b. Food and drinks must be carefully handled in the cockpit and should not be placed on or about the controls due to the possibility of spillage with the associated risks for electrical and other equipment. Give details in the Technical Log and verbally of all incidents in which spillage of a liquid on the control pedestal or other vulnerable areas involved.

Cabin, Cockpit

6.1.8.3 Food poisoning

As a precaution against operational consequences of food poisoning, pilots shall have different meals not only on board the aeroplane but also at hotels before reporting for duty as far as possible.

Refer to OM A Food Poisoning and OM A Incapacitation of crew members

Cabin, Cockpit

6.1.9 Sleep and rest

Cabin, Cockpit

6.1.9.1 General

It is of outmost importance to execute flight operations as alert as possible. Negative occurrences such as sleep disturbance and/or circadian disruptions (desynchronisation of the internal “body clock”) may be successfully counteracted if proper preventive actions are being undertaken. Although these actions may be applied according to individual need, their general content is of value for everybody and serves as basis for a well-balanced fatigue management.

Cabin, Cockpit

6.1.9.2 Coordination before and between flights

Flight duty shall be commenced in a good physical and mental condition, well rested with appropriate personal conduct with regard to sleep, suitable nutrition and consideration of the effects of drugs, alcohol, caffeine, nicotine, etc.

Cabin, Cockpit

6.1.9.3 Controlled Rest on the flight deck during flight

Controlled rest on the flight deck may be and should be used on flights where experience has shown or where it is expected that crew alertness may be improved, especially for the final part of the flight. The rest period should be no longer than 45 minutes (in order to limit any actual sleep to approximately 30 minutes). After this 45-minute period, there should be a recovery period of 20 minutes during which sole control of the aeroplane should not be entrusted to the pilot who has completed his rest. Controlled rest period should terminate at least 30 minutes before top of descent.

Application:

- Allocation and planning of the rest period should be part of the briefing before the flight. It is the duty of the individual flight crew member to keep the other flight crew members informed about his need for rest;
- Coordination with and information of cabin crew should be arranged in due time.

Cabin, Cockpit

6.1.9.4 Fatigue and Alertness Management during flight

The following recommendations aim to reduce phases of decreased alertness during the flight, and in particular those occurring simultaneously to both pilots. It includes management of activities and rest to reduce monotony and fatigue. This is achieved by desynchronisation of activities and rest periods for the two pilots by alternating passive and active vigilance phases every 20 to 40 minutes followed by formal handover between the pilots.

Active vigilance phases are characterized by:

- verbal exchanges and tasks related to flight management;
- varied motor activities associated with mental tasks, e.g. navigation (FMS) and system (ECAM/EI) management, alternate weather monitoring etc.;
- fulfilment of PF and PM duties;

- no meals should be taken during this period.

Passive vigilance phases are characterized by:

- more dispersed supervision of the flight;
- eating of meals or snacks, if possible at the start of these phases;
- activities not related to the flight;
- taking a nap (see OM A Controlled Rest on the flight deck during flight above).
- The measures mentioned above are only applicable for quiet cruise portions of a flight and shall be finished at the latest 30 minutes before top of descent.

Application:

- Long cruise phases are divided in active vigilance, passive vigilance, and update phases.
- The end of each active-passive vigilance phase must be expressed verbally to the other crew member.
- Pilot in active vigilance phase is taking care of PF and PM duties and positive activities as outlined above.
- Pilot in passive vigilance phase is resting or relaxing, eating and performing activities not related to the flight. This to prepare and be ready for the next active vigilance phase.
- During the update phase pilots are updating each other in respect of the flight progress. One is acting as PF, the other one as PM. The next active and passive vigilance phases shall be planned during this period.

Cabin, Cockpit

6.1.10 Surgical operation

After any surgical procedure, a fitness certificate signed by an aeromedical doctor shall be produced prior to returning to flying duties.

For detailed procedures refer to OM A Resumption of flight duty for Flight Crew Members

Cabin, Cockpit

6.1.11 Eye protection

Sunglasses can reduce the vision drastically; therefore they should only be used when necessary. Sunglasses with maximum peripheral vision are recommended. These must not be polarized as they may cause blurred and reduced vision when used in aeroplane with laminated windshields.

In cases where corrective eyeglasses are a requirement of the medical certificate for the license, flight crew members must wear the prescribed glasses while on flight duty and have to carry a spare of these glasses on board.

Lenses and sunglasses do not fulfil this requirement.

Before and during take-off, climb-out, approach and landing, the use of bright lights should be restricted so as to favour the eye adaptation to darkness.

Cabin, Cockpit

6.1.12 Ear protection

Flight personnel are recommended to use suitable ear-plugs in noisy environment, while on duty (e.g. on tarmac) and during private activities.

Cabin, Cockpit, Operational Ground Staff

6.1.13 Protection against Tropical diseases / Malaria

Malarone tablets have to be taken along on every flight starting with the first long-haul rotation. We recommend that you keep your tablets with you at all times, also during your private trips and vacation.

Anti Brumm Spray and Malarone tablets are provided by EDW.

- Anti Brumm Sprays can be obtained in the Crewroom, OPC
- Out of date or used packs of Malarone can be exchanged at SWISS Medical Services, refer to FAM 1.1.10 SWISS Medical Services.

Cabin, Cockpit, Operational Ground Staff

6.2 Flight physiology

Cabin, Cockpit, Operational Ground Staff

6.2.1 Climate on board

Cabin, Cockpit, Operational Ground Staff

6.2.1.1 Air Pressure

- Cabin pressurisation establishes and maintains cabin pressure;
- Equivalent to air pressure levels at 1600 - 2400 meters above sea level; and
- Presents no problem for people in good health.

Cabin, Cockpit, Operational Ground Staff

6.2.1.2 Oxygen

- Sufficient oxygen on board (parallel to cabin pressure).
- Oxygen outside the aircraft.
    - Remember that partial pressure of oxygen is more reduced the higher we get, because of decreasing atmospheric pressure during ascent. This means a lowering of the driving force causing oxygen to pass into our blood. This leads to hypoxia. Refer to OM A Hypoxia

Passengers suffering from respiratory or circulatory diseases can already be affected at normal cabin altitude, since their adaptive mechanism and reserves are exhausted.

Cabin, Cockpit, Operational Ground Staff

6.2.1.3 Temperature

- Can be regulated like air conditioning.

Cabin, Cockpit, Operational Ground Staff

6.2.1.4 Air Circulation

- Can be regulated like air conditioning.

In commercial aeroplanes half of the cabin air is removed from the aircraft, the other half is recirculated and passes through the so called HEPA (High Efficiency Particulate Air) Filters. These filters are very effective at trapping microscopic particles such as bacteria and viruses and can provide essentially particle free air in the recirculation system. Cabin air exchange rate can be regulated and averages 20 air changes per hour compared with 12 in a typical office building.

Fresh air (one half is outside air, the other half is recirculated air) enters the cabin through the nozzles located in the ceiling and upper shelves and is removed through the exhaust ports located in the lower portion of the legroom sidewall. The air-conditioning techniques prevent the movement of cabin air lengthwise along the aeroplane.

Cabin, Cockpit, Operational Ground Staff

6.2.1.5 Humidity

- Humidity on board is very low due to the circulation of cold, dry outside air.

Being exposed for a longer time the body can lose considerable amount of fluids which can result in dehydration and the following symptoms:

Symptoms/risks	**Precaution/Treatments**
Skin feeling dry and irritated	Use moisturizing cosmetics
Eye irritation, inflammation	Use artificial tears Remove contact lenses if possible, wear glasses instead
Dry nasal passage; easily infected	Use nasal ointment and nose spray with saline solution
Urine becomes concentrated. Elevated risk for bladder infections and kidney stones	Drink enough liquid, (200ml) per hour of flight so that urine has a fair colour
Constipation	Drink enough liquid (combined with eating healthy nutrition and physical activity)

Cabin, Cockpit, Operational Ground Staff

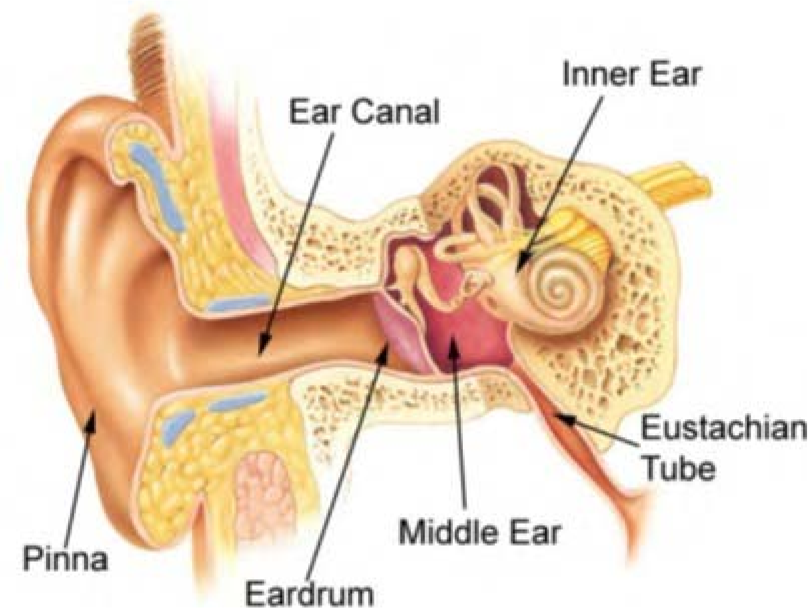
6.2.2 Barotrauma

Cabin, Cockpit, Operational Ground Staff

6.2.2.1 General

Atmospheric pressure falls with an increase in altitude and rises with a decrease in altitude. Air in a confined space (e.g. balloon) expands when increasing altitude, e.g. a balloon gets bigger, and contracts when decreasing the altitude e.g. a balloon gets smaller. If there is a connection to the outside air flows in or out in order to equalize the pressure difference.

The human body contains several air filled cavities such as the lungs, the Gastrointestinal tract, the middle ears and the sinuses. During atmospheric pressure changes (ascent, descent) gas movement occurs (in or out) when there is a free passage to the open. However trapped gas in various parts of the body can cause discomfort or injury to sensitive tissue.



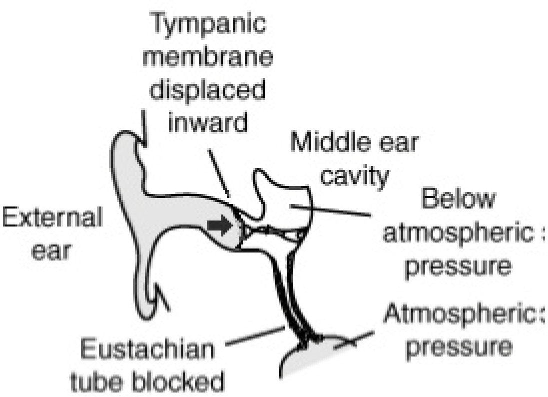
Picture 1: Pressure equalization via Eustachian tube.

Cabin, Cockpit, Operational Ground Staff

6.2.2.2 Middle ear

The middle ear is an air filled cavity behind the eardrum. It is connected by a small tube to the back of the throat (Eustachian tube). Under normal circumstances this tube allows pressure equalization at atmospheric pressure changes (see picture 1). Inflammation in the throat, nose or sinuses which cause a swelling of the mucus membranes can also affect the Eustachian tube.

An obstructed air flow in the tube leads to a pressure increase in the middle ear during an ascent (ear drum pushed outwards) and a pressure decrease as the aircraft descents (ear drum pushed inside, see picture 2). Due to it's anatomy a partially blocked Eustachian tube rather allows an air flow out (ascent) than in (descent).



Picture 2: Aeroplane in descent, blocked Eustachian tube.

Cabin, Cockpit, Operational Ground Staff

6.2.2.3 Blockage of the ears

Cabin, Cockpit, Operational Ground Staff

6.2.2.3.1 Cause

Swelling of the Eustachian tube caused by:

- a common cold;
- an allergy.

Cabin, Cockpit, Operational Ground Staff

6.2.2.3.2 Symptoms

- Feeling of pressure or/and pain in the ear, caused by over stretched or in rare cases even ruptured eardrum;
- Impaired hearing in the affected ear.

Cabin, Cockpit, Operational Ground Staff

6.2.2.3.3 First aid

- Swallow, yawn and chew;
- Repeatedly administer decongestive spray (Otriven) into each nostril to open Eustachian tubes;

> Do not give medication to small children. Alternative: pacifier or bottle during take- off and landing.

Cabin, Cockpit, Operational Ground Staff

6.2.2.3.4 Prevention

- Do not fly if you are already suffering from problems of pressure equalization on ground;
- Care of the mucous membranes of nose and throat by salt solutions (sprays) and nasal ointment;
- Stop smoking: smoking makes the mucous membranes more sensitive to infections (colds).

Cabin, Cockpit, Operational Ground Staff

6.2.2.3.5 Special regulations for flying staff

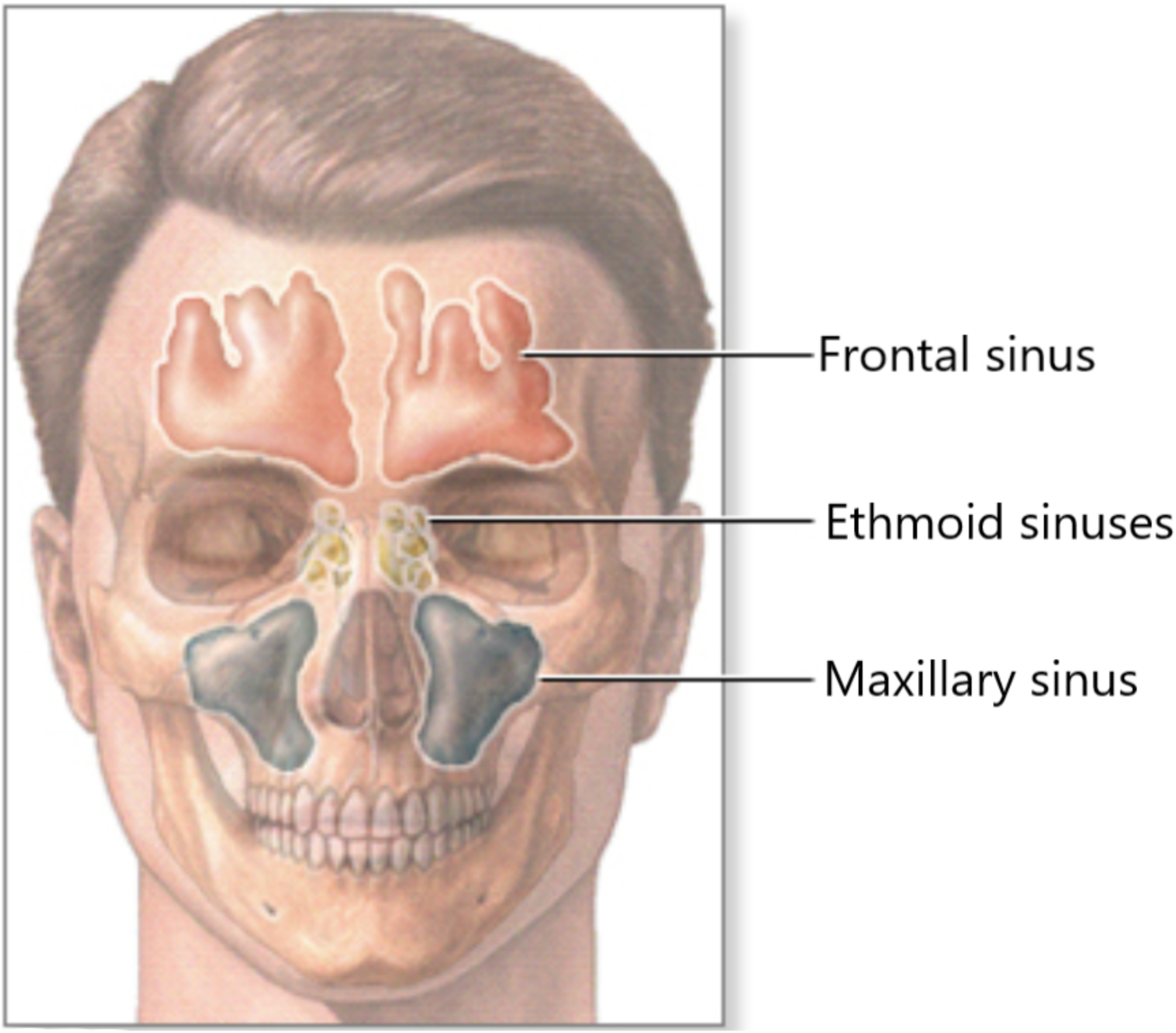
- If you are unable to equalize the pressure in your ears satisfactorily, you may be temporarily unfit to fly.
- The Valsalva - Manoeuvre on the ground can quickly tell you if pressure equalisation is a problem or not.
- If in doubt, you can make an appointment with SWISS Medical Services to have your pressure equalisation checked (telephone).

Cabin, Cockpit, Operational Ground Staff

6.2.2.4 Sinuses

The sinuses are air-filled cavities in the facial bones, connected to the nasal cavity by narrow passages. A common cold that causes a swelling and increased mucous production can lead to a blockage of the passages.

a. Symptoms:
    - Pain in the cheekbones and upper teeth (maxillary sinuses);
    - Pain under the eyebrows and corner of the eyes (other sinuses).
b. First Aid:
    - Administer nasal decongestant sprays (Otriven).



Cabin, Cockpit, Operational Ground Staff

6.2.2.5 Lungs

Under normal circumstances there is a free passage for air to flow along the airways and lung tissue can stretch as air expands. However, there are certain situations of pressure changes in which damage to the lungs may occur:

- If air is trapped in pockets of abnormal lung tissue;
- In rapid decompression, if expanding air cannot escape.

Cabin, Cockpit, Operational Ground Staff

6.2.2.6 Gastrointestinal tract

The stomach and the intestines contain swallowed air and gases produced by bacteria in the large intestine. The amount of gases may be increased by consuming gas-forming foods and drinks, such as beans or carbonated drinks, or as a result of gastrointestinal infections. In normal flight the gases readily expand and are released by passing gas. Occasionally, expansion of the gases on ascent may cause some discomfort.

Cabin, Cockpit, Operational Ground Staff

6.2.3 Hypoxia

Cabin, Cockpit, Operational Ground Staff

6.2.3.1 General

Hypoxia (hypo=low) is a lack of oxygen in the body cells. Most organisms gain their energy by oxidation of the nutriment. That's why oxygen is so important for maintaining the body functions. Insufficient oxygen level leads to an impairment of the cell functions; especially the highly developed centres of the brain are affected first. So hypoxia will result in unconsciousness and death within a very short period of time (minutes).

At an altitude of 5'500m (16'000ft) oxygen partial pressure is 50% of normal, at 10'000m (30'000ft) only 25% of normal. At this altitude the brain remains functional for about 60 seconds without oxygen.

Cabin, Cockpit, Operational Ground Staff

6.2.3.2 Symptoms of hypoxia

- headache;
- impaired performance;
- impaired colour vision;
- poor judgement;
- euphoria;
- cyanosis
- tremor;
- seizures;
- loss of consciousness.

In case of a sudden loss of cabin pressure you have to reach for an oxygen mask before offering help to others. All passengers including those using additional oxygen (POC, medical oxygen unit) have to use the yellow oxygen mask.

Passengers suffering from respiratory or circulatory diseases can already suffer from hypoxia at normal cabin pressure.

Cabin, Cockpit, Operational Ground Staff

6.2.4 Decompression sickness (diving and flying)

Cabin, Cockpit, Operational Ground Staff

6.2.4.1 General

The air we breathe contains 78% nitrogen gas. Some of the nitrogen is dissolved in body fluids and tissues. Normally, as altitude increases, the nitrogen is released and expelled through the lung. However, if sudden decompression occurs at high altitude above 7600 m or caused by a quick ascent while scuba diving, the gas is rapidly released and can form bubbles in the blood or the body tissues. This process results in a process called **D**e**C**ompression **S**ickness (DCS).

A rapid decompression on board at high altitude can cause in addition symptoms of a barotrauma, hypoxia and hypothermia.

Example: Gas held under pressure in liquid (e.g. Champagne) bubbles out if released quickly when opening the bottle (decompression).

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6.2.4.2 Symptoms

- Itching, aching joints;
- Mottled or marblet skin, swelling;
- A tingling sensation or numbness in the limbs;
- Difficulties with breathing, coughing;
- Weakness, exhaustion, even signs of paralysis, spasms, disorientation or even unconsciousness, shock or death.

The symptoms usually occur immediately after diving or within several hours after.

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6.2.4.3 First Aid

- If patient is conscious: place in shock position (flat on back);

- Administer oxygen (4l/min);
- Offer beverages approx. 1/2 - 1 lt per hour
- Inform S/C an CMD;
- Call for a medically qualified person or/and inform MedAire (if passenger suffers from paralysis he must be brought to a decompression chamber as soon as possible)
- If patient is unconscious: refer to CSPM Loss of consciousness.

In the chamber, the atmospheric pressure is increased and the nitrogen bubbles are turned back into the liquid form. Now the excess pressure can be decreased step by step so the nitrogen, which is transformed into gas, can at the same time be eliminated from the body via respiration.

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6.2.4.4 Prevention

A flight increases the risk of decompression sickness as there is, additionally to the loss of water pressure, the decrease of air pressure. Due to the risk of decompression sickness, passenger must refrain from diving 24 hours before flight. For limitation of flight personnel refer to OM A Deep diving.

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6.2.5 Jet lag

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6.2.5.1 Definition

Long-distance flights passing through time zones disrupt the body's inner clock and its wake-sleep rhythm. This is called desynchronisation or “jet lag”.

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6.2.5.2 Causes

- External desynchronisation: i.e. the inner clock is out of step with local time;
- Internal desynchronisation: i.e. the individual biological body rhythm is out of step with each other.

Particularly affected are:

- The digestive system;
- Body temperature;

- Hormones;
- Sleep patterns.

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6.2.5.3 Symptoms

- Difficulty with sleeping;
- Problems with digestion;
- Tiredness at unusual times;
- Listlessness;
- Mood swings;
- Irregular menstrual cycle.

Cabin, Cockpit, Operational Ground Staff

6.2.5.4 Resynchronisation

- In time, the inner rhythm adjusts to the natural day. It is easier to adjust when travelling westwards because this coincides with the body's natural tendency to make the day longer (25 hours);
- Time-zone changes towards the east cause more difficulty, because the “inner clock” is forced to shorten the day, which is against the body's natural tendency;
- According to a scientific study, jet lag reduces by half every two days. After a flight through eight time zones, you would be four hours out of step after two days. Two hours after four days, etc.;
- The most common symptom of desynchronisation is sleep disruption. The sleep-wake rhythm is disrupted by adjustment to the time zone change. This results in difficulty in falling asleep or sleeping through.

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6.2.5.5 Measures to promote sleep

- Suitable sleeping quarters;
- Comfortable sleep-wear;
- Physical activity before going to sleep;
- Light meals;
- Physical exercise (shower, sauna, etc.)

- Relaxation exercise (autogenic training, yoga, etc.)

The human body also regenerates itself through rest. Little sleep may be sufficient.

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6.2.5.6 Avoid

- Stimulants (coffee, black tea, nicotine);
- Alcohol which helps to fall asleep will have a negative effect on the quality of sleep;
- Sleeping tablets:
  - Disrupts the natural sleep pattern;
  - Can become addictive, either psychologically or physically.
  - Incorrect dose or wrong tablets: persistent fatigue;
  - Harmful to health if used over longer periods.

Sedatives and tranquillizers should only be used in exceptional circumstances and under the supervision of a doctor.

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6.2.6 Air sickness

Cabin, Cockpit, Operational Ground Staff

6.2.6.1 General

Airsickness is a condition in which a disagreement exists between visually perceived movement and the sense of movement perceived by the inner ear.

Flying personnel generally get used to the vibrations and occasional turbulence and very seldom suffer from airsickness.

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6.2.6.2 Symptoms

- Paleness;
- Nausea and vomiting;
- Vertigo

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6.2.6.3 Treatment

- Open fresh - air vent (A320);
- Adjust seat to comfortable position (lean back);
- Keep airsickness bag ready;
- Offer blankets and refresher towels;
- Supply medicine for motion sickness if desired (Stugeron or Itinerol B6 for children);
- Offer Coca Cola, tea and crackers

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6.3 Cosmic radiation exposure

Cabin, Cockpit, Operational Ground Staff

6.3.1 General

Cosmic radiation derives from rays from space, which penetrate the atmosphere. The amount of radiation increases with altitude and latitude position.

Personal health is dependent on the amount of total radiation that the body is exposed to. The unit of measurement is the millisievert (mSv).

Flying personnel are exposed to more cosmic radiation than other people. The extra dose they receive per year typically amount to considerably less than a doubling of the average natural radiation to which people are usually exposed, which is around 5mSv per year.

These extra amounts are not higher than those experienced through ordinary fluctuations in natural radiation levels. The amount of additional exposure is not higher than it would be experienced in the Swiss Alps or in canton Ticino. People who live in these regions, and people living in houses with high levels or radon radiation, are exposed to radiation that is twice as high as that experienced by flying personnel. In many areas of the world the exposure is even much higher. None of these areas show evidences that the radiation experienced poses danger to women who are pregnant.

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6.3.2 Assessment of cosmic radiation

The german GSF (Forschungszentrum für Umwelt und Gesundheit) has developed a calculation software called EPCARD (European Program Package for the Calculation of Aviation Route Doses). The software enables the exact calculation of the personal radiation dose for any specific flight. The software can be found on the following Internet site: www.gsf.de/epcard.

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6.3.2.1 Legal provisions

The federal ordinance on protection from radiation (Article 41 of the section on “Protecting persons subject to exposure”) refers to flying personnel:

“Personnel working on jet aeroplanes must be informed by the employer of radiation to which they are likely to be exposed as a result of their work when they commence such flight duty activities. Pregnant women are entitled to be relieved of such flight duties if they so desire.”

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6.3.3 Pregnancy

As soon as a crew member notifies EDW about her pregnancy the maximum radiation dose that she may be exposed to during the remainder of her pregnancy is 1 mSv. Crew planning is responsible that this limit is not exceeded.

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6.4 Tropical medicine

Cabin, Cockpit, Operational Ground Staff

6.4.1 Risk of the tropical climate

Four key factors influence the effect a tropical climate has on the human organism:

- Temperature;
- Humidity;
- Air current.
- Sunlight.

Caution is particularly advised in areas where the temperature changes frequently. Outdoors in the tropics, temperatures tend to be relatively high, whereas temperatures indoors in air-conditioned rooms are rather low. This fluctuation can cause the body to catch cold. It is therefore important to wear appropriate clothing.

The human organism may react to overexposure or to strong sunlight in one of the following ways:

- Sunburn;
- Sunstroke;
- Heatstroke.

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6.4.1.1 Sunburn

Even under cloudy skies, the risk of sunburn in the tropics is much greater than in other zones because of the greater intensity of ultraviolet rays. The sun's rays are strongest on the water and on the beach, where they are reflected. Visitors to these regions are advised against excessive exposure to the sun because of the link between the sun and certain types of skin cancer.

Another point to consider is that excessive exposure to the sun can cause severe sunburn. Fair-skinned adults, babies and elderly people are particularly vulnerable.

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6.4.1.1.1 Symptoms

- Redness of large areas of the skin;
- Painful, burning skin irritation;
- Possible 2nd degree burns (blistering).

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6.4.1.1.2 First aid

- Avoid further exposure to the sun;
- Apply cooling, soothing cream (e.g. Fenistil-Gel);
- Drink plenty of liquid.

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6.4.1.1.3 Prevention

- Moderate exposure to the sun;
- Suntan lotion with high sun block factor (e.g. Day-Long);
- Protect exposed skin with sun-hat and clothing and eyes with sunglasses.

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6.4.1.2 Heat illness

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6.4.1.2.1 General

Heat illness is a spectrum of disorders due to environmental heat exposure. It includes minor conditions such as rash ("prickly heat"), cramps, exhaustion, fainting as well as the more severe condition known as heat stroke.

Prickly heat is a skin disease marked by small and itchy rashes. It's a common ailment in hot and humid conditions.

Heat cramps are muscle spasms that result from loss of large amount of salt and water through exercise. Heat cramps are associated with cramping in the abdomen, arms and calves. This can be caused by inadequate consumption of fluids or electrolytes after heavy sweating.

Heat exhaustion can be a precursor of heatstroke; the symptoms include heavy sweating, rapid breathing and a fast, weak pulse.

Heat stroke is defined by a body temperature of greater than 40.6 °C due to environmental heat exposure with lack of thermoregulation. Symptoms include dry skin, rapid, strong pulse, dizziness, confusion and unconsciousness.

Sunstroke is an isolated heatstroke of the head and the neck due to direct solar exposure.Symptomes include throbbing headache, stiff neck, dizziness.

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6.4.1.2.2 First aid (cramps, exhaustion, stroke):

- Elevated upper body (lateral position, if passenger is unconscious);
- Cool quickly using whatever method is available: spray, bathe with cold water;
- Give salted fluid (to restore circulatory function);
- Monitor body temperature.

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6.4.1.2.3 Prevention

- Limit exposure to the sun;
- Keep head covered (e.g. sun hat);
- Avoid physical exercise in hot, humid climate.

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6.4.2 Malaria

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6.4.2.1 General

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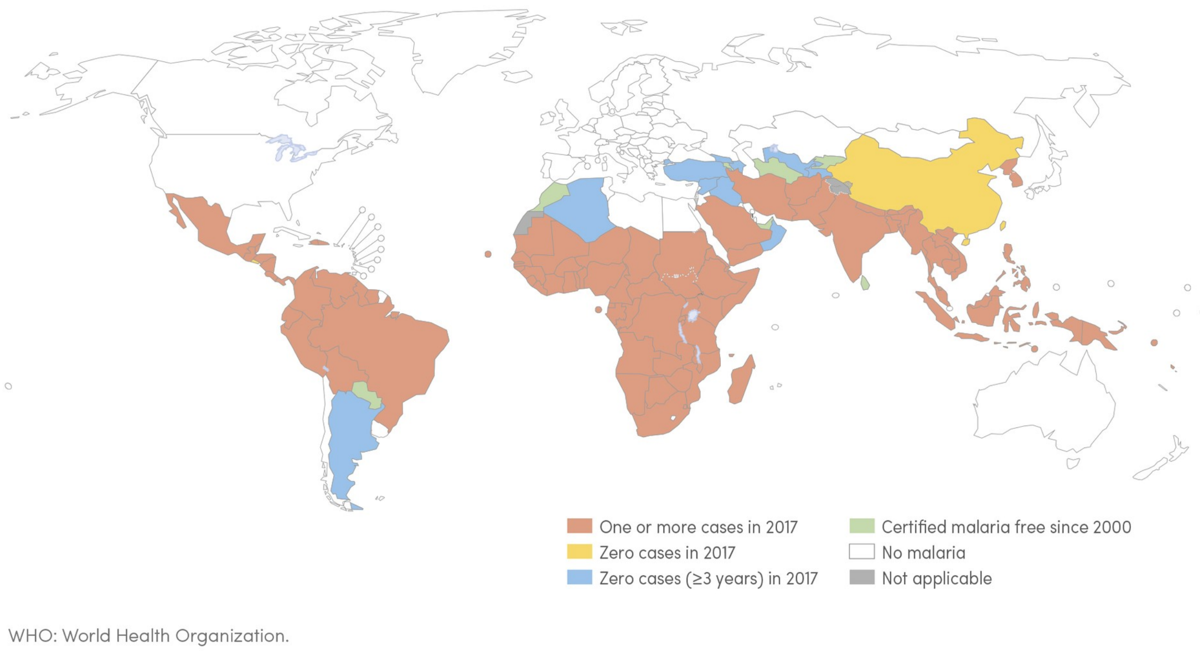
6.4.2.1.1 Prevalence and distribution



- Wide spread in the tropical and subtropical zones (warm, moist climate);
- High risk area: cities in the rural areas of tropical Africa;
- Low risk area: southern Atlantic, cities in the Middle and Far East.

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6.4.2.1.2 Pathogen

Malaria Pathogens are micro organisms (plasmodia) carried by the female anopheles mosquito.

Pathogen	**Fever Attacks**
Plasmodium vivax Plasmodium ovale	Every 3 days (Malaria tertiana)

Plasmodium malariae	Every 4 days (Malaria quartana)
Plasmodium falciparum	Irregular (Malaria tropica)

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6.4.2.1.3 Transmission

Malaria parasites (plasmodia) are transmitted by the female Anopheles mosquito: the mosquitoes get infected by sucking blood from infected individuals. On subsequent blood- meals they introduce the parasites by their saliva into other human hosts. The pathogens first enter the liver, where they proliferate and attack the red blood cells (erythrocytes).

Anopheles mosquitoes typically feed in the evening hours and at night.

There is no human-to-human transmission by blood etc.

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6.4.2.1.4 Incubation period

- 6 to 30 days for the potentially life-threatening infection with plasmodium falciparum (malaria tropica)
- On occasion, an excessively long incubation period of several months up to one year has been observed.

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6.4.2.2 Symptoms

First:

- Fever;

- Headache, aching limbs;
- Exhaustion;
- Loss of appetite, nausea and vomiting.

Later (particularly in case of malaria tropica):

- Organ failure: e.g brain damage (dizziness, apathy, coma), kidney failure
- Anaemie, haemorrhage (bleeding)

Important:

- Any fever over 37,5 ° more than 6 days after potential exposure is suspicious of malaria infection.
- Proper medical examination (blood analysis by a doctor) should be done as soon as possible (at the latest within 24 hours) any time malaria is suspected.
- The doctor has to be informed about your stay in the tropics to facilitate diagnose.

Treatment:

- Anti-malaria medication, depending on the pathogen;
- Hospital treatment/intensive care unit, if required.

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6.4.2.3 Precautions/Prophylaxis

The methods of control currently available are exposure prophylaxis, chemoprophylaxis and/or therapy.

There is no guaranteed method of protection against malaria. It is impossible to avoid mosquito bites altogether, and even when preventive medicine is correctly administered, there is still a small chance of fever (breakthrough).

However, the disease can be cured if treated early enough and by correct means.

Intensive efforts to develop a vaccine are still in progress.

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6.4.2.3.1 Exposure prophylaxis

Exposure to mosquitoes can be avoided by sleeping inside well-screened areas or under mosquito netting. Outdoors, exposure to mosquito bites can be reduced by wearing light clothing that adequately covers the arms and legs, by periodic application of mosquito repellents to the skin (e.g Anti-Brumm forte, ExoPic 12) and by reducing outdoor activities in the evening, when mosquitoes usually bite.

Repellents are usually well tolerated on the human skin and effective for several hours. The above mentioned insect repellents should not be used for babies and only sparingly on small children.

Please take note that repellents can affect synthetic plastic material including watch glasses, spectacle frames, some synthetic fibres such as acetate-silk and lycra and possibly contact lenses.

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6.4.2.3.2 Chemoprophylaxis

Important: chemoprophylaxis does not replace exposure prophylaxis!

The recommendations for chemoprophylaxis can be obtained through family doctors, tropical doctors and immunization centres (e.g. SWISS Medical Services).

Precautionary medication: Malarone: Take one tablet a day, from the day before your arrival to seven days after you have left the malaria-risk region.

Important:

In case of side effects from anti-malaria (Malarone: stomach problems) stop medication and contact SWISS Medical Services.

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6.4.2.4 Stand-by-treatment

A preventive self-treatment of suspected malaria is the recommended strategy for areas with moderate risk of malaria. A self-treatment should be started when:

- Exposure for more than 6 days in a malaria risk area;
- fever of 37.5 C° and more;
- No medical examination with malaria diagnostics was possible within 24 hours.

Malarone:

- 4 tablets initially
- 2. day: 4 tablets (single dose)
- 3. day: 4 tablets (single dose)

For malaria diagnostic and possible additional medication after having taken the stand-by treatment, always see a doctor.

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6.4.3 Dengue and Chikungunya

Cabin, Cockpit, Operational Ground Staff

6.4.3.1 General

Dengue and Chikungunya are viral infections transmitted by the "aedes" mosquito. The mosquito mainly bites at dusk but may bite at any time during the day. Dengue is found in most tropical countries worldwide, Chikungunya in the tropical zones of East Africa and Asia.

Incubation period: Dengue 3-14 days, Chikungunya 3-7 days.

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6.4.3.2 Symptoms

- high fever, shivering attack
- rash
- severe headache
- muscular pain

The complication of spontaneous bleeding in Dengue is rare and occurs due to repeated infections.

Cabin, Cockpit, Operational Ground Staff

6.4.3.3 Prevention

There is no vaccination. The only protective measure is exposure prophylaxis against mosquito bites (clothing, repellents, etc., during daytime and dusk)

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6.4.3.4 Treatment

For treatment of symptoms, don't use Aspirin as this could cause complications in case of an infection (Medication Paracetamol).

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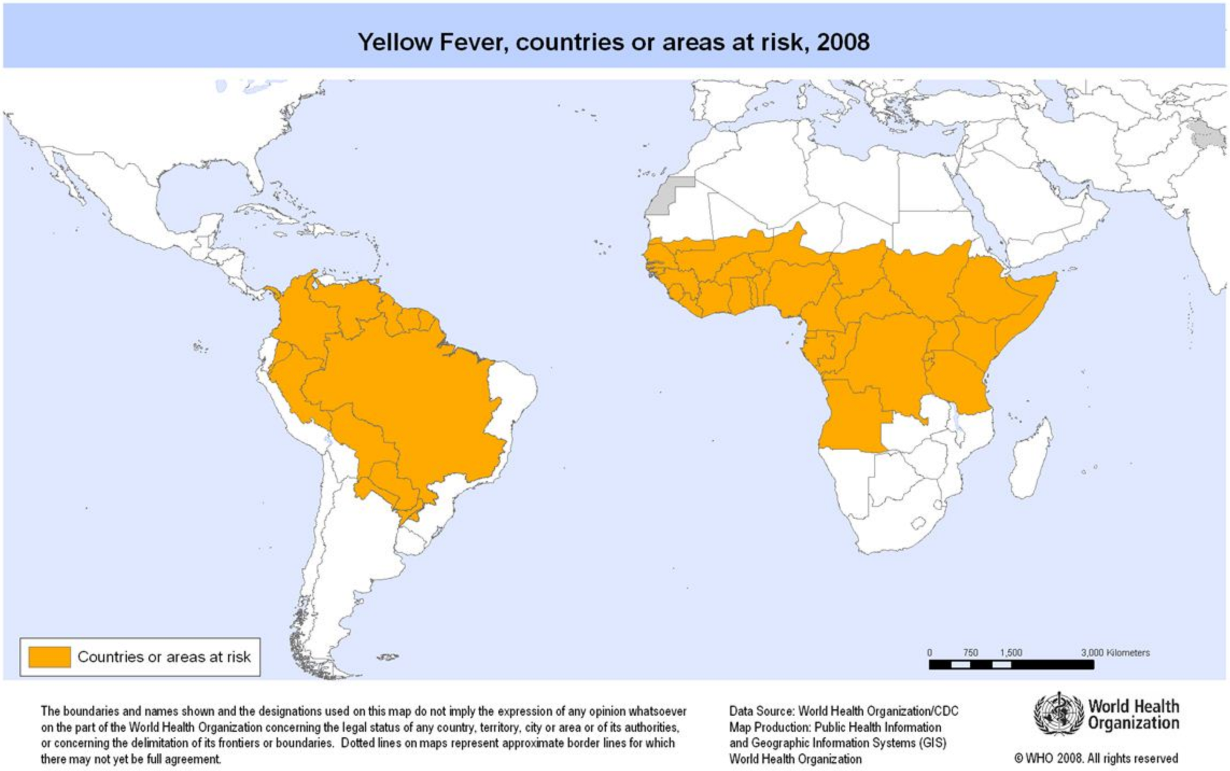
6.4.4 Yellow fever



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6.4.4.1 General

Yellow fever is a mosquito-borne viral disease, transmitted only by the bite of the “Aedes Mosquito”. The risk of yellow fever exists between 15°N and 15° S in Africa and South America. Yellow fever is not present in Asia (see map above)

The disease often results in death.

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6.4.4.2 Symptoms

Illness varies in severity from a flu-like syndrome to severe hepatitis and haemorrhagic fever.

- Acute onset, victim feels extremely unwell;
- Headache aching limbs;
- Fever;
- Skin becomes yellowish (the result of damage to the liver)

- Possible bleeding of skin and mucous (faulty coagulation);
- Aside from mild cases, yellow fever can cause death within ten days as a result of damage to the liver, kidneys and circulatory system.

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6.4.4.3 Prophylaxis

Vaccination is the only effective preventive measure. Crew members must have a valid vaccination against yellow fever.

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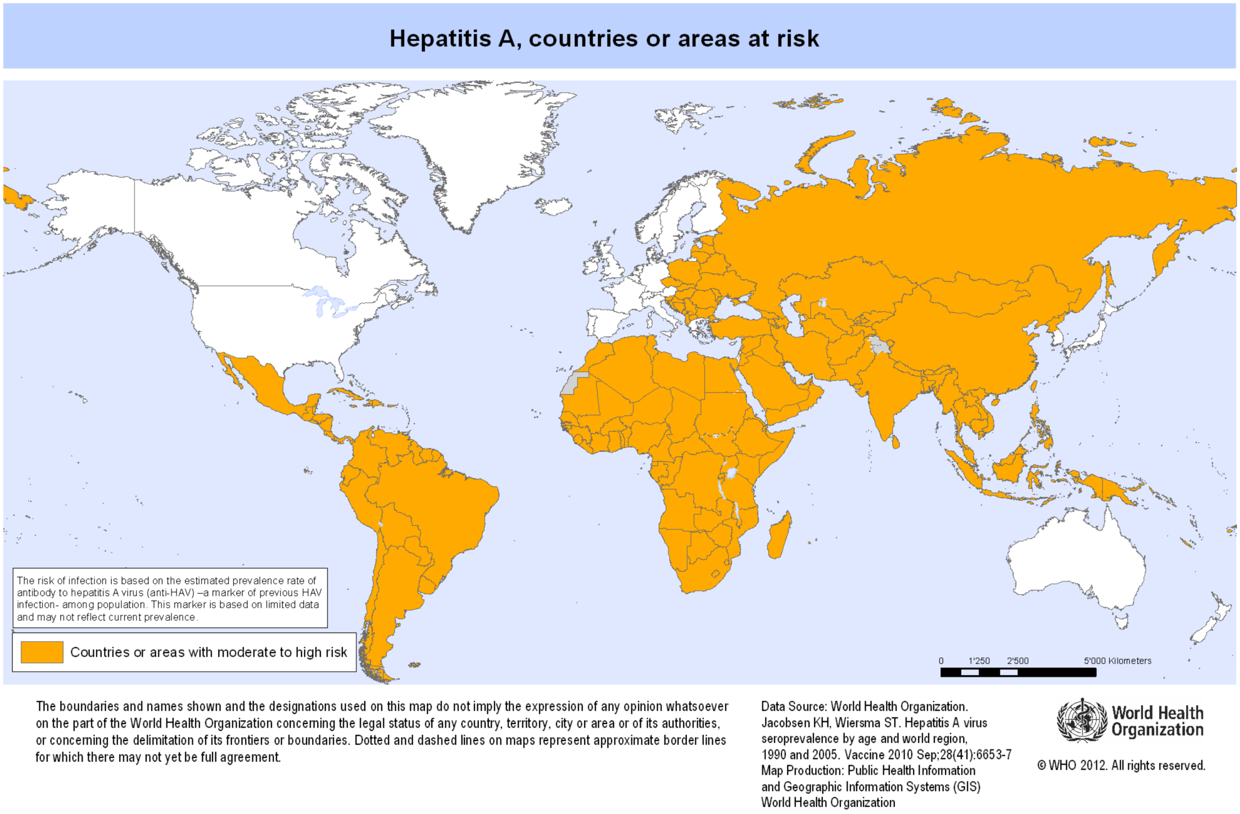
6.4.5 Hepatitis A



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6.4.5.1 General

Hepatitis A is transmitted by smear infection that causes inflammation of the liver.

The hepatitis A pathogen is usually found where hygienic conditions are very poor. In contrast to hepatitis B (see below), hepatitis A is generally less aggressive. It rarely becomes chronic.

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6.4.5.2 Symptoms

- General feeling of being unwell;
- Stomach and intestinal pain;
- Aching joints, possible fever;
- Nausea, urge to vomit after eating fatty food;
- Later: yellowish colouring of eyes and skin.

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6.4.5.3 Prophylaxis

- Good food hygiene;
- Vaccination.

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6.4.6 Hepatitis B and C

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6.4.6.1 General

The Hepatitis B virus is usually transmitted by direct contact with blood, saliva, bodily fluid and sexual intercourse.

The disease is similar to hepatitis A in many ways. However, treating hepatitis B usually takes longer, the disease takes a more aggressive course, and the acute phase of liver inflammation can develop into a chronic, difficult-to-treat stage that results in damage to the affected organ.

Vaccination offering a high level of protection is recommended for the following persons:

- Hospital personnel (direct blood contact);
- Drug addicts (exchange of needles);
- Everybody in the sexual active age.

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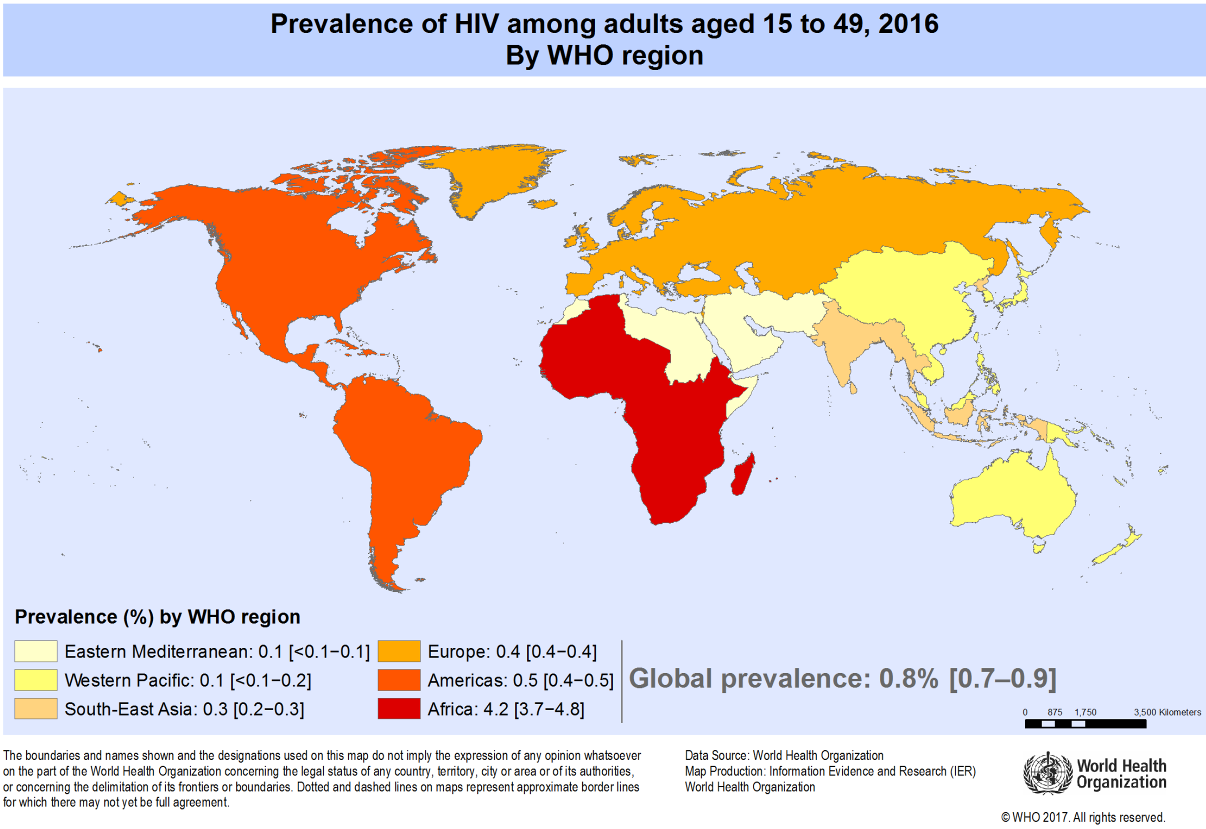
6.4.7 AIDS (Acquired Immune Deficiency Syndrome)



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6.4.7.1 General

AIDS is an infectious disease transmitted by the HIV (Human Immune Deficiency Virus).

Blood, sperm, and vaginal secretions contain the HIV in high concentrations, which is a key factor in transmission of the disease. When infection occurs, the virus penetrates the cells of the immune system and weakens it severely. The result is infections that do not appear in people with an intact immune system.

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6.4.7.2 First symptoms

Swollen lymph nodes;

- Fever;
- Diarrhoea;

- Severe weight loss;
- Night sweats;
- Unusual fatigue over long periods.

(These symptoms can also appear for every other infectious disease).

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6.4.7.3 The major manifestations of the disease

- Infection of the lungs;
- Chronic herpes on anus and penis;
- Fungal infection on mouth and oe-sophagus;
- Infection of central nervous system and brain;
- Malignant tumour (Kaposi syndrome).

Any of these diseases can cause death. But not everyone infected with the HIV will become seriously ill. The incubation period can last several years.

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6.4.7.4 Groups at risk

- Drug addicts (exchange of needles);
- AIDS is a factor for all sexually active people whose sexual behaviour involves high risk practices (sexual intercourse without a condom outside a monogamous relationship).

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6.4.7.5 Prophylaxis

- Do not exchange needles;
- Use condoms (except in monogamous relationships where neither partner is a carrier).

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6.4.7.6 First aid

- At present there is no cure for a HIV infection, nor is there any vaccination that protects against infection.

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6.4.8 Billharziasis

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6.4.8.1 General

Billharziasis is a worm infestation that can be contracted through contact with slow moving or still freshwater (e.g. Nile or Congo). The disease is widespread throughout the tropics and is especially common in Africa.

The eggs of the worm enter the water in urine or stool (lakes, rivers and ponds with high faecal content). The eggs become larvae, which then develop further in the bodies of certain snails (intermediate host). The fully developed larvae then leave the snail's body and enter the human body via the skin where they then mature into sexually mature worms.

Mating produces new eggs, which then penetrate the kidneys and the walls of the intestine and are then excreted either via the urine or the stool.

Worms and eggs can attack various body organs by lodging in the veins. This can interfere with or even stop the proper circulation of the blood and prevent the organ from functioning as it should.

There are a variety of symptoms for the disease.

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6.4.8.2 Symptoms

- Itching on the area of skin affected (point of entry for larvae)

Approximately 2 - 8 weeks later:

- Fever, chills;
- Digestive problems;
- Listlessness;
- Swelling of the liver and spleen;
- Blood in the urine, bladder infection (malignant tumour possible);
- Bloody stool and gastro-enteritis;
- Water retention in stomach cavity, damage to the liver (cirrhosis);
- Bronchitis and degeneration of the lung;
- Spinal meningitis, encephalitis.

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6.4.8.3 First aid

- Anti- worm medication (eggs have a short life span);
- Measures beneficial to the organism.

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6.4.8.4 Prevention

- No bathing or swimming in slow moving or still water.

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6.4.9 Cholera

Cabin, Cockpit, Operational Ground Staff

6.4.9.1 General

Cholera occurs mainly in countries where hygienic conditions are very poor.

The lack of sanitation precautions allows the cholera pathogen to enter the ground water (in the stool of an infected person) and thus enter the human organism via a smear infection.

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6.4.9.2 Symptoms

- Sudden vomiting, diarrhoea;
- Often without fever;
- After 1 - 2 days: signs of dehydration, i.e. dry mucous membrane, little urine production;
- Failure of the circulatory system.

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6.4.9.3 First aid

- Replace loss of fluid and salt;
- Support circulatory system;
- Medication;

- Isolate patient.

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6.4.9.4 Prophylaxis

- Good food hygiene;
- Vaccination in some circumstances (medical personal, aid workers, regulations);

Cholera is now curable, but because it spreads rapidly, quick notification is required, if the disease is suspected.

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6.4.10 Tetanus

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6.4.10.1 General

The tetanus pathogen is widespread. Infection occurs with an injury (from minor injuries, such as splinters, to serious injuries that become infected).

In the absence of oxygen, the tetanus bacilli form toxins (poisons) that spread through the nervous system and damage nerves that control the senses and the body's motor system.

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6.4.10.2 Symptoms

- At first the victim has difficulty chewing and swallowing;
- Gradual stiffening of the neck muscles, back and chest muscles;
- Hyperactive reflexes;
- the victim remains fully conscious
- Severe pain;
- Muscles stiffen, hyperactive reflexes and full consciousness are characteristic of this disease;
- Victim lies in a stiff, cramped position;
- Irritant sources of light, sound and touch trigger unbearably painful muscles or broken bones;
- In serious cases, heart failure and failure of the respiratory and circulatory systems can cause death.

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6.4.10.3 Treatment

- Immediate passive and active immunisation;
- Artificial respiration;
- Medication.

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6.4.10.4 Prophylaxis

- Vaccination.

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6.4.11 Diphtheria

Cabin, Cockpit, Operational Ground Staff

6.4.11.1 General

Diphtheria bacteria are transmitted by droplet infection as well as through direct contact. The toxins cause mucous infections in the throat/pharynx and can damage cells in the nervous system and heart.

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6.4.11.2 Symptoms

- Sore throat and difficulty swallowing;
- Fever;
- Fibrous white coating of the throat;
- Possible spread of the infection to larynx;
- Increased difficulty breathing due to swelling of glands in the throat.

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6.4.11.3 Therapy

- Medication.

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6.4.11.4 Prophylaxis

- Vaccination (usually combined with tetanus shot).

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6.4.12 Rubella (German measles)

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6.4.12.1 General

The measles virus is transmitted as a droplet infection.

While itself quite harmless, the disease is a threat to pregnant women. If contracted in the first three months of pregnancy in particular, the disease can cause serious deformities to the foetus.

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6.4.12.2 Symptoms

- Pale pink skin rash over the whole body;
- Fever and swollen lymph nodes;
- The disease lasts 4 - 5 days.

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6.4.12.3 Treatment

- General rest.

Cabin, Cockpit, Operational Ground Staff

6.4.12.4 Prophylaxis

- Active vaccination for young girls (usually carried out at school);
- Having had german measles provides lifelong immunity against the disease, as does the vaccination.

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6.4.13 Polio

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6.4.13.1 General

Transmission of the polio virus occurs through smear infection.

The virus first attacks the mucous membrane in the throat and small intestine; symptoms of an inflammation result. Only rarely does the virus attack the spinal cord and brain via blood.

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6.4.13.2 Symptoms

- Usually only a brief feverish throat infection;
- An attack on the spinal cord can leave the victim paralysed;

This can result in partial or complete disability in more than 50% of the cases.

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6.4.13.3 Therapy

- Medication;
- Possible artificial respiration if it appears that the victim has stopped breathing, or if there is a threat that his/her breathing may stop.

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6.4.13.4 Prophylaxis

- Vaccination

Cabin, Cockpit, Operational Ground Staff

6.4.14 Salmonella

Cabin, Cockpit, Operational Ground Staff

6.4.14.1 General

There are many types of salmonella that are transmitted between human beings by smear infection.

The most common types and their toxins invade the digestive system. The earliest symptoms appear soon afterwards.

Salmonella can be treated, but the treatment process can last a long time.

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6.4.14.2 Symptoms

- Nausea, vomiting, stomach cramps;
- Fever;
- Severe watery diarrhoea, possibly containing traces of blood and mucous;
- Later: symptoms of dehydration;
- Failure of the circulatory system;
- Possible transfer of pathogen into blood.

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6.4.14.3 First aid

- Replace lost fluid and salt;
- Support of circulatory system;
- Medication.

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6.4.14.4 Prophylaxis

- Good food hygiene;
- Salmonella spread quickly (carriers excrete pathogens without themselves becoming infected), the chain of infection is continued and should be reported as soon as their presence is suspected.

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6.4.15 Typhoid fever (most serious form of salmonella)

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6.4.15.1 General

The transmission of typhoid fever occurs by smear infection and through direct human contact.

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6.4.15.2 Symptoms

- Gradual beginning, listlessness, rheumatic complaints;
- Fever;
- Greyish - brown coating of the tongue;
- Later: lentil - sized brownish - red colouring on chest and abdomen;
- Intestinal ulcers;
- Severe diarrhoea;
- Spreads to other organs, causing damage.

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6.4.15.3 First aid

- Medication (antibiotics and cortisone);
- Lowering of fever;
- Support of circulatory system;
- Easily digestible diet.

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6.4.15.4 Prophylaxis

- Good food hygiene;
- Vaccination in certain cases (“back pack tourists”, aid workers in developing countries etc.).

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6.4.16 Amoebas

Cabin, Cockpit, Operational Ground Staff

6.4.16.1 General

Amoebas are microorganisms transmitted by smear infection from person to person.

Amoebas penetrate the intestinal wall and cause inflammation. Less frequently they enter the blood vessels in the intestine via which they are carried to the liver, where they then lodge.

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6.4.16.2 Symptoms

- Acute stomach pain;
- Glassy - bloody stool;
- Generally ill feeling;
- Weeks later: uncharacteristic stomach ache, irregular bowel movements;
- Rare: pus builds up in the liver (abscessed liver), the result of deposits left by amoeba.

Cabin, Cockpit, Operational Ground Staff

6.4.16.3 Treatment

- Medication;
- Diet.

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6.4.16.4 Prophylaxis

- Good food hygiene

Amoebas can be treated, but in some cases they can become chronic and very bothersome.

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6.4.17 Rabies

Cabin, Cockpit, Operational Ground Staff

6.4.17.1 General

Rabies is a viral infection that causes an acute infection of the brain. It is transmitted by the saliva of an infected mammal, most often through a bite. Except for a few countries in Europe, Australia and New Zealand the disease is found worldwide with most cases in south and southeast Asia. For travellers with special risks a pre-exposure vaccination is recommended. The disease is fatal if left untreated and treatment is only possible within days after an infection.

Cabin, Cockpit, Operational Ground Staff

6.4.17.2 Prevention

Avoid contact to straying dogs and wild mammals, especially to those which appear to be ill or behave aggressively.

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6.4.17.3 First Aid after being bitten

- wash and disinfect wound;
- seek medical help urgently for treatment (post exposure immune therapy and vaccination).

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6.4.18 Traveller's diarrhea

Cabin, Cockpit, Operational Ground Staff

6.4.18.1 General

A high proportion of visitors to tropical countries experience one or more short episodes of diarrhoea, mostly lasting only a few days, even without treatment.

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6.4.18.2 Pathogens

Although a number of different kinds of bacteria, protozoa and viruses can cause this disease, a specific (i.e. antibiotic) treatment is rarely needed, because the body's own defence mechanism is able to eliminate the pathogens.

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6.4.18.3 Transmission

Ingestion of the causative organisms with contaminated foodstuff and beverages.

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6.4.18.4 Incubation time

Usually only some hours to a few days.

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6.4.18.5 Symptoms

Acute watery diarrhoea with abdominal cramps, often preceded or accompanied initially by nausea, vomiting and fever. The symptoms usually subside within one or a few days. If bloody diarrhoea occurs and the fever continues, a complicated infection must be suspected. Due to the loss of fluid, dizziness and even collapse can occur.

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6.4.18.6 Treatment

As in many cases of diarrhoea, it is most important to generously replace the fluid lost:

- drinking tea with sugar, alternating with stock or light soups, supplemented by eating a banana from time to time is the most simple thing to do (special electrolyte solutions are more appropriate, but rarely needed).
- If there is vomiting, small amounts of fluid should be taken at short intervals and combined with an anti-emetic drug.
- Also Loperamid (Immodium) which slows the digestive system and is effective against diarrhoea can be taken.
- In cases with prolonged high fever, especially with diarrhoea containing blood and mucous, treatment with an appropriate antibiotic should be given.

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6.4.18.7 Prevention

Food hygiene refer to OM A Hygiene

Cabin, Cockpit, Operational Ground Staff

6.4.19 Sand flies

Cabin, Cockpit, Operational Ground Staff

6.4.19.1 General

Sand flies are blood sucking insects which are found predominantly in the Mediterranean area, the tropics and sub tropics of America and Asia. An insect bite causes reddening and itching of the skin, sometimes along with indisposition and fever. Occasionally certain tropical diseases can be transmitted through the sting.

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6.4.19.2 Prevention

Insect repellent

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6.4.20 Zika

In 2016 the Zika virus spread rapidly from South America to Central America, the Caribbean, Southeast Asia and to parts of Florida. It is transmitted by Aedes mosquitoes which also spread Dengue and Chikungunya. A transmission through sexual contact or via blood transfusion is possible. Aedes mosquitoes are mainly active during the day and at dusk.

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6.4.20.1 Symptoms

The incubation period is 3 to 12 days. Only one in five persons who are infected will develop symptoms. The symptoms are usually mild, last for 3 to 7 days and include skin rash, inflammation of the eyes, slight fever, headache and muscle and joint pains. In rare cases a neurological complication can develop.

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6.4.20.2 Effects during pregnancy

Zika infection during pregnancy can cause microcephaly (head and brain reduced in size), other neurological damage, eye deformities and diminished hearing in the unborn child.

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6.4.20.3 Prevention

Protection against mosquito bites (clothing, repellents, mosquito nets etc.) is the most effective precaution against Zika infection. Also spending time indoors, in rooms with air conditioning or mosquito screens lowers the risk for a mosquito bite. During and after a stay in a Zika risk area both men (via semen) and women (direct transmission) may pose a risk to an unborn child. As a precaution women should avoid pregnancy* and men should use condoms for a certain time period*. Partners of pregnant women should also use condoms for the whole time of the pregnancy. *for length of precaution see updated WHO recommendation.

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6.4.20.4 Treatment

There is no specific treatment for a Zika infection. A vaccination is not yet available. Paracetamol is effective in lowering fever and relieving pain.

Cabin, Cockpit, Operational Ground Staff

6.4.21 Hygiene

Cabin, Cockpit, Operational Ground Staff

6.4.21.1 General

The main focus of hygiene is to avoid the transmission of infectious diseases via agents such as bacteria, viruses and other micro organisms.

Some species of bacteria are essential to our health. Most of them are harmless and only a few are potentially infectious. Our immune system is highly efficient in keeping these infective agents under control. Nevertheless, under certain circumstances we fall ill. Factors such as the number, type of microorganism as well as the strength of the immune system play a key role.

There are various means of transmission. Each requires a different method of protection.

Transmission	Examples of diseases	Prevention
Person to person: • droplets (coughing, sneezing) • Physical contact (hands!)	Measles, mumps, Common Cold, Influenza, Polio	Personal hygiene
Feco-oral: • contaminated food/ water with excrements	Travellers Diarrhoea, Hepatitis A, Typhoid, Cholera	Food hygiene, personal hygiene
Through insect carriers or animals (e.g. stings, bites)	Malaria, Dengue, Chikungunya, Fever, Rabies, Tic bite diseases	Various methods, refer to corresponding chapters
Blood borne and sexually transmitted diseases	AIDS, Hepatitis B and C	“Safer sex”
Others	Bilharzia, Larva Migrans, Tetanus, Sand flies	Avoidance of contact, refer to corresponding chapters

Travelling to tropical and subtropical areas increases the risk of contracting an infectious disease due to poor food hygiene, climate and a higher prevalence of communicable diseases.

Incubation Period: time from the infection (entrance of the pathogen into the body) to the first symptoms of disease.

Cabin, Cockpit, Operational Ground Staff

6.4.21.2 Hygiene on board

A simple and affordable way of practicing good hygiene standard is by washing your hands frequently with soap.

The hand disinfectant provided on board is only needed:

1. when washing of the hands with soap and water is not possible;
2. after direct physical (with bare hands) contact with a person who is seriously ill;
3. after direct physical contact with infectious material (blood, excrements, vomit, body fluids).

Surgical masks are devices that may help prevent the spread of germ from one person to another. In the first place it should be worn by the contagious person and only in the second place by the persons taking care of the ill passenger. If worn properly, a surgical mask is supportive blocking droplets, splashes, sprays that may contain germs. Surgical masks are not intended to be used more than once. if a mask is damaged or soiled, or if breathing through the mask becomes difficult, you should remove the surgical mask, discard it safely and replace it by a new one. Wear gloves and wash your hands after handling the used mask.

Gloves should be worn whenever hands may get into contact with infectious substances like blood, body fluids, vomit, excrements, wounds and contaminated surfaces.

Infectious material should be disposed of separately. Please mark the bags with “Infectious material”. For medical utensils such as used syringes and opened ampoules use the yellow container in the Emergency Medical Kit.

The cabin air is cleaned by HEPA filters (refer to OM A Air Circulation), which absorb even the tiniest of microorganism very effectively. However, transmission of infectious diseases among passengers and crew via droplets is still possible. Until date, only very few cases are known in which dangerous diseases have been transmitted and spread in the cabin.

To reduce risk of acquiring an infectious disease avoid touching your face with your hands, and wash your hands frequently.

Cabin, Cockpit, Operational Ground Staff

6.4.21.3 Food Hygiene

Whenever possible, food should be cleaned, washed or peeled before being further prepared.

Food at room temperature is an ideal growing medium for all kinds of germs. Cooling and freezing are methods of slowing down the reproduction. Whereas heat (frying, boiling, toasting) above a certain temperature destroys most of the germs.

In countries with low hygienic standards tap water is also a frequent source of infectious diseases. Use only bottled water for drinking and brushing your teeth.

Ice from doubtful sources might contain germs which come to life when the ice melts. Abstain from drinking iced drinks or eating ice-cream.

If food hygiene is poor, remember:

Boil it, cook it, peel it or forget it

Cabin, Cockpit, Operational Ground Staff

6.4.21.4 Food Poisoning

Food poisoning is caused by smear infection.

Micro organisms on hands enter the mouth, pass through the stomach and digestive system, where they quickly multiply. Symptoms start 30 minutes up to several hours after the meal. There is no clear-cut distinction between food poisoning and traveller's diarrhoea. The later usually has a longer incubation time.

Cabin, Cockpit, Operational Ground Staff

6.4.21.4.1 Symptoms

- Nausea, vomiting;
- Diarrhoea;
- Abdominal cramps;
- Collapse

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6.4.21.4.2 First Aid

- Dietary steps:
    - Salt and fluid intake (bouillon, tea with sugar);

    - Food that slows the digestive system (e.g. bananas, rice, chocolate).
- Offer Domperidon against nausea;
- Offer Loperamid against diarrhoea; Loperamid reduces the hyperactivity of the bowels which causes partly the diarrhoea. It acts symptomatically and is not efficient against bacteria or toxins.
- Rest.

The main problem resulting from diarrhoea is the massive loss of salt and water from the intestine. In tropical zones, the body may react very sensitively to a loss of salt and water.

Cabin, Cockpit, Operational Ground Staff

6.4.21.5 Food Poisoning on Board

If several passengers fall ill during flight, there is a big chance that they are suffering from a case of food poisoning.

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6.4.21.5.1 Organisational measures

- Inform S/C and CMD;
- Call for a medically qualified person and get the EMK ready;
- Ask the affected patients about the food they have eaten (when, where, what);
- Refrigerate at least one sample of the food (for bacteriological examination on ground);
- Note passenger and doctor's contact addresses;
- Write a flight report.

Cabin, Cockpit, Operational Ground Staff

6.4.21.5.2 First aid

- Distribute airsickness bags and blankets;
- Place passengers near toilets;
- Reserve one toilet for crew and passengers not showing symptoms;
- Offer Loperamid against diarrhoea;
- Offer Domperidon against nausea;
- Offer tea, bouillon, Cola, crackers or equivalent;
- Open fresh air vent (A320);

- Supply refresher towels or hot towels;
- Arrange passengers seats to comfortable position.

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6.4.22 Aeroplane disinsection

According to the International Health Regulation of WHO some national health authorities require incoming aeroplanes to be sprayed with insecticide to ensure disease-carrying insects, mainly mosquitoes, are not brought into those countries. This procedure is known as disinsection. The chemical agent used by EDW is d-Phenotrin, a synthetic pyrethroid, which is recommended by WHO.

Although some individuals may experience transient discomfort (eye or skin irritation) an aircraft disinsection by aerosol application has no toxicological impact, especially when considering the low dosage and the short exposure time. With proper handling therefore no systemic health risk is anticipated for passengers, including children and crew members. Passengers who have respiratory disorders, allergies or are sensitive to chemical substances and pregnant women may wish to cover their mouths and noses during disinsection. This also applies to pregnant women. For exact application mode see FAM Disinsection.

Cabin, Cockpit, Operational Ground Staff

6.4.23 Phone numbers and contacts

In case of unspecific symptoms or suspected tropical disease the following organisations provide factual information:

Organisation	Phone number
SWISS Medical Services	+41 58 584 68 33
Swiss Tropical Institute Basel	+41 61 284 82 55 **+41 61 284 81 44 (Emergency Phone 24h)**
Airport Medical Centre Zurich	+41 43 816 60 00
REGA	Switzerland: 1414 (24h) Worldwide: +41 333 333 333 (24h)
MedAire	+49 6102 35 88 172
MedAire Passenger fit-to-fly	+49 6102 35 88 190

7 Flight Time Limitations

Cabin, Cockpit, Operational Ground Staff

7.1 Definitions

Cabin, Cockpit, Operational Ground Staff

7.1.1 Acclimatisation

Cabin, Cockpit, Operational Ground Staff

7.1.1.1 Acclimatised

Cabin, Cockpit, Operational Ground Staff

Means a state in which a crew member's circadian biological clock is synchronised to the time zone where the crew member is. A crew member is considered to be acclimatised to a 2-hour wide time zone surrounding the local time at the point of departure. A crew member remains acclimatised to the local time of his/her reference time during 47 hours 59 minutes after reporting no matter how many time zones he/she has crossed.

7.1.1.2 Unknown state of acclimatisation

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Means a state in which a crew member's circadian biological clock is not synchronised to either the point of departure of the preceding FDP or the point of departure of the subsequent FDP. The crew member's circadian biological clock is in the process of adjusting and is therefore considered 'unknown'.

7.1.1.3 Reference time

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Means the local time at the reporting point situated in a 2-hour wide time zone band around the local time where a crew member is acclimatised.

7.1.2 Accommodation

Cabin, Cockpit, Operational Ground Staff

7.1.2.1 General

Cabin, Cockpit, Operational Ground Staff

Means, for the purpose of standby and split duty, a quiet and comfortable place not open to the public with the ability to control light and temperature, equipped with adequate furniture that provides a crew member with the possibility to sleep, with enough capacity to accommodate all crew members present at the same time and with access to food and drink.

Cabin, Cockpit, Operational Ground Staff

7.1.2.2 Suitable accommodation

Means, for the purpose of standby, split duty and rest, a separate room for each crew member located in a quiet environment and equipped with a bed, which is sufficiently ventilated, has a device for regulating temperature and light intensity, and access to food and drink.

Cabin, Cockpit, Operational Ground Staff

7.1.3 Augmented flight crew

Means a flight crew which comprises more than the minimum number required to operate the aircraft, allowing each flight crew member to leave the assigned post, for the purpose of in-flight rest, and to be replaced by another appropriately qualified flight crew member.

Cabin, Cockpit, Operational Ground Staff

7.1.4 Break

Means a period of time within a flight duty period, shorter than a rest period, counting as duty and during which a crew member is free of all tasks.

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7.1.5 Delayed reporting

Means the postponement of a scheduled FDP by Edelweiss Air before a crew member has left the place of rest.

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7.1.6 Disruptive schedule

Cabin, Cockpit, Operational Ground Staff

7.1.6.1 General

Means a crew member's roster which disrupts the sleep opportunity during the optimal sleep time window by comprising an FDP or a combination of FDP’s which encroach, start or finish during any portion of the day or of the night where a crew member is acclimatised. A schedule may be disruptive due to early starts, late finishes or night duties.

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7.1.6.2 Early start

Means a duty period starting in the period between 05:00 and 05:59 in the time zone to which a crew member is acclimatised.

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7.1.6.3 Late finish

Means a duty period finishing in the period between 23:00 and 01:59 in the time zone to which a crew member is acclimatised.

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7.1.6.4 Night duty

Means a duty period encroaching any portion of the period between 02:00 and 04:59 in the time zone to which the crew is acclimatised.

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7.1.7 Duty

Means any task that a crew member performs for Edelweiss Air, including flight duty, administrative work, giving or receiving training and checking, positioning, and some elements of standby.

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7.1.8 Duty period

Means a period which starts when a crew member is required by Edelweiss Air to report for or to commence a duty and ends when that person is free of all duties, including post-flight duty.

Cabin, Cockpit, Operational Ground Staff

7.1.9 Duty type overview

<table>
<tr><td>Preflight duty[1]</td><td>Block off Block on</td><td>Postflight duty[2]</td><td>Free of any duty</td></tr>
<tr><td colspan="3">Duty period</td><td>Rest period</td></tr>
<tr><td colspan="2">Flight duty period (FDP)</td><td colspan="2"></td></tr>
<tr><td></td><td>Flight time</td><td colspan="2"></td></tr>
</table>

1. Starts with reporting for duty
2. Ends with check-out

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7.1.10 Eastward-westward/westward-eastward transition

Means the transition at home base between a rotation crossing a 6 hour wide or more time zone in one direction and a rotation crossing a 4 hour wide or more time zone in the opposite direction.

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7.1.11 Flight duty period

Flight duty period (FDP) means a period that commences when a crew member is required to report for duty, which includes a sector or a series of sectors, and finishes when the aircraft finally comes to rest and the engines are shut down, at the end of the last sector on which the crew member acts as an operating crew member. MFDP means maximum daily flight duty period.

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7.1.12 Flight time

Means the time between an aircraft first moving from its parking place for the purpose of taking off until it comes to rest on the designated parking position and all engines are shut down.

Cabin, Cockpit, Operational Ground Staff

7.1.13 Home base

Means the location, assigned by Edelweiss Air to the crew member, from where the crew member normally starts and ends a duty period or a series of duty periods and where, under normal circumstances, Edelweiss Air is not responsible for the accommodation of the crew member concerned. The home base is a single airport location assigned with a high degree of permanence.

Cabin, Cockpit, Operational Ground Staff

7.1.14 Inflight rest facility

Means a bunk or seat with leg and foot support suitable for crew members' sleeping on board an aircraft. it is divided into 3 classes:

- “Class 1 rest facility” means a bunk or other surface that allows for a flat or near flat sleeping position. It reclines to at least 80° back angle to the vertical and is located separately from both the flight crew compartment and the passenger cabin in an area that allows the crew member to control light, and provides isolation from noise and disturbance.
- “Class 2 rest facility” means a seat in an aircraft cabin that reclines at least 45° back angle to the vertical, has at least a pitch of 55 inches (137,5cm), a seat width of at least 20 inches (50cm) and provides leg and foot support. It is separated from passengers by at least a curtain to provide darkness and some sound mitigation, and is reasonably free from disturbance by passengers or crew members;
- “Class 3 rest facility” means a seat in an aircraft cabin or flight crew compartment that reclines at least 40° from the vertical, provides leg and foot support and is separated from passengers by at least a curtain to provide darkness and some sound mitigation, and is not adjacent to any seat occupied by passengers.

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7.1.15 Local day

Means a 24-hour period commencing at 00:00 local time.

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7.1.16 Local night

Means a period of 8 hours falling between 22:00 and 08:00 local time.

Cabin, Cockpit, Operational Ground Staff

7.1.17 Operating crew member

Means a crew member carrying out duties in an aircraft during a sector.

Cabin, Cockpit, Operational Ground Staff

7.1.18 Positioning/Deadheading

Means the transferring of a non-operating crew member from one place to another, at the behest of Edelweiss Air, excluding:

- The time of travel from a private place of rest to the designated reporting place at home base and vice versa, and
- The time for local transfer from a place of rest to the commencement of duty and vice versa.

Detailed procedures are laid down in OM A Crew transportation.

Cabin, Cockpit, Operational Ground Staff

7.1.19 Reserve

Reserve (RSV) means a period of time during which a crew member is required by Edelweiss Air to be available to receive an assignment for an FDP, positioning or other duty notified at least 10 hours in advance.

Cabin, Cockpit, Operational Ground Staff

7.1.20 Rest period

Means a continuous, uninterrupted and defined period of time, following duty or prior to duty, during which a crew member is free of all duties, standby and reserve.

Cabin, Cockpit, Operational Ground Staff

7.1.21 Rotation

Is a duty or a series of duties, including at least one flight duty, and rest periods out of home base, starting at home base and ending when returning to home base for a rest period where Edelweiss Air is no longer responsible for the accommodation of the crew member.

Cabin, Cockpit, Operational Ground Staff

7.1.22 Single day free of duty

Means, for the purpose of complying with the provisions of Council Directive 2000/79/EC, a time free of all duties and standby consisting of one day and two local nights, which is notified in advance. A rest period may be included as part of the single day free of duty.

Cabin, Cockpit, Operational Ground Staff

7.1.23 Sector

Means the segment of an FDP between an aircraft first moving for the purpose of taking off until it comes to rest after landing on the designated parking position.

Cabin, Cockpit, Operational Ground Staff

7.1.24 Standby

Cabin, Cockpit, Operational Ground Staff

7.1.24.1 General

Means a pre-notified and defined period of time during which a crew member is required by Edelweiss Air to be available to receive an assignment for a flight, positioning or other duty without an intervening rest period.

Cabin, Cockpit, Operational Ground Staff

7.1.24.2 Airport standby

Means a standby performed at the airport (not applicable for EDW).

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7.1.24.3 Other standby

Means a standby either at home or in a suitable accommodation.

Edelweiss Air defines the following types of standby:

- SBS XX-YY means standby for shorthaul within an defined time range (e.g. SBS 05-12 means standby for SH which starts at 0500LT and ends at 1200LT).
- SBL XX-YY means standby for longhaul within an defined time range (e.g. SBL 10-20 means standby for LH which starts at 1000LT and ends at 2000LT).
- SBC XX-YY means standby combined for longhaul and shorthaul (e.g. SBC 12-22 means standby for LH and SH which starts at 1200LT and ends at 2200LT).

SBC is used primarily for LH OPS. If no assignment has been given and the respective LH flight has departed it continues to be used for SH OPS.

Cabin, Cockpit, Operational Ground Staff

7.1.25 Window of circadian low

Window of circadian low (WOCL) means the period between 02:00 and 05:59 hours in the time zone to which a crew member is acclimatised.

Cabin, Cockpit, Operational Ground Staff

7.2 Introduction

Cabin, Cockpit, Operational Ground Staff

7.2.1 General

These flight time limitations apply to all flight crew and cabin crew members and to all EDW operations, scheduled and non-scheduled, short-haul and long-haul. They are the legal basis containing the flight and duty time limitations as defined by Commission Regulation (EU) No 83/2014 of 29 January 2014 and Council Directive 2000/79/EC of 27 November 2000 as well as applicable national regulations of Switzerland.

For FCM only:
Additional regulations apply from the GAV2019 under normal circumstances from the planning stage until check-in.

For CCM only:
Additional regulations apply from the GAV2022 under normal circumstances from the planning stage until check-in.

Cabin, Cockpit, Operational Ground Staff

7.2.1.1 Edelweiss Air duties and responsibility relating to flight time limitations

Edelweiss Air issues individual duty rosters covering one calendar month to every crew member. This personal schedule is published latest normally on the 15th of the previous month.

Edelweiss Air allocates local days free of duty to every crew member according to applicable rules and regulations contained in this chapter. Edelweiss Air will ensure that duty periods are planned to enable crew members to remain sufficiently free from fatigue so they can operate to a satisfactory level of safety under all circumstances.

Edelweiss Air specifies reporting times that allow sufficient time for ground duties (Refer to OM A Reporting Times).

Edelweiss Air takes into account the relationship between the frequency and pattern of flight duty periods and rest periods and give consideration to the cumulative effects of undertaking long duty hours combined with minimum rest periods.

Edelweiss Air allocates duty patterns which avoid practices that cause a serious disruption of an established sleep/work pattern, such as alternating day/night duties.

Edelweiss Air complies with the provisions concerning disruptive schedules.

Edelweiss Air provides rest periods of sufficient time to enable crew members to overcome the effects of the previous duties and to be rested by the start of the following flight duty period.

Edelweiss Air plans recurrent extended recovery rest periods and notifies crew members sufficiently in advance.

Edelweiss Air plans flight duties in order to be completed within the allowable flight duty period taking into account the time necessary for pre-flight duties, the sector and turnaround times.

Edelweiss Air will change a schedule and/or crew arrangements if the actual operation exceeds the maximum flight duty period on more than 33% of the flight duties in that schedule during a scheduled seasonal period.

Cabin, Cockpit, Operational Ground Staff

7.2.1.2 Crew member duties and responsibility relating to flight time limitations

Crew members shall:

- comply with all flight and duty time limitations (FTL) and rest requirements applicable to their activities;
- make optimum use of the opportunities and facilities for rest provided and plan and use their rest periods properly.

Apart from flying/instructing for Edelweiss Air, no crew member is allowed to fly or instruct on a simulator or aircraft for financial gain, or commercially for a third party, without the approval of Edelweiss Air Flight Operations Management (OC).

Cabin, Cockpit, Operational Ground Staff

7.2.2 Home base

Cabin, Cockpit, Operational Ground Staff

7.2.2.1 General

The home base is stipulated in the individual working contract.

Crew members should consider making arrangements for temporary accommodation closer to their home base if the travelling time from their residence to their home base usually exceeds 90 minutes.

Cabin, Cockpit, Operational Ground Staff

7.2.2.2 Change of home base

In the case of a change of home base, the first recurrent extended recovery rest period prior to starting duty at the new home base is increased to 72 hours, including 3 local nights. Travelling time between the former home base and the new home base is positioning.

Cabin, Cockpit, Operational Ground Staff

7.2.3 Reporting Times

Cabin, Cockpit, Operational Ground Staff

7.2.3.1 Reporting Times for Flight Duty

Crew members shall report for their assigned duty as follows:

Type of duty	Time before planned STD/ETD (minutes)	
	Home base	Abroad
A320	60	60
A340 Flight crew	80	80[1]
A340 Cabin crew	90	75[1]

1. Minimum check-in time can be reduced to 60 minutes applying the special reporting for duty procedure (refer to FOSI Special check-in procedure and FAM Special check-in procedure).

At stations abroad, the CMD or S/C may in exceptional cases define different reporting for duty times, if additional time is required by the flight or cabin crew. The minimum time for pre-flight duties (i.e. reporting for duty) is 1 hour. Check-in time represents the commencement of a FDP.

The CMD and S/C check that the flight- and cabin crew are complete and report any irregularity immediately to each other and OCC and/or to the respective station abroad in case of operational consequences.

All flight personnel are responsible to board the aeroplane early enough, considering also tarmac transportation situation, in order to ensure careful and complete cockpit/cabin preparation prior to departure.

At the beginning of each flight duty, flight- and cabin crew will meet each other in order to:

a. Organise and optimise teamwork, and to pass information and/or instructions for the flight (such as flight time, routing, special weather conditions, PA, crew rest, safety, etc.);
b. Inform about special conditions, which might influence an efficient service to the passengers.

Cabin, Cockpit, Operational Ground Staff

7.2.3.2 Reporting Times for Positioning

Positioning means travelling by aeroplane, coach/bus, train or car without any function on board for commencing a duty, within a crew rotation or at the end.

Depending on the transportation means, the crewmember reports for duty as follows:

Type of transportation	Type of reporting	Reporting time before planned STD/ETD (minutes)
International flight	By phone call to Crewoffice/OCC	120
Domestic flight ex ZRH	Personally at Crewoffice/OCC	60
Domestic flight ex GVA	By phone call to Crewoffice/OCC	60
Coach/Bus	n/a	Arranged by CMD or S/C

Train	By phone call to Crewoffice/OCC	60
Car	According special arrangement	

Delayed positioning must be reported to the Crewoffice in order to log duty time correctly.

Cabin, Cockpit, Operational Ground Staff

7.2.4 Post-flight duty time

Post-flight duties count as duty period. The standard post-flight duty is 30 minutes. The standard post-flight duty may be extended (e.g. for debriefing of a flight etc.).

Cabin, Cockpit, Operational Ground Staff

7.2.5 Fatigue risk management

Refer to OMM Fatigue Risk Management System (FRMS).

Cabin, Cockpit, Operational Ground Staff

7.3 Duty and flight time limitations

Cabin, Cockpit, Operational Ground Staff

7.3.1 Duty time limitations

The total duty periods to which a crew member may be assigned shall not exceed:

- 60 duty hours in any 7 consecutive days;
- 110 duty hours in any 14 consecutive days;
- 190 duty hours in any 28 consecutive days, spread as evenly as practicable throughout that period; and
- 2'000 duty hours in any calendar year.

The following fixed values are calculated in the above limitations:

Duty	Duty hours
Office duty	8.5 hours
Classroom instruction	8 hours
MIL service	8.5 hours
Recency training in simulator (including briefing and debriefing)	1 hours
Simulator (including briefing and debriefing)	7 hours

Positioning ZRH-GVA and vice versa by train	4 hours

Positionings are calculated as follows (times always refer to the respective reporting point):

- Scheduled International flight: actual schedule time plus 2 hour before flight and 30 minutes after the flight;
- Scheduled Domestic flight: actual schedule time plus 1 hour before flight and 30 minutes after the flight;
- Chartered transportation means for crew positioning purpose only (e.g. aeroplane or coach/bus): upon actual situation;
- Train: actual schedule time (except ZRH-GVA and vice versa);
- Car: actual travel time

Cabin, Cockpit, Operational Ground Staff

7.3.2 Flight time limitations

The total flight time of the sectors on which an individual crew member is assigned as an operating crew member shall not exceed:

- 100 hours of flight time in any 28 consecutive days;
- 900 hours of flight time in any calendar year; and
- 1'000 hours of flight time in any 12 consecutive calendar months.

Cabin, Cockpit, Operational Ground Staff

7.3.3 Days free of duty

Cabin, Cockpit, Operational Ground Staff

7.3.3.1 General

Days free of duty shall normally be planned at home base. Exceptions may be defined for special operations (e.g. Weltrundflug).

Planned days free of duty during a period of illness/accident still count as days free of duty.

If only one single day free of duty is planned it has to include two local nights in order to be counted as OFF day.

Values up to 0.49 are rounded down, higher values are rounded up.

Cabin, Cockpit, Operational Ground Staff

7.3.3.2 Days free of duty per month

Edelweiss Air plans all duty rosters to ensure that every crew member receives a minimum of 7 single days free of duty at home base within every single calendar month. The monthly minimum 7 days free of duty may be reduced by 1/4 of a day for every day of vacation, unpaid leave, military service or illness/accident.

Cabin, Cockpit, Operational Ground Staff

7.3.3.3 Days free of duty in a 3 month period (flight crew only)

Each crewmember shall be given at least 28 days free of duty per quarter of the year. This number is reduced by 1/3 of a day for every day of absence (e.g. vacation, unpaid leave, military service, illness/accident).

Cabin, Cockpit, Operational Ground Staff

7.3.3.4 Days free of duty per year

Every crew member shall be given at least 120 days free of duty per calendar year. This number is reduced by:

1. Each day of vacation, military service or illness/accident by 1/3 of a day, in any combination to not less than 96 days free of duty per calendar year;
2. Each day of unpaid leave by 1/3 of a day;

Crew members working under a part time contract receive a minimum of OFF days pro rata according their contract percentage.

Planned days free of duty during a period of illness or accident still count as days free of duty.

Cabin, Cockpit, Operational Ground Staff

7.3.3.5 Days free of duty versus long term operation away from home base

In agreement with the crew member concerned, Edelweiss Air may allocate duty rosters away from home base. The days free of duty are then planned at the temporary base of the crew member. For every consecutive 30 days of absence away from home base, the crew member shall be given seven local days free of duty at home base upon return.

Cabin, Cockpit, Operational Ground Staff

7.3.4 FDP with different reporting time for flight crew and cabin crew

Whenever the cabin crew has an earlier reporting time prior to the same flight duty compared with the flight crew, the FDP of the cabin crew may be extended by the difference in reporting time between the cabin crew and the flight crew. The difference shall not exceed 1 hour. The MFDP for cabin crew shall be based on the time at which the flight crew report for their FDP, but the FDP shall start at the reporting time of the cabin crew.

Cabin, Cockpit, Operational Ground Staff

7.3.5 State of acclimatisation

When the local time at the place where a duty commences differs by more than 2 hours from the local time at the place where the next duty starts, the crew member, for the calculation of the MFDP, is considered to be acclimatised in accordance with the values in the table below:

Time difference (h) between reference time and local time where the crew member starts the next duty	**Time elapsed since reporting at reference time**				
	< 48	48-71:59	72-95:59	96-119:59	≥ 120
< 4	B	D	D	D	D
≤ 6	B	X	D	D	D
≤ 9	B	X	X	D	D
≤ 12	B	X	X	X	D

"B" means acclimatised to the local time of the departure time zone;

"D" means acclimatised to the local time where the crew member starts his/her next duty; and

"X" means that a crew member is in an unknown state of acclimatisation.

Cabin, Cockpit, Operational Ground Staff

7.3.6 MFDP for acclimatised crew members

Start of FDP at reference time	Sectors			
	1-2	3	4	5
0500-0514	12:00	11:30	11:00	10:30
0515-0529	12:15	11:45	11:15	10:45
0530-0544	12:30	12:00	11:30	11:00
0545-0559	12:45	12:15	11:45	11:15
0600-1329	13:00	12:30	12:00	11:30
1330-1359	12:45	12:15	11:45	11:15

1400-1429	12:30	12:00	11:30	11:00
1430-1459	12:15	11:45	11:15	10:45
1500-1529	12:00	11:30	11:00	10:30
1530-1559	11:45	11:15	10:45	10:15
1600-1629	11:30	11:00	10:30	10:00
1630-1659	11:15	10:45	10:15	09:45
1700-0459[1]	11:00	10:30	10:00	09:30

1. For night duties according OM A Night Duty, the following applies:

   The MFDP for consecutive night duties, the number of sectors is limited to 4 sectors per duty;

   Edelweiss Air shall apply appropriate fatigue risk management to actively manage the fatiguing effect of night duties of more than 10 hours in relation to the surrounding duties and rest periods

Cabin, Cockpit, Operational Ground Staff

7.3.7 Crew members in an unknown state of acclimatisation

The maximum daily FDP when crew members are in an unknown state of acclimatisation shall be in accordance with table state X:

Table State X				
Sectors	1 - 2	3	4	5
Maximum daily FDP	11:00	10:30	10:00	09:30

Crew Members in an unknown state of acclimatisation under FRM: The values in the following table state X* may apply, provided the EDW FRM continuously monitors that the required safety performance is maintained.

Table State X*				
Sectors	1 - 2	3	4	5
Maximum daily FDP	12:00	11:30	11:00	10:30

EDW FRM is in force as per OMM Fatigue Risk Management System (FRMS). If table state X* applies, the crew is informed accordingly.

Cabin, Cockpit, Operational Ground Staff

7.3.8 FDP extension without in-flight rest

The MFDP for acclimatised crew members can be extended without the provision of in-flight rest facilities in accordance with the table below:.

Start of FDP at reference time	Sectors			
	1-2	3	4	5
0600-0614	Not allowed			
0615-0629	13:15	12:45	12:15	11:45
0630-0644	13:30	13:00	12:30	12:00
0645-0659	13:45	13:15	12:45	12:15
0700-1329	14:00	13:30	13:00	12:30
1330-1359	13:45	13:15	12:45	
1400-1429	13:30	13:00	12:30	
1430-1459	13:15	12:45	12:15	
1500-1529	13:00	12:30	12:00	
1530-1559	12:45	Not allowed		
1600-1629	12:30			
1630-1659	12:15			
1700-1729	12:00			
1730-1759	11:45			
1800-1829	11:30			
1830-1859	11:15			
1900-0559[1]				

1. For night duties according OM A Night Duty, the following applies:

   The MFDP for consecutive night duties, the number of sectors is limited to 4 sectors per duty

Edelweiss Air shall apply appropriate fatigue risk management to actively manage the fatiguing effect of night duties of more than 10 hours in relation to the surrounding duties and rest periods

The following conditions apply:

1. The MFDP may be extended by up to 1 hour not more than twice in any 7 consecutive days. In that case:
   - the minimum pre-flight and post-flight rest periods shall be increased by 2 hours; or
   - the post-flight rest period shall be increased by 4 hours.
2. When extensions are used for consecutive FDP's, the additional pre- and post-flight rest between the two extended FDP's required under point 1. above shall be provided consecutively.
3. The use of the extension shall be planned in advance (i.e latest prior to the rest period preceding the extended FDP), and shall be limited to a maximum of:
   - 5 sectors when the WOCL is not encroached; or
   - 4 sectors, when the WOCL is encroached by 2 hours or less; or
   - 2 sectors, when the WOCL is encroached by more than 2 hours.
4. Extension of the MFDP without in-flight rest shall not be combined with extensions due to in-flight rest or split duty in the same duty period

Cabin, Cockpit, Operational Ground Staff

7.3.9 FDP extension with in-flight rest

Cabin, Cockpit, Operational Ground Staff

7.3.9.1 General

The maximum daily FDP can be extended based on the number and the class of in-flight crew rest facilities. Crew rest facilities are divided into 3 classes depending on the quality of rest they provide. For the minimum standards required of each type of rest facility refer to the definitions of class 1, class 2 and class 3 rest facilities contained in the chapter OM A Inflight rest facility.

The extension of the FDP with in-flight rest shall comply with the following:

- The FDP is limited to 3 sectors;
- The minimum in-flight rest is the time which can be spent in the inflight rest facility.

- The minimum in-flight rest period is a consecutive 90-minute period for each crew member and 2 consecutive hours for the flight crew members which are at the controls during landing;
- All time spent in the rest facility is counted as FDP;
- The minimum rest at destination is at least as long as the preceding duty period, or 14 hours, whichever is greater; and
- A crew member does not start a positioning sector to become part of this operating crew on the same flight

Cockpit, Operational Ground Staff

7.3.9.2 FDP extension for augmented flight crew

Type of rest facility	3 Pilots	4 Pilots
Class 1	16[1]	17[1]
Class 2	15[1]	16[1]
Class 3	14[1]	15[1]

1. May be increased by 1 hour for FDPs that include 1 sector of more than 9 hours of continuous flight time and a maximum of 2 sectors.

Cabin, Cockpit, Operational Ground Staff

7.3.9.3 FDP extension with in-flight rest for cabin crew

<table>
<tr><th rowspan="2">Maximum extended FDP</th><th colspan="3">Minimum in-flight rest per CCM (hours)</th></tr>
<tr><th>Class 1</th><th>Class 2</th><th>Class 3</th></tr>
<tr><td>up to 14:30</td><td>1:30</td><td>1:30</td><td>1:30</td></tr>
<tr><td>14:31-15:00</td><td>1:45</td><td>2:00</td><td>2:20</td></tr>
<tr><td>15:01-15:30</td><td>2:00</td><td>2:20</td><td>2:40</td></tr>
<tr><td>15:31-16:00</td><td>2:15</td><td>2:40</td><td>3:00</td></tr>
<tr><td>16:01-16:30</td><td>2:35</td><td>3:00</td><td rowspan="2"></td></tr>
<tr><td>16:31-17:00</td><td>3:00</td><td>3:25</td></tr>
<tr><td>17:01-17:30</td><td>3:25</td><td colspan="2" rowspan="2">Not allowed</td></tr>
<tr><td>17:31-18:00</td><td>3:50</td></tr>
</table>

Cabin, Cockpit, Operational Ground Staff

7.3.10 Unforeseen circumstances in flight operations

Cabin, Cockpit, Operational Ground Staff

7.3.10.1 FDP and Rest modification at CMD's discretions

The CMD may modify the limits on flight duty, duty and rest periods in the case of unforeseen circumstances in flight operations, which start at or after the reporting time.

The exercise of CMD's discretions should be considered as exceptional and should be avoided at home base where standby or reserve crew members should be available.

1. In all cases the CMD shall comply with the following:
    - The MFDP which results after applying OM A MFDP for acclimatised crew members - OM A Crew members in an unknown state of acclimatisation, OM A FDP extension with in-flight rest and OM A Split duty may not be increased by more than 2 hours unless the flight crew has been augmented. With augmented flight crew the MFDP may be increased by not more than 3 hours.
    - If OM A FDP extension without in-flight rest has been applied, the MFDP must be calculated as in OM A MFDP for acclimatised crew members and the result may not be increased by more than 2 hours.
    - If on the final sector within an FDP the allowed increase is exceeded because of unforeseen circumstances after take-off, the flight may continue to the planned destination or alternate aerodrome.
    - The rest period following the FDP may be reduced but can never be less than 12 hours at home base and 10 hours away from home base.
2. In case of unforeseen circumstances which could lead to severe fatigue, the commander shall reduce the actual flight duty period and/or increase the rest period in order to eliminate any detrimental effect on flight safety.
3. The commander shall consult all crew members on their alertness levels before deciding on the modifications of the FDR mentioned under points 1. and 2. above. This includes the consideration of additional factors that might decrease the crew member's alertness level (e.g. complexity of operation, WX conditions, training activities etc.).
4. The commander shall submit a report to Edelweiss when an FDP is increased or a rest period is reduced at his or her discretion.
5. Where the increase of an FDP or reduction of a rest period exceeds 1 hour, a copy of the report, to which Edelweiss Air shall add its comments, shall be sent by Edelweiss Air to the competent authority not later than 28 days after the event.

At CMD's discretion means that the CMD has the authority to decide and all parties involved will accept his decision and abide by it. The CMD's decision not to apply CMD's discretion under unforeseen circumstances in flight operations to extend the FDP or to reduce the rest period is classified by Edelweiss Air as non-punitive and will not result in adverse consequences.

Cabin, Cockpit, Operational Ground Staff

7.3.10.2 Delayed reporting

Edelweiss Air may delay the reporting time in the event of unforeseen circumstances. In such a case OPR shall retain records of delayed reporting. OPR shall contact the crew member by the regular communications channels when a delayed reporting of the crew member is required.

When contacting a crew member OPR will try to avoid interference with the sleeping patterns of the crew member. OPR shall contact the crew member at the home base no later than 1hrs 30min before reporting time. At stations abroad OPR shall notify the crew member before leaving the suitable accommodation.

In such a case, if the crew member is informed of the delayed reporting time, the FDP is calculated as follows:

		1 crew notification	2 or more crew notifications
Application of FDP		FDP counts from delayed reporting time	FDP counts from first delayed reporting time or from 1 hour after the second notification, whichever is earlier.
Calculation of MFDP	Delay < 4 hrs	MFDP calculated at original reporting time	MFDP calculated at original reporting time
	Delay ≥ 4 hrs	MFDP is the more restrictive of MFDP calculated at original reporting time or delayed reporting time.	MFDP is the more restrictive of MFDP calculated at original reporting time or delayed reporting time.
	Delay ≥ 10 hrs	Delay counts as rest period as long as crew member is not further disturbed. MFDP is calculated at delayed reporting time	Delay counts as rest period as long as crew member is not further disturbed. MFDP is calculated at delayed reporting time

Cabin, Cockpit, Operational Ground Staff

7.3.11 Positioning

Whenever a crew member is engaged in 'positioning' the following shall apply:

- Positioning after reporting but prior to operating shall be counted as FDP but shall not count as a sector; and
- All time spent on positioning shall count as duty period.

Cabin, Cockpit, Operational Ground Staff

7.3.12 Split duty

The conditions for extending the basic MFDP due to a break on the ground shall be in accordance with the following:

1. The break on the ground within the FDP shall have a minimum duration of 3 consecutive hours.
2. The break excludes the time allowed for post and pre-flight duties and travelling. The minimum total time for post and pre-flight duties and travelling is 30 minutes. Actual times for post and pre-flight duties and travelling shall be defined taking into account aircraft type, type of operation and airport conditions. These times will be published in the station sheet.
3. The MFDP specified in OM A MFDP for acclimatised crew members and OM A Crew members in an unknown state of acclimatisation may be increased by up to 50% of the break.
4. Suitable accommodation shall be provided either for a break of 6 hours or more; or for a break that encroaches the window of circadian low (WOCL).
5. In all other cases:
   - Accommodation shall be provided, and
   - Any time of the actual break exceeding 6 hours or any time of the break that encroaches the WOCL shall not count for the extension of the FDP.
6. The break on the ground shall count in full as FDP.
7. A split duty shall not be combined with in-flight rest.
8. A split duty shall not follow a reduced rest.

Split duty example:

<table>
<tr><th colspan="9">Split duty</th></tr>
<tr><td>Pre-flight</td><td>1 or more sectors</td><td>Postflight</td><td>Travel</td><td>Break</td><td>Travel</td><td>Preflight</td><td>1 or more sectors</td><td>Postflight</td></tr>
<tr><td colspan="2" rowspan="2"></td><td colspan="2">A</td><td rowspan="2">Min 3 hours</td><td colspan="2">B</td><td rowspan="2"></td><td rowspan="2"></td></tr>
<tr><td colspan="2">A+B Minimum 30 Min</td><td colspan="2">A+B Minimum 30 Min</td></tr>
</table>

Extended FDP (max. MFDP acc. § 3.6-3.7 + 50% of break)	

Cabin, Cockpit, Operational Ground Staff

7.4 Standby duty and reserve

Cabin, Cockpit, Operational Ground Staff

7.4.1 Standby (SBS/SBL/SBC)

The maximum duration of standby is 16 hours. Any duty within the qualification range of the crew member concerned may be assigned out of standby.

Should the standby lead to an assignment of an FDP, the maximum combined duration of the standby and FDP do not lead to more than 18 hours awake time (except for split duty and augmented flights). It is the crew members responsibility to plan their activities during their standby accordingly.

25% of time spent on standby counts as duty time for the purpose of OM A Duty time limitations;

Standby is followed by a rest period in accordance with OM A Rest periods;

Standby ceases when the crew member reports at the designated reporting point.

If standby ceases within the first 6 hours, the MFDP counts from reporting.

If standby ceases after the first 6 hours, the MFDP is reduced by the amount of standby time exceeding 6 hours.

If the FDP is extended due to in-flight rest according to OM A FDP extension with in-flight rest, or to split duty according to OM A Split duty, then the following applies:

- If standby ceases within the first 8 hours, the MFDP counts from reporting.
- If standby ceases after the first 8 hours, the MFDP is reduced by the amount of standby time exceeding 8 hours.

If standby starts between 23:00 and 07:00, the time between 23:00 and 07:00 does not count towards the reduction of the FDP until the crew member is contacted by Edelweiss.

If a crew member on standby is not required anymore on that day they can be released by OCC or crew control.

The response time between call and reporting time allows the crew member to arrive from their place of rest to the designated reporting point. The crew member must be at the reporting point latest 60 min after the notification.

Cabin, Cockpit, Operational Ground Staff

7.4.2 Reserve (RSV)

Edelweiss Air assigns reserve duties to crew members and publishes them in the duty roster. The maximum duration of a single reserve period is 24 hours.

Duties are assigned to a crew member on reserve complying with the following:

An assigned FDP counts from the reporting time.

Reserve times do not count as duty period for the purpose of OM A Duty time limitations and OM A Rest periods.

Edelweiss Air will not assign flight crew members more than 7 consecutive reserve days within the limits of OM A Rest periods.
For cabin crew members a reserve concept is in place. Refer to Reservereglement (Yonder → Legal Docs → GAV → Reservereglement Kabine).

To protect an 8-hour sleep opportunity, Edelweiss Air rosters a period of 8 hours, taking into account fatigue management principles, for each reserve day during which a crew member on reserve is not contacted. Edelweiss Air considers the first eight (8) hours of the reserve to be rostered for a sleep opportunity whenever a crew member is not contacted for a duty.

The minimum notification time before an assignment is 10 hours.

These 10 hours between the notification of an assignment for any duty and reporting for that duty during reserve may include the period of 8 hours during which a crew member on reserve is not contacted by Edelweiss Air.

Cabin, Cockpit, Operational Ground Staff

7.4.3 Release out of standby duty and reserve for flight and cabin crew

A FCM can be released out of RSV, SBS, SBL or SBC during the previous days.

EDW notifies the FCM as follows:

- During the previous days by Change Log entry;
- On the day before RSV, SBS, SBL or SBC until 1200 LT by phone call or Short Message Service (SMS) if not on flight duty, by ACARS if on flight duty.

If no duty is assigned out of RSV to a FCM after 1200 LT the previous day, it has to be assigned as EXT instead of OFF.

A CCM can be released out of RSV, SBS, SBL or SBC during the previous days. EDW notifies the CCM as follows:

- During the previous days by Change Log entry;

- On the day before RSV, SBS, SBL or SBC until 1800 LT by phone call or Short Message Service (SMS). If no OFF is assigned out of RSV to a CCM after 1800 LT the previous day, it has to be assigned as EXT instead of OFF.

Cabin, Cockpit, Operational Ground Staff

7.5 Rest periods

Cabin, Cockpit, Operational Ground Staff

7.5.1 Minimum rest periods at home base

The minimum rest period provided before undertaking an FDP starting at home base shall be at least as long as the preceding duty period, or 12 hours, whichever is greater.

Edelweiss Air may plan a shorter rest period at home base according to OM A Minimum rest periods away from home base as long as a suitable accommodation to the crew member at home base is provided.

Cabin, Cockpit, Operational Ground Staff

7.5.2 Minimum rest periods away from home base

The minimum rest period provided before undertaking an FDP starting away from home base shall be at least as long as the preceding duty period, or 10 hours, whichever is greater. This period shall include an 8-hour sleep opportunity in addition to the time for travelling and physiological needs.

The time allowed for physiological needs should be 1 hour. Consequently, if the travelling time to the suitable accommodation is more than 30 minutes Edelweiss Air should increase the rest period by twice the amount of difference of travelling time above 30 minutes.

Cabin, Cockpit, Operational Ground Staff

7.5.3 Minimum rest period after military service

Military service is counted like duty. A combined block of MIL and EDW duty period shall not be longer than 168 hours before the next recurrent extended recovery rest period. The last night of the MIL-block is counted to be a local night.

After a military service of up to 4 days check-in for a duty period on the following day shall be not before 0800 LT.

After a military service of 5 days or more any duty on the following day shall not begin before 1800 LT.

Cabin, Cockpit, Operational Ground Staff

7.5.4 Reduced rest

The minimum reduced rest periods under reduced rest arrangements are 12 hours at home base and 10 hours out of home base. The rest period following the reduced rest is extended by the difference between the minimum rest period specified in OM A Minimum rest periods at home base or OM A Minimum rest periods away from home base above and the reduced rest.

The FDP following the reduced rest is reduced by the difference between the minimum rest period specified in OM A Minimum rest periods at home base or OM A Minimum rest periods away from home base above as applicable and the reduced rest.

Reduced rest	**Compensatory rest**	**MFDP following reduced rest**
At home base: 12 hrs Away from home base 10 hrs	Increased by the difference between required and reduced rest.	Reduced by the difference between required and reduced rest.

There is a maximum of 2 reduced rest periods between 2 recurrent extended recovery rest periods.

Cabin, Cockpit, Operational Ground Staff

7.5.5 Recurrent extended recovery rest periods

To compensate for cumulative fatigue Edelweiss Air shall plan the recurrent extended recovery rest periods as follows:

- The minimum recurrent extended recovery rest period shall be 36 hours, including 2 local nights.
- The time between the end of one recurrent extended recovery rest period and the start of the next extended recovery rest period shall not be more than 168 hours.
- The recurrent extended recovery rest period shall be increased to 2 local days twice every month.

Cabin, Cockpit, Operational Ground Staff

7.5.6 Effect of time zone differences

Cabin, Cockpit, Operational Ground Staff

7.5.6.1 General

“Rotation” in the context of this provision means a series of duties, including at least one flight duty, and rest period out of home base, starting at home base and ending when returning to home base for a rest period where Edelweiss Air is no longer responsible for the accommodation of the crew member.

Edelweiss Air shall monitor rotations and combinations of rotations in terms of their effect on crew member fatigue, and shall adapt the rosters as necessary.

Time zone differences shall be compensated by additional rest as follows:

Cabin, Cockpit, Operational Ground Staff

7.5.6.2 At home base

At home base, if a rotation involves a 4 hour time difference or more, the following minimum number of local nights of rest shall be planned:

Maximum time difference (h) between reference time and local time where the crew member rests during the rotation	Time elapsed (h) since reporting for the first FDP in a rotation involving at least 4 hour time difference to the reference time			
	< 48	48-71:59	72-95:59	≥ 96
≤ 6	2	2	3	3
> 6 and ≤ 9	2	3	3	4
> 9 and ≤ 12	2	3	4	5

> The time elapsed since reporting for a rotation involving at least a 4-hour time difference to the reference time stops counting when the crew member returns to his/her home base for a rest period during which Edelweiss Air is no longer responsible for the accommodation of the crew member.

Cabin, Cockpit, Operational Ground Staff

7.5.6.3 Away from home base

Away from home base, if an FDP involves a 4-hour time difference or more, the minimum rest following that FDP is at least as long as the preceding duty period, or 14 hours, whichever is greater.

Edelweiss Air may apply this rest requirement also at the home base provided:

- It is only applied once between 2 recurrent extended recovery rest periods as specified in OM A Recurrent extended recovery rest periods; and
- Edelweiss Air provides suitable accommodation to the crew member.

Cabin, Cockpit, Operational Ground Staff

7.5.6.4 Eastward-Westward and v.v transition

In case of an Eastward-Westward or Westward-Eastward transition, at least 3 local nights of rest at home base must be provided between alternating rotations.

Cabin, Cockpit, Operational Ground Staff

7.5.7 Cumulative fatigue due to disruptive schedules

In order to compensate for additional cumulative fatigue due to disruptive schedules the following rest periods shall be planned:

- If a transition from a late finish/night duty to an early start is planned at home base, the rest period between the 2 FDPs shall include 1 local night.
- If a crew member performs 4 or more night duties, early starts or late finishes between 2 extended recovery rest periods as defined in OM A Recurrent extended recovery rest periods, the second extended recovery rest period shall be extended to 60 hours.

Cabin, Cockpit, Operational Ground Staff

7.6 Nutrition

Edelweiss Air provides beverages and snacks for all crew members on every flight duty. For flight duties exceeding 6 hours hot meals are also provided. Crew members are responsible to plan and coordinate their activities while on duty in such a way, that they can have sufficient beverages and snacks at regular intervals in order to avoid any detriment to their performance. Meals should be taken at regular intervals in line with the body rhythm of the crew member. If the FDP covers both the time window for lunch and dinner according to the crew member's body rhythm, then two meals should be taken.

Cabin, Cockpit, Operational Ground Staff

7.7 Duty and flight time records

Cabin, Cockpit, Operational Ground Staff

7.7.1 Duty and flight time records retained by Edelweiss Air

The following records are stored for a minimum period of 24 months:

- Individual records for each crew member including:
  - Flight times;
  - Start, duration and end of each duty period and FDP;
  - Rest periods and days free of all duties; and
  - Assigned home base.
- Reports on extended FDP and reduced rest periods.

Edelweiss Air will make copies of individual records of flight times, duty periods and rest periods available upon request to the crew member concerned as well as to another operator, in relation to a crew member who is or becomes a crew member of the operator concerned.

Cabin, Cockpit, Operational Ground Staff

7.7.2 Duty and flight time records retained by the crewmember

Any work (flying or non-flying activities) which a crew member performs privately or for a third party and for which remuneration (subject to federal income tax) is being received counts towards flight and duty time limitations according to this chapter. The crew member concerned shall maintain his individual records of such work for at least 24 months including:

1. Flight times;
2. Start, duration and end of each duty period and FDP;
3. Rest periods and days free of all duties;
4. Data regarding operations on more than one type or variant.

The crew member has to report these duty hours and data to OC on a monthly basis.

Cabin, Cockpit, Operational Ground Staff

7.8 Fatigue management training

Initial and recurrent fatigue management training to crew members, personnel responsible for preparation and maintenance of crew rosters and management personnel concerned is provided by Edelweiss Air according to OMM Fatigue Risk Management System (FRMS) and OM D Training for Fatigue Risk Management (FRM).

8 Operating Procedures

A320, A340, Cabin, Cockpit, Operational Ground Staff

8.1 Flight Preparation Instructions

Cabin, Cockpit, Operational Ground Staff

8.1.1 Minimum flight altitudes

Cockpit, Operational Ground Staff

8.1.1.1 Policy

Cockpit, Operational Ground Staff

All flights, except in direct connection with take-off, approach or landing, shall be planned and operated at an altitude/flight level which is at or above the minimum altitude.

When establishing minimum flight altitudes, the following factors are taken into account:

1. the accuracy with which the position of the aircraft can be determined;
2. the probable inaccuracies in the indications of the altimeters used;
3. the characteristics of the terrain, such as sudden changes in the elevation, along the routes; or in the areas where operations are to be conducted;
4. the probability of encountering unfavourable meteorological conditions, such as severe turbulence and descending air currents; and
5. possible inaccuracies in aeronautical charts.
6. corrections for temperature and pressure variations from standard values;
7. ATC requirements; and
8. any foreseeable contingencies along the planned route.

> Note: Where the minimum flight altitudes established by the operator and a State overflown differ, the higher values shall apply.

The Minimum Terrain Clearance Altitude (MTCA) respectively Minimum Grid Altitude (MGA) shall be used to determine minimum altitudes for drift down and for engine-out cruise operation. Other published altitudes, such as MEA, MOCA use different areas for calculation and may therefore differ from the MTCA.

EDW uses LIDO OM C and does not establish own minimum flight altitudes. The definitions of the different minimum altitudes are published in OM C Gen Part 1.4.2.11.1

8.1.1.2 Planning principles

Cockpit, Operational Ground Staff

Every flight shall be planned in such a way that it will proceed at or above MTCA/MGA of the planned route also in case of a one-engine-out operation. The gradient of the en-route net flight path shall be positive at least 1'000 ft above all terrain and obstructions along the route within 9,3 km / 5 NM (10 NM if navigation accuracy does not meet RNP5) on either side of the intended track.

The net flight path shall permit the aeroplane to continue flight from the cruising altitude to an aerodrome where a landing can be made. The net flight path shall clear vertically, by at least 2'000 ft, all terrain and obstructions along the route within 5 NM (10 NM if navigation accuracy does not meet RNP5) on either side of the intended track in accordance with the following:

- the engine is assumed to fail at the most critical point along the route;
- account is taken of the effects of winds on the flight path;
- fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves; and
- the aerodrome where the aeroplane is assumed to land after engine failure shall meet the following criteria:
    - the performance requirements at the expected landing mass are met; and
    - weather reports and/or forecasts and field condition reports indicate that a safe landing can be accomplished at the estimated time of landing.

In case if a diversion a net flight path shall have a positive gradient at 1'500 ft AAE where a landing is made after engine failure including the operation of ice protection systems, if required.

Additionally, for EROPS, the following criteria must be fulfilled:

- The TEI en-route net flight path shall clear vertically, by at least 2’000 ft, all terrain and obstructions along the route within 5 NM (10 NM if navigation accuracy does not meet RNP5) on either side of the intended track.
- A positive climb gradient 1'500 ft above the aerodrome of intended landing with TEI must be achieved;
- TEI is assumed at the most critical point along the route;
- The performance requirements for TEI landing at the expected landing mass are fulfilled.

This can be achieved by using drift-down procedures (calculated with the FS+ in- flight module, including fuel dumping), using the lateral part of the oxy escape routes according OM C Appendix Decompression Routes or limiting the take-off mass to meet the MTCA/MGA requirements along the planned route, if required.

The planned route has to allow at any point either a descent along the planned track or a diversion via an escape route in such a way that beyond 15 min (A320) or 22 min (A340) after the deployment of the PAX oxygen masks, the highest MTCA/MOCA/MGA/MORA does not exceed 14'000 ft for 30 min flight time in order to allow a flight not above this altitude. It may be maintained for more than 30 min as long as supplemental oxygen for

10 percent of the passengers is available. After that time the maximum flight altitude is 10'000 ft.

Over high terrain where escape routes are required to ascertain a descent to a feasible altitude EDW calculates with fixed distances. These oxy escape routes are to be found in OM C Appendix Decompression escape routes.

Cockpit, Operational Ground Staff

8.1.1.3 Selection of cruising altitudes

The selection of cruising altitudes/flight levels shall be based on:

- The company operating policy (FCOM)
- The specified terrain clearances to ensure safety on the route to be flown
- The security overflight restrictions
- The ATC requirements
- The noise abatement policy.

Cockpit, Operational Ground Staff

8.1.2 Criteria and responsibilities for determining the adequacy of aerodromes

Cockpit, Operational Ground Staff

8.1.2.1 General

Only adequate aerodromes for the type of aircraft and operation shall be used. This is ensured by the aerodrome classification and approval process.

The criteria for determining the adequacy of aerodromes are stipulated in the aerodrome classification table. The categorisation of an aerodrome is determined with the aerodrome categorisation criteria table.

Approved aerodromes shall be published in the respective approved aerodrome list. An approval on short notice for use of other aerodromes than listed may be given by other means (e.g. FPM NOTAM, briefing of the crew etc.).

The use of an isolated aerodrome as destination aerodrome requires prior approval by FOCA and the NPFO. EDW does not hold an approval to operate to an isolated aerdrome. If approval for the operation to an isolated aerdrome is requested, the required policies and procedures shall be implemented in the relevant manuals. Any aerodrome for which an approval for use as an isolated aerodrome as destination aerodrome has been obtained, will be published by Flight Ops Support via FPM NOTAM.

Cockpit, Operational Ground Staff

8.1.2.2 Approval of aerodromes

Before an aerodrome is first utilised for Edelweiss Air operations the NPFO shall approve it. An operation to or from an aerodrome will only be permitted provided that standard operating procedures can be used.

For approval of an aerodrome for operations, the following criteria shall be considered:

- Applicable performance requirements;
- Obstacles in the approach, missed approach and departure sectors required for the execution of contingency procedures and necessary clearance;
- Aerodrome operating minima prescribed by state authorities;
- The flight technique to be used during the final approach;
- Runway characteristics and ground manoeuvring areas;
- Air Traffic Services including aircraft tracking and communication requirements;
- Company experience with regard to approach facilities, ATC, meteorology;
- Nav aids, lighting and adequacy and performance of the available visual and non-visual ground aids;
- Weather reporting;
- Aerodrome classification and flight crew qualification requirements;
- Emergency services, including temporary periods of reduced RFF;
- Local conditions such as weather situations, particular terrain features likely to cause down drafts and turbulence, curfew regulations or even political aspects which might affect operations; and
- Ground service facilities for refuelling, loading, de-/anti-icing, catering and general handling;
- Customs, immigration and health regulation facilities.

All approved aerodromes are published in OM C Appendix AAL - Approved Airport List.

Cockpit, Operational Ground Staff

8.1.2.3 Aerodrome classification criteria

Aerodrome classification		Classification criteria
Basic aerodrome	BA	An aerodrome may be classified as basic aerodrome if: • the aircraft can be operated, taking account of: ◦ the applicable performance requirements; and

Aerodrome classification		Classification criteria
		◦ runway characteristics • equipped with necessary ancillary services such as: ◦ air traffic services (ATS); ◦ sufficient lighting; ◦ communications; ◦ meteorological reporting; ◦ navigation aids; ◦ emergency services.
Planning aerodrome	PA	An aerodrome may be classified as planning aerodrome if: • the classification criteria of a basic aerodrome are fulfilled; and • fuel for the specific aircraft type is provided.
Operational aerodrome	OA	An aerodrome may be classified as operational aerodrome if: • the classification criteria of a planning aerodrome are fulfilled; and • the following services are provided: ◦ ground handling (passengers and aircraft); ◦ customs and immigration
Non-classified aerodrome	NC	An aerodrome not listed on the Approved Aerodrome List (e.g. other and emergency aerodromes).

Note: Aerodromes that are not published on the Approved Aerodrome List have not been classified by Flight Ops Support or do not meet EDW aerodrome classification criteria for the respective aircraft type.

Cockpit, Operational Ground Staff

8.1.2.4 Aerodrome categorisation criteria

Prior to operation, all aerodromes used for planning purposes will be analysed by EDW for the following criteria:

- Obstructions and surrounding terrain
- Physical layout (TWY and RWY dimensions, slope)
- Ground movement considerations
- Lighting and night operations
- Approach aids

- Departure, arrival and holding procedures
- Operating minima, instrument approaches, approach angles, circling heights
- Communication and air traffic facilities, services and procedures
- Performance limitations (MTOM, MLM, EOSID)
- Seasonal meteorological conditions and special weather phenomena

All aerodromes are classified by EDW into categories A, B and C according to their training and/or experience requirements.

Category A – an aerodrome that meets all of the following requirements:

- a straight-in 3D instrument approach procedure with a glide path angle of not more than 3.5 degrees to each runway expected to be used for landing
- at least one runway with no performance-limited procedure for take-off and/or landing, such as no requirement to follow a contingency procedure for obstacle clearance in the event of an engine failure on take-off from any runway expected to be used for departure
- night operations capability

Category B – an aerodrome that does not meet the category A requirements or which requires extra considerations such as:

- non-standard approach aids and/or approach patterns, such as restrictions on the availability of straight-in instrument approach procedures
- unusual local weather conditions, such as environmental features that can give rise to turbulence, windshear or unusual wind conditions
- unusual characteristics or performance limitations, such as unusual runway characteristics in length, width, slope, markings or lighting that present an atypical visual perspective on approach
- any other relevant considerations, including obstructions, physical layout, lighting, etc., such as restrictions on circling in certain sectors due to obstacles in the circling area
- training or flight crew experience requirements stipulated by the competent authority responsible for the aerodrome that do not include instruction in an FSTD or visiting the aerodrome

Category C – an aerodrome:

- that requires additional considerations, according to internal risk assessment, to those of a category B aerodrome
- or for which flight crew experience or qualification requirements stipulated by the competent authority responsible for the aerodrome include instruction in an FSTD or visiting the aerodrome

Refer to the OM C AAL - Approved Airport List.

For minimum experience requirements for designated aerodromes refer to OM A Minimum Experience Requirements.

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8.1.2.5 Selection of aerodromes

- Destinations and alternates which are approved for operation are contained in the OM C Appendix AAL - Approved Airport List.
- Selection of aerodromes other than stipulated in the AAL need a one time approval by the NPFO.

Cockpit, Operational Ground Staff

8.1.2.6 Aerodrome categories for fire fighting and rescue services (RFFS)

Cockpit, Operational Ground Staff

8.1.2.6.1 General

The following regulations and minimum requirements for rescue and fire fighting services at destination, alternate and en-route alternate aerodromes apply:

Cockpit, Operational Ground Staff

8.1.2.6.1.1 Principle

During approach, landing, taxi, take-off and departure of aircraft, boarding and deboarding of passengers as well as at all times when passengers are on board, the RFFS of an aerodrome must comply with the category as defined in ICAO Annex 14:

- A320: 6
- A340: 9

Refer to Lido Route Manual RAR and ADR.

Cockpit, Operational Ground Staff

8.1.2.6.1.2 Planning stage

If the necessary aeroplane RFFS category according ICAO Annex 14 is not available at the time of the planning of a flight, the operator must ensure that the aerodrome RFFS category at each aerodrome that has to be specified in the OFP meets the criteria in the table below at the time of expected use:

Aerodrome[1]	Minimum aerodrome RFFS capability	
	Published RFFS category	Temporary downgrade by NOTAM
Departure and destination	A320: 5 A340: 8	A320: 4 A340: 7
Take-off alternate Destination alternate Fuel enroute alternate Destination 2 (RCF)[2,3]	A320: 4 A340: 7	at least category 4
Enroute alternate aerodromes	Category 4 equivalent at 30 minutes notice	N/A
Cargo, training and ferry flights to foreign aerodromes	A320: 4 A340: 7	N/A
Medical evacuation flight (MEDE-VAC) all relevant aerodromes	At least category 1	N/A
Emergency aerodrome	No minimum require-ments[4]	N/A

1) If an individual aerodrome serves more than one purpose, the highest RFFS category must be available at the time of expected use.
2) An alternate required to be adequate and specified in the OFP (e.g. the 3% ERA).
3) As well applicable for the subsequent take-off in case of diversion.
4) PIC is obliged to approach the aerodrome that is the most suitable for the emergency situation at hand.

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8.1.2.6.1.3 Authority acceptance

Selection and specification in the OFP of an aerodrome with an RFFS category below that stated in the table above requires acceptance by the Authority on a case-by-case basis.

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8.1.2.6.1.4 Inflight decision for safety reason

In flight, the pilot may decide to land at an aerodrome where the RFFS category is lower than specified above, if in his/her judgment and after due consideration of all prevailing circumstances, to do so would be safer than to divert.

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8.1.2.7 Preflight requirements regarding aerodrome facilities and performance

	DEP AD	DEST	DEST ALTN	T/O ALTN	DEST 2 (RCF)	Fuel ERA (3% CFS)	ERA / OXY ALTN	EROPS
Services								
ATS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Opening hours (AOI or by NOTAM)	Open	Open	Open	No (provided ATS and RFF available)	Open	Open	No (provided ATS and RFF available)	No (provided ATS and RFF available)
PPR	Yes	Yes	Yes	No	Yes	Yes	No	No
Published RFFS CAT	A320: 5 A340: 8 Temp. by NOTAM: A320: 4 A340: 7	A320: 5 A340: 8 Temp. by NOTAM: A320: 4 A340: 7	A320: 4 A340: 7 Temp. by NOTAM: 4	A320: 4 A340: 7 Temp. by NOTAM: 4	A320: 4 A340: 7 Temp. by NOTAM: 4	A320: 4 A340: 7 Temp. by NOTAM: 4	4 within 30 min	4 within 30 min
Customs	Yes	Yes	Yes	No	Yes	Yes	No	No
Aerodrome classification	OA	OA	OA	PA	PA	PA	BA	BA
Weather								
WX permissible	Yes OEI minima[2]	Yes DEST minima	Yes ALTN minima	Yes OEI minima	Yes ALTN minima	Yes ALTN minima	No	Yes applicable minima

	DEP AD	DEST	DEST ALTN	T/O ALTN	DEST 2 (RCF)	Fuel ERA (3% CFS)	ERA / OXY ALTN	EROPS
Aerodrome performance								
Overweight	Yes[2]	No	No	Yes	Yes	Yes	Yes	Yes
LD calculation[1]	FLD OEI[2]	RLD	RLD	FLD OEI	FLD	FLD	FLD OEI	FLD OEI
MISAP OEI	Yes[2]	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Enroute performance								
Terrain clearance	Yes OEI[2]	Yes OEI	Yes OEI	Yes OEI	Yes OEI	Yes OEI	Yes OEI[3]	Yes OEI[3]
Decompression profile	Yes[2]	Yes	No	No			Yes	Yes

1) For all FLD and FLD OEI calculations up to MLM a RLD calculation has additionally to be performed and the higher result has to be considered.
2) If used as T/O ALTN.
3) For A340 EROPS (outside of the 90 min circle) operation, TEI must be considered.

Yes: Has to be considered / fulfilled during planning stage

No: Does not have to be considered during planning stage

Note: A340: For all performance calculations, fuel dumping may be taken into account as long as the time frame covers the time for fuel dumping (e.g. time from take-off with MTOM to landing with MLM is 90 minutes). Therefore planning is done with MLM for the performance calculations. In case fuel dumping is not available due MEL restriction, all performance calculations during planning stage have to be done with the expected landing mass not considering fuel dumping.

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8.1.2.8 Aerodrome PCN

An aerodrome may be planned even if the PCN is too low for the respective aeroplane type as long as the aerodrome has accepted the operation. Nevertheless, there might be a weight restriction which has to be respected. Such a restriction will be published via CAE NOTAM.

Cockpit, Operational Ground Staff

8.1.3 Methods and responsibilities for establishing aerodrome operating minima

Cockpit, Operational Ground Staff

8.1.3.1 General

Aerodrome operating minima are the lowest permissible minima and shall be determined taking into account the provisions of this subpart and various factors, such as:

- Type, performance and handling characteristics of the aircraft;
- Composition, competence and experience of the flight crew;
- Dimensions and characteristics of the runways that may be selected for use;
- Adequacy and performance of the available visual and non-visual ground aids;
- Equipment available on the aircraft for the purpose of navigation and/or control of the flight path during the take-off, the approach, the flare, the landing, rollout and the missed approach;
- For the determination of obstacle clearance, the obstacles in the approach, missed approach and the climb-out areas necessary for the execution of contingency procedures;
- Obstacle clearance altitude/height for the instrument approach procedure;
- Means to determine and report meteorological conditions;
- RVR reporting is available for approach operations with any approach minima less than 800 m;
- Flight technique to be used during the final approach;
- Company experience with regard to approach facilities, ATC, meteorology;
- Local regulations (e.g. foreign ops specs).

Additional increments may be specified by FOCA.

The calculation of aerodrome operating minima for take-off and landing is delegated to Lido.

Cockpit, Operational Ground Staff

8.1.3.2 Aerodrome operating minima published in the OM C

Aerodrome operating minima for take-off and landing are established for each aerodrome and published in the OM C (Lido Route Manual - Network Part) including route and aerodrome documentation. They are the lowest permissible minima under EASA Air Ops or the state authority of the aerodrome concerned if higher.

Cockpit, Operational Ground Staff

8.1.3.3 Aerodrome operating minima stated in foreign operations specifications

Foreign operations specifications are issued by the respective state authority and stipulate the lowest permissible aerodrome operating minima for certain approach operations.

For detailed information refer to OM C Appendix Foreign OPS Specs.

Cockpit, Operational Ground Staff

8.1.3.4 Temporarily raised minima

State authorities can publish temporarily raised or lowered OCA and/or OCH values.
If an OCA (OCH) published in NOTAM is higher than DH / DA / MDH / MDA indicated on IAC, this higher value shall be used.
The applicable RVR/visibility shall be checked for a possible required increase if not already stated in the NOTAM.

Cockpit, Operational Ground Staff

8.1.3.5 Minima related to the aircraft system and/or performance capability

The minima related to the aircraft system capability limitations are published in the OM B. They state the lowest permissible minima the aircraft has been certified for.

Where applicable, deferred MEL/CDL items requiring corrections on the published minima have to be applied. Restrictions due to deferred MEL/CDL items may influence the approach capability, hence higher minima may be required.

Under certain meteorological conditions (e.g. air density, OAT) and depending on the expected aircraft mass, higher aerodrome operating minima might apply due to performance restrictions.

Cockpit, Operational Ground Staff

8.1.3.6 Published OEI minima

Published minima may only be applied if defined missed-approach climb gradients can be achieved. The required gradient is 2.5% (2.7% for A340) for CAT I/II/III.

Cockpit, Operational Ground Staff

8.1.3.7 Determination of minima for aerodromes, take off and landing

The flight crew usually has no possibility to verify the correctness of data presented on an approach chart. However, it is the responsibility of the crew to ensure that the selected minima is applicable to the aircraft type concerned.

Cockpit, Operational Ground Staff

8.1.3.8 Presentation of minima

Cockpit, Operational Ground Staff

8.1.3.8.1 Classification of aeroplanes

Specific minima for each aeroplane category or type are established and stated in the RM/RAR.

A320 and A340	Category C Vth from 121 to 140kts

Cockpit, Operational Ground Staff

8.1.3.8.2 Take-off minima

The minima for take-off is expressed in VIS/RVR.
Where there is a specific need to see and avoid obstacles on departure, additional conditions (e.g. ceiling) may be required (refer to Lido Route Manual).

Cockpit, Operational Ground Staff

8.1.3.8.3 Landing minima

Landing Minima are expressed as follows:

Approach	Landing minima
Type B	DA/H or NO DH and VIS/RVR
Type A	DA/H or MDA/H and VIS/RVR
Circling approach	MDA/H and VIS

In principle, minima for straight-in NDB/VOR approaches will be published where the approach line does not diverge more than 20 degrees from the centerline of the runway. In exceptional cases, an angle of more than 20 degrees may be accepted after due consideration and will then be indicated on the IAC.

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8.1.3.8.4 Conversion of visibility to CMV

The following conditions apply to the use of converted meteorological visibility (CMV) instead of RVR:

- If the reported RVR is not available, the RVR may be substituted by a CMV, except:
  - for take-off minima;
  - for an approach in LVO.

If the minimum RVR for an approach is more than the maximum value assessed by the aerodrome operator, then CMV shall be used.

In order to determine CMV from VIS:

- For flight planning purposes, a factor of 1.0 shall be used;
- For purposes other than flight planning, the conversion factors specified in the table below shall be used:

Lighting elements in operation	RVR/CMV = Reported VIS multiplied by	
	Day	Night
HI approach and runway lights	1.5	2.0
Any type of light installation other than above	1.0	1.5
No lights	1.0	N/A

Cockpit, Operational Ground Staff

8.1.3.9 Conditions for the use of minima

Cockpit, Operational Ground Staff

8.1.3.9.1 Applicability

Minima on the IAC for a specific type of approach are considered applicable if:

- The required ground equipment or GNSS for the intended procedure is fully operative; and
- The required aeroplane systems are fully operative;
- The required aeroplane performance criteria are met; and
- The flight crew is qualified accordingly.

These applicable values shall be governing for the selection of destinations and alternates.

Refer to OM C Appendix Foreign Ops Specs.

EDW does not hold an approval to use lower minima with operational credit (e.g. SA CAT I, SA CAT II etc.)

Cockpit, Operational Ground Staff

8.1.3.9.2 Deficiencies

Whenever deficiencies or restrictions show up or are reported, higher minima may be stipulated in the Lido Route Manual or NOTAM. Furthermore, the CMD may decide to apply special increments to minima for other reasons, e.g. if the physical conditions (undue fatigue) of any flight crew member so require.

Cockpit, Operational Ground Staff

8.1.3.9.3 Effect of downgraded or failed ground equipment

<table>
<tr><th rowspan="3">Failed or down-graded equip-ment</th><th colspan="6">Effect on landing minima</th></tr>
<tr><th colspan="5">Type B</th><th rowspan="2">Type A</th></tr>
<tr><th>CAT III (no DH)</th><th>CAT III DH 0-49 ft</th><th>CAT III DH 50-99 ft</th><th>CAT II</th><th>CAT I</th></tr>
<tr><td>Navaid stand-by transmitter</td><td>Not allowed</td><td>RVR 200 m</td><td colspan="4">No effect</td></tr>
<tr><td rowspan="4">Outer marker</td><td colspan="4" rowspan="4">No effect if the required height versus glide path can be checked using other means, e.g. DME fix.</td><td rowspan="4">Not allowed except if the required height versus glide path can be checked using other means, e.g. DME fix.</td><td>APV: Not applicable</td></tr>
<tr><td>NPA with FAF: no effect unless used as FAF</td></tr>
<tr><td>If FAF cannot be identified: NPA operations cannot be conducted</td></tr>
<tr><td>For CAT I: Not allowed except if the required height versus glide path can be checked using other means, e.g. DME fix.</td></tr>
</table>

<table>
<tr><th rowspan="3">Failed or downgraded equipment</th><th colspan="6">Effect on landing minima</th></tr>
<tr><th colspan="5">Type B</th><th rowspan="2">Type A</th></tr>
<tr><th>CAT III (no DH)</th><th>CAT III DH 0-49 ft</th><th>CAT III DH 50-99 ft</th><th>CAT II</th><th>CAT I</th></tr>
<tr><td>Middle marker</td><td colspan="5">No effect</td><td>No effect unless used as MAPT</td></tr>
<tr><td>DME</td><td colspan="6">No effect if replaced by RNAV (GNSS) information or the outer marker.</td></tr>
<tr><td>RVR assessment system</td><td>At least one RVR value to be avbl at the aerodrome</td><td colspan="3">On runways equipped with two or more RVR assessment units, one may be inoperative</td><td colspan="2">No effect</td></tr>
<tr><td>APP lights</td><td>No effect</td><td colspan="2">Not allowed for DH > 50 ft</td><td>Not allowed</td><td colspan="2">Minima as for nil facilities</td></tr>
<tr><td>APP lights except the last 210 m</td><td colspan="3">No effect</td><td>Not allowed</td><td colspan="2">Minima as for basic facilities</td></tr>
<tr><td>APP lights except the last 420 m</td><td colspan="4">No effect</td><td colspan="2">Minima as for intermediate facilities</td></tr>
<tr><td>STBY Power for APP lights</td><td colspan="6">No effect</td></tr>
<tr><td>Standby power for runway lights with 1-second switch-over time</td><td>No effect</td><td>Not allowed</td><td colspan="2">RVR 550 m</td><td colspan="2">No effect</td></tr>
<tr><td rowspan="2">Edge lights</td><td rowspan="2">No effect</td><td colspan="5">Day: no effect</td></tr>
<tr><td colspan="2">Night: RVR 550 m</td><td colspan="3">Night: not allowed</td></tr>
<tr><td rowspan="2">Threshold lights</td><td colspan="2" rowspan="2">No effect</td><td colspan="4">Day: No effect</td></tr>
<tr><td>Night: RVR 550 m</td><td colspan="3">Night: Not allowed</td></tr>
<tr><td rowspan="2">Runway end lights</td><td colspan="4" rowspan="2">No effect if centre line lights are serviceable</td><td colspan="2">Day: No effect</td></tr>
<tr><td colspan="2">Night: Not allowed</td></tr>
</table>

<table>
<tr><th rowspan="3">Failed or downgraded equipment</th><th colspan="6">Effect on landing minima</th></tr>
<tr><th colspan="5">Type B</th><th rowspan="2">Type A</th></tr>
<tr><th>CAT III (no DH)</th><th>CAT III DH 0-49 ft</th><th>CAT III DH 50-99 ft</th><th>CAT II</th><th>CAT I</th></tr>
<tr><td rowspan="2">Centre line lights</td><td>Day: RVR 200 m</td><td rowspan="2">Not allowed</td><td>Day: RVR 300 m</td><td>Day: RVR 350 m</td><td rowspan="2">No effect if F/D or AL. Otherwise RVR 750 m</td><td rowspan="2">RVR 750 m</td></tr>
<tr><td>Night: not allowed</td><td>Night: RVR 400 m</td><td>Night: RVR 550 m (400 m with AL)</td></tr>
<tr><td>Centreline lights spacing increased to 30 m</td><td colspan="2">RVR 150 m</td><td colspan="4">No effect</td></tr>
<tr><td>TDZ lights</td><td>No effect</td><td>Day: RVR 200m Night: RVR 300 m</td><td colspan="2">Day: RVR 300 m Night: RVR 550 m / 350 m with AL</td><td>No effect if F/D or AL. Otherwise RVR 750 m</td><td>No effect</td></tr>
<tr><td>Taxiway light system</td><td colspan="6">No effect</td></tr>
</table>

Conditions for the use of this table:

- The table may be used pre-flight and in-flight.
- Multiple failures of RWY lights other than indicated above are not acceptable.
- Deficiencies of both the approach and runway lights are acceptable at the same time and the most demanding consequence should be applied.
- For approach operations with a DH below 200 ft a combination of deficiencies in runway lights and RVR assessment equipment are not permitted.
- Failures other than ILS, GLS and MLS affect the RVR only and not the DH.

Note: For country-specific regulations refer to OM C Appendix Foreign OPS Specs.

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8.1.3.9.4 ILS

Stipulated ILS minima are based on the availability of a complete ILS installation, i.e. localizer, glide path and outer marker or substitute as published on the IAC.

In case of an unserviceable ILS-glide path, a LLZ approach may be flown if published. The minima are only valid when an outer marker or substitute, as published on the IAC, permits a positive check of the prescribed altitude at this point. The middle marker normally serves as missed approach point (MAPt).

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8.1.3.10 Lighting facilities

- For approach and/or runway lighting system and markings, the following definitions are used:
- Full (FALS);
- Intermediate (IALS);
- Basic (BALS); and
- Nil (NALS)

These definitions must be used for the determination of the lowest minimum visibility as well as increments on the required visibility in case of reduced availability.

In the RM the following abbreviations are used:

- H: High (HIALS);
- M: Medium(MALS);
- L: Low (ALS);
- HL: variable between H and L;
- ML: variable between M and L.

<table>
<tr><th>Class of lighting facility</th><th>Length, configuration and intensity of approach lights</th><th>RWY markings[1]</th></tr>
<tr><td>FALS[2]</td><td>ICAO: CAT I lighting system (HIALS 720 m) distance coded centreline, Barrette centreline
FAA: ALSF1, ALSF2, SSALR, MALSR, high or medium intensity and/or flashing lights, 720 m or more</td><td rowspan="3">Yes</td></tr>
<tr><td>IALS[2]</td><td>ICAO: Simple approach lighting system (HIALS 420 – 719 m) single source, Barrette
FAA: MALSF, MALS, SALS/SALSF, SSALF, SSALS, high or medium intensity and/or flashing lights, 420 – 719 m</td></tr>
<tr><td>BALS[2]</td><td>Any other approach lighting system (HIALS, MALS or ALS 210 – 419 m)
FAA: ODALS, high or medium intensity or flashing lights 210 – 419 m</td></tr>
</table>

Class of lighting facility	Length, configuration and intensity of approach lights	RWY markings[1]
NALS	Any other approach light system (HIALS, MALS or ALS <210 m) or no approach lights	

[1] Landings on runways without markings shall not be planned.
[2] Lights must be on.

For night operation at least runway edge lights (REDL), runway end lights (RENL) and threshold lights (RTHL) must be operational.

Partial unserviceability up to 50% (e.g. every 2nd or 3rd of any visual aid u/s) has no effect. However, the complete failure of the first half of RWL must be considered as a total failure. With more than 50% of the visual aid unserviceable, the visual aid must be considered as failed.

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8.1.3.11 Take-off

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8.1.3.11.1 General

Before commencing take-off, the CMD shall be satisfied that:

- The meteorological conditions at the aerodrome and the condition of the runway intended to be used will not prevent a safe take-off and departure.
- The selected aerodrome operating minima are consistent with all of the following:
  - The operative ground equipment
  - The operative aircraft systems
  - The aircraft performance
  - Flight crew qualifications

The CMD shall not commence take-off unless the weather conditions at the aerodrome of departure are equal to or better than the applicable minima for landing at that aerodrome unless a weather-permissible take-off alternate aerodrome is available.

If the reported VIS is below the minimum specified for take-off and RVR is not reported, then take-off shall only be commenced if the CMD can determine that the visibility along the take-off runway is equal to or better than the required minimum.

For low visibility take-off operations, refer to OM A Low visibility take-off (LVTO).

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8.1.3.11.2 RVR/visibility for take-off

Facilities	Minimum RVR / VIS[1,2,5,6]
Nil[3]	500 m (day)
Centre line markings or Runway edge lights or Runway centre line lights	400 m (day)
Runway end lights[4] and Runway edge lights or runway centreline lights	400 m (night)
Centre line markings; and Runway edge lights.	300 m (day)
Centre line markings; and Runway edge lights; and Runway end lights or centre line lights.	300 m (night)
Centre line markings; and Runway end lights; and Runway edge lights; and Runway centre line lights.	150 m
Centre line markings; and Runway end lights; and Runway edge lights (spaced 60 m or less); and Runway centre line lights (spaced 15 m or less).	125 m

1) The reported RVR/VIS value representative for the initial part of the take-off run can be replaced by pilot assessment.
2) Multi-engined aeroplanes that in the event of an engine failure at any point during take-off can either stop or continue the take-off to a height of 1'500 ft above the aerodrome while clearing obstacles by the required margins.
3) The pilot is able to continuously identify the take-off surface and maintain directional control.
4) Runway end lights may be substituted by colour-coded runway edge lights or colour-coded runway centre line lights.
5) The minimum RVR value specified shall be achieved for all reporting points representative of the parts of the runway from the point at which the aircraft commences the take-off until the calculated accelerate-stop distance from that point.
6) LVP must be in force.

When the reported meteorological visibility is

- below that required for take-off and RVR is not reported,
- or when reported meteorological visibility and RVR are not available,

a take-off may only be commenced if the CMD can determine that the VIS/RVR along the take-off runway is equal to or better than the required minimum.

Pilot assessment may replace the first RVR value of the take-off run.

Where it is not possible to use the departure aerodrome for an in-flight return due to meteorological or other reasons, a take-off alternate aerodrome shall be selected.

For operation under foreign ops specs refer to OM C Appendix Foreign Ops Specs.

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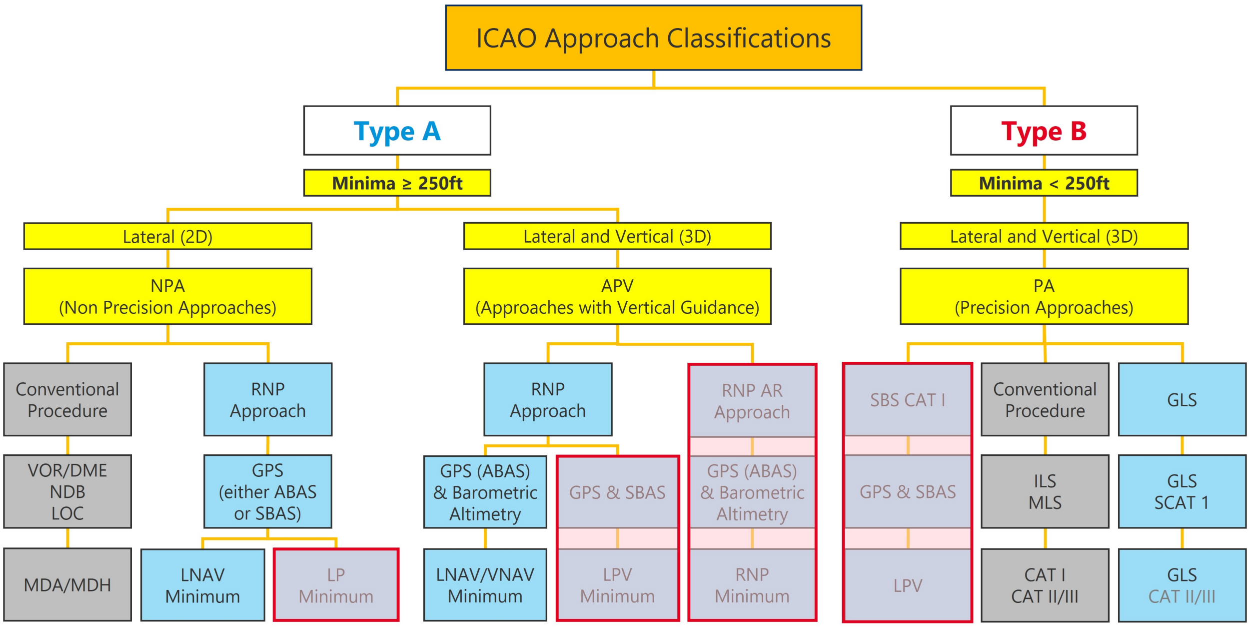
8.1.3.12 Instrument Approach Classification



EDW is not authorised to perform the approaches marked in the red boxes

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8.1.3.13 Determination of RVR or VIS for instrument approach operations

The RVR or VIS for straight-in instrument approach operations shall be not less than the greatest of:

- the minimum RVR or VIS for the type of runway used according to table OM A Runway type minima.
- the minimum RVR determined according to the MDH or DH and class of lighting facility according to OM A RVR/CMV/VIS Minima for NPA, APV and CAT I; or
- the minimum RVR according to the visual and non-visual aids and on-board equipment used according to the table OM A Visual and non-visual aids and/or on-board equipment versus minimum RVR.

If the value determined according the table OM A Runway type minima is a VIS, then the result is a minimum VIS. In all other cases, the result is a minimum RVR.

The visual aids should comprise standard runway day markings, runway edge lights, threshold lights, runway end lights and approach lights as defined in OM A Lighting facilities.

For night operations or for any operation where credit for visual aids is required, the lights should be on and serviceable except as provided for in OM A Effect of downgraded or failed ground equipment.

Where any visual or non-visual aid specified for the approach and assumed to be available in the determination of operating minima is unavailable, revised operating minima will need to be determined.

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8.1.3.13.1 Runway type minima

Runway type	Lowest DH/MDH (ft)
Instrument RWY: Precision approach RWY Cat I	200
Instrument RWY: Non-precision approach RWY	250
Non-instrument RWY	Circling minima

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8.1.3.13.2 Visual and non-visual aids and/or on-board equipment versus minimum RVR

Type of approach	Facilities	Lowest RVR
3D operations with final approach track offset ≤ 5°	Runway touchdown zone lights (RTZL) and runway centre line lights (RCLL)	No limitation
	Without RTZL and/or RCLL but using autopilot or flight director to the DH	No limitation
	No RTZL and/or RCLL, not using autopilot or flight director to the DH	750 m
3D operations with final approach track offset > 5°	RTZL and runway centre line lights RCLL	800 m

Type of approach	Facilities	Lowest RVR
	Without RTZL and RCLL but using autopilot or flight director to the DH	800 m
2D operations	Final approach track offset ≤ 5°	750 m
	Final approach track offset > 5°	1200 m

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8.1.3.14 NPA, APV and CAT I operating minima

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8.1.3.14.1 General

The decision height (DH) to be used for a 3D approach operation or a 2D approach operation flown with the continuous descent final approach (CDFA) technique, shall not be lower than the highest of:

- the obstacle clearance height (OCH) for the category of aircraft;
- the published approach procedure DH or minimum descent height (MDH) as published in the respective AIP where applicable;
- the system minima as specified in the system minima table below;
- the minimum DH permitted for the runway specified in the runway type minima table above;
- the minimum DH specified in the AFM, if stated.

System minima:

Facility	Lowest DH/MDH (ft)
ILS/MLS/GLS	200
GNSS/SBAS (LPV)	200*
GNSS/SBAS (LP)	250*
GNSS (LNAV)	250
GNSS/Baro-VNAV (LNAV/VNAV)	250
LOC with or without DME	250
SRA (terminating at ½ NM)	250
SRA (terminating at 1 NM)	300

Facility	Lowest DH/MDH (ft)
SRA (terminating at 2 NM or more)	350
VOR	300
VOR/DME	250
NDB	350
NDB/DME	300
VDF	350

* EDW is not authorised for GNSS/SBAS (LPV) & GNSS/SBAS (LP) approaches, therefore these minima must not be used.

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8.1.3.14.2 RVR/CMV/VIS Minima for NPA, APV and CAT I

DH or MDH	Class of lighting facility			
	FALS	IALS	BALS	NALS
ft	RVR/CMV (m)			
200 - 210	550	750	1 000	1 200
211 - 240	550	800	1 000	1 200
241 - 250	550	800	1 000	1 300
251 - 260	600	800	1 100	1 300
261 - 280	600	900	1 100	1 300
281 - 300	650	900	1 200	1 400
301 - 320	700	1 000	1 200	1 400
321 - 340	800	1 100	1 300	1 500
341 - 360	900	1 200	1 400	1 600
361 - 380	1 000	1 300	1 500	1 700
381 - 400	1 100	1 400	1 600	1 800
401 - 420	1 200	1 500	1 700	1 900
421 - 440	1 300	1 600	1 800	2 000
441 - 460	1 400	1 700	1 900	2 100
461 - 480	1 500	1 800	2 000	2 200

DH or MDH	Class of lighting facility			
	FALS	IALS	BALS	NALS
ft	RVR/CMV (m)			
481 - 500	1 500	1 800	2 100	2 300
501 - 520	1 600	1 900	2 100	2 400
521 - 540	1 700	2 000	2 200	2 400
541 - 560	1 800	2 100	2 300	2 400
561 - 580	1 900	2 200	2 400	2 400
581 - 600	2 000	2 300	2 400	2 400
601 - 620	2 100	2 400	2 400	2 400
621 - 640	2 200	2 400	2 400	2 400
641 - 660	2 300	2 400	2 400	2 400
661 and above	2 400	2 400	2 400	2 400

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8.1.3.15 CAT II approach minima

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8.1.3.15.1 General

A CAT II operation is a precision instrument approach with a DH below 200ft but not lower than:

100ft DH	300m RVR

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8.1.3.15.2 Required RVR for CAT II

DH (ft)	Auto-coupled to below DH
100 - 120	300m
121 - 140	400m
141 -199	450m

The reference to "auto-coupled to below DH" in this table means continued use of the automatic flight control system down to a height which is not greater than 80% of the applicable DH.

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8.1.3.16 CAT III approaches

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8.1.3.16.1 CAT III operation minima: RVR (m) versus DH (ft)

DH (ft)	Rollout control/guidance system	RVR (m)
50 - 99	Not required	175
0 - 49 or NO DH	Fail operational	75

For actual conditions refer to the eQRH - QL - Requirements for use of low visibility minima.

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8.1.3.16.2 CAT III operations on CAT II installations

Some CAT II ILS installations, which meet CAT III standards are authorised for CAT III operations by the responsible state authorities. The applicable statement is published in Lido Route Manual.

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8.1.3.17 Circling approach

Lowest applicable circling minima are as follows:

MDA/H	Met VIS
800 ft	3400 m

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8.1.3.18 Visual Approach

A visual approach is an approach when either part or all of an instrument approach procedure is not completed and the approach is executed with visual reference to the terrain.

Minimum met requirements are:

- VMC according airspace classification and at least 5 km met visibility

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8.1.4 En-route operating minima for VFR flights or VFR portions of a flight

Flights under VFR shall be conducted in VMC. For the appropriate minima refer to the table below.

Note: These minima are to be considered as an absolute MINIMUM. Keep in mind that "see & avoid" policy is rather difficult, especially in cases of traffic mix (high speed / low speed aircraft) in areas of a high traffic density.

Visual meteorological conditions (VMC)

<table>
<tr><th rowspan="2">Airspace</th><th rowspan="2">Flight visibility</th><th colspan="2">Distance from Clouds</th></tr>
<tr><th>Vertically</th><th>Horizontally</th></tr>
<tr><td>B</td><td rowspan="4">8 km (at or above FL 100)

5 km (below FL 100)</td><td colspan="2">clear of clouds</td></tr>
<tr><td>C + D</td><td rowspan="3">1'000 ft</td><td rowspan="3">1, 5 km</td></tr>
<tr><td>E</td></tr>
<tr><td>F + G above 3'000 ft</td></tr>
<tr><td>F + G at and below 3'000 ft</td><td>5 km</td><td colspan="2">clear of clouds and in sight of surface</td></tr>
</table>

Note: Class A airspace is reserved for IFR-traffic only.

For airspace classification and state differences refer to OM C RAR and CRAR.

Visual meteorological conditions (VMC) for Special VFR:

<table>
<tr><th rowspan="2">Airspace</th><th rowspan="2">Flight visibility</th><th rowspan="2">Ceiling</th><th>Distance from clouds</th></tr>
<tr><th>vertically and horizontally</th></tr>
<tr><td>D</td><td>1,5 km</td><td>1'500 ft</td><td>clear of clouds</td></tr>
</table>

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8.1.5 Presentation and application of aerodrome and en-route operating minima

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8.1.5.1 Flight preparation instructions

Flight preparation includes following items:

- Collecting and evaluating all information necessary for the safe conduct of the flight;
- Calculating the operational flight plan;
- Filing of ATC flight plan, where required;
- Ordering of fuel;
- Informing the respective station personnel about relevant fuel figures and take-off performance;
- Determine the usability of the aerodromes, concerning performance limitations, rescue and fire fighting, ground services.
- Observe that the aircraft is operated according to OM A Area of operations

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8.1.5.1.1 Area of operation

Flights shall only be conducted within areas, for which:

- The FCM holds the required Area and Route Competency. Refer to OM A Area and Route Competency
- The required emergency and survival equipment is on board
- The area is within the operations specifications of the aircraft. Refer to OM B Types of operation that are approved (A320 / A340)

> Note: The aircraft shall remain within a distance corresponding to 120 min at One-Engine-Inoperative (OEI) cruising speed from an aerodrome when operating without the required additional survival equipment (e.g. polar conditions).

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8.1.5.1.2 Flight preparation briefings

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8.1.5.1.2.1 General

Briefing in this context means to obtain the necessary information for flight preparation either in oral or written form. The following types of briefings shall be conducted by flight crew members before each flight/series of flights:

- Company briefing;
- Meteorological briefing;
- Cabin briefing;
- Technical briefing / acceptance of the aeroplane;

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8.1.5.1.2.2 Company Briefing

Company Briefing includes:

- NOTAMs applicable to the en route phase of flight and to departure, destination and alternate airports;
- GNSS status (satellite serviceability) and GPS RAIM predictions (if required);
- OFP, ATC flight plan, load forecast, fuel matters;
- ATC briefing if applicable;
- Availability of aerodrome charts in the on-board documentation;
- EFB data validity check (refer to OM A Policy)

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8.1.5.1.2.3 Meteorological briefing

The documentation provided shall cover the flight in respect of time, altitude and geographical extent. This includes additionally required routes, e.g. routes to destination alternates and all aerodromes required for a legal flight planning and inflight replanning. It shall contain the latest available information, especially as far as aerodrome forecasts and actual reports, trends and runway reports are concerned.

For definition of standard and reduced flight documentation Refer to RM MET.

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8.1.5.1.2.4 Cabin briefing

This is information from the flight crew to the cabin crew concerning special security and safety items, passenger load and specialities concerned, weather including expected turbulence, routing, flight time etc.

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8.1.5.1.2.5 Technical briefing

- The technical briefing consists of the following consultations:
    - CAE NOTAM
    - ELB

The CMD shall brief the S/C about technical defects affecting the cabin crew.

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8.1.5.1.2.6 Acceptance of aeroplane

The detailed procedures for technical ground handling, availability of mechanics at Edelweiss Air line-stations, checks to be performed, etc. are included in the FCOM and in the FOSI.

The CMD performs the necessary preflight and postflight checks according to the Maintenance Checklists published via Yonder/EFB.

The flight crew member accepting the aeroplane shall receive a written certification and briefing of its airworthiness by means of the ELB.

By checking the various sections of the ELB the CMD shall make himself familiar with the technical conditions of the aircraft. This technical status report and the result of the flight crew Preflight Check enables the CMD to confirm that the technical minimum requirements for a safe flight are fulfilled.

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8.1.5.2 General

On an IFR flight a CMD shall not commence the flight unless information is available indicating that the estimated weather conditions at the destination and/or required alternate aerodrome(s) at the time of arrival are at or above the planning minima.

On a VFR flight a CMD shall not commence the flight unless current meteorological reports and forecasts indicate, that the meteorological conditions en route, or for that route segment of VFR flight of the route, will be at the appropriate time such as prescribed for VFR operation.

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8.1.5.3 Enroute alternate aerodrome (ERA)

For 2-engine non ETOPS aeroplanes an enroute alternate aerodrome must be available at any point along the planned route within 60 minutes flight time at OEI cruise speed in still air under standard conditions at max OEI FL according FCOM PRO-SPO-40 (A320).

For 3 or more engined aeroplanes an enroute alternate aerodrome must be available at any point along the planned route within 90 minutes at the all-engines long range cruising speed at standard temperature in still air under standard conditions at max OEI FL. Operation outside this maximum distance range is permitted if the following planning criteria are fulfilled:

- In a two engine inoperative (TEI) case, the amount of fuel must allow the aeroplane to reach an EROPS alternate and hold there at 1’500 ft AAE for 15’ at any point along the route (FPM calculates the great circle distance to any EROPS alternate plus 20’ of fuel at 1’500 ft covering the 15’ Holding plus additional 5’ covering an IFR approach).
- The cargo compartment fire suppression capability shall not be exceeded. The maximum distance to an EROPS alternate is given by the cargo compartment fire suppression capability in accordance with OM A Planning Minima - General

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8.1.5.4 Policy

It is policy to always plan with 2 independent approach and subsequent landing possibilities, e.g. for normal planning:

- 1 destination plus 1 destination alternate

Approved planning options are described in OM A Planning options.

Safety is the predominant factor when selecting destination and alternate aerodromes. The most important points to be considered are:

- Aerodrome infrastructure (i.e. runway and taxiway system, ramp areas, fire and rescue services, lighting system, PPR curfew issues etc.)
- Navigation facilities, incl. GPS signal availability and its quality
- Meteorological situation and services
- Fuel availability
- Customs and immigration facilities and regulations

- Possibilities of onward transportation for passengers, crew and dead-load

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8.1.5.5 Application of performance calculation

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8.1.5.5.1 Take off

For each take off a performance calculation shall be done according to FCOM PRO-NOR-SOP-04 Preliminary performance determination (A320 / A340) and FCTM PR-NP-SOP-40 Preliminary takeoff performance computation (A320 / A340).

The take-off performance computation for wet and contaminated runways shall be based on the reported runway surface condition in terms of contaminant and depth.

When different runway surface conditions (contaminant and depth) are reported along the required runway length, the most conservative runway surface condition shall be applied.

If the runway surface condition (contaminant and depth) for the last third of the runway is significantly worse than the other thirds, a runway shortening may be applied.

During planning stage, if the structural MTOM of the aeroplane cannot be achieved due to environmental conditions (e.g. high temperature, tailwind etc.) the highest possible TOM based on performance has to be calculated and communicated to the relevant operational personnel.

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8.1.5.5.2 Landing

At the preflight stage (dispatch), the CMD shall ensure that the landing performance requirements are complied with.

The landing performance requirements shall be ensured by either:

- A performance computation with the FS+ landing module (dispatch).
- An assessment based on the LDTA reference table published in the eQRH QL section.

The landing mass of the aeroplane shall allow a full-stop landing from 50 ft above the threshold at the destination or any alternate.

When the appropriate weather reports or forecasts, or both, indicate that the runway at the estimated time of arrival is:

- **Dry**: The landing distance determined must be within 60% of the landing distance available (LDA).

- **Wet**: The LDA shall be not less than one of the following distances:
    - The dispatch landing distance determined on wet runway.
    - The dispatch landing distance determined for dry runway, whichever is greater.
- **Contaminated**: The LDA shall be not less than one of the following distances:
    - The dispatch landing distance determined with the respective contaminant selected.
    - The dispatch landing distance determined for a wet runway, whichever is greater.

> Note: On contaminated runways, an additional FLD calculation check (FS+ inflight calculation) is automatically included in the FS+ dispatch calculation and the higher value is limiting.

When determining the landing mass, not more than 50% of the headwind component or not less than 150% of the tailwind component shall be taken into account.

For dispatching the aeroplane, the following two assumptions shall be complied with:

a. The aeroplane shall land on the most favourable (usually longest) runway without considering any wind.
b. The aeroplane shall land on the runway most likely to be assigned, considering the probable wind speed and direction at ETA, the ground-handling characteristics of the aeroplane and other conditions such as landing aids and terrain.

If unable to comply with a):

- For wet and dry RWY: no dispatch is allowed.
- For contaminated RWY: If the landing depends upon a specific wind component, the aeroplane shall only be dispatched if two alternate aerodromes are designated.

If unable to comply with b):

- For the destination aerodrome, the aeroplane shall only be dispatched if an alternate aerodrome is designated.

If unable to comply with a) and b):

- No dispatch is allowed.

For all approaches (destination or any alternate), the OEI missed approach climb gradient must be equal to or greater than 2.5% (2.7% for A340) or the published gradient, whichever is greater.

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8.1.5.5.3 Wind

For all flight planning purposes wind must be taken into consideration according OM A Application of aerodrome forecast for planning. For wind limitations Refer to FCOM and QRH QL “RCAM Runway Condition Assessment Matrix” .

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8.1.5.6 Flightplanning mass verification

To prevent performance calculations and FMS entries with wrong ZFM/TOM, the ZFM on the OFP must be verified with the EZFM (EZFM received from handling or calculated EZFM with PAX figures/cargo) during flight planning.

If the actual ZFM differs significantly (A320: ≅ 1.5 T, A340: ≅ 3 T) from the EZFM on the OFP, a new OFP should be calculated.

For minor corrections refer to the fuel correction scenarios in eFM "Flight Details" tab "Fuel Calculations".

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8.1.5.7 Planning minima

For flight planning the latest available meteorological information, including forecasts, actual reports or an appropriate combination thereof shall be considered. Preflight planning minima are applicable until the commencement of flight.

The CMD shall only commence the flight; or continue beyond the point from which a revised ATS flight plan applies in the event of in-flight replanning, when information is available indicating that the expected weather conditions, at the time of arrival, at the destination and/or required alternate aerodrome(s) are at or above the planning minima.

If no weather forecast is available for a selected aerodrome, it shall be considered as being below company minima for all planning purposes.

If the TAF indicates a VRB wind with a speed in excess of 10 kt, CAE FPM cannot plan a RWY as the tailwind component for both directions would be out of limits. Nevertheless, such an aerodrome may be used for planning provided the crosswind component (including gust) is within limits.

In case a visual approach is required for preflight-planning (e.g. due to NAV Aids not available), company VMC limitations apply and ceiling shall not be below the level of the beginning of the initial approach segment.

A route shall not be planned further away from an adequate aerodrome than the all engine operative distance under standard conditions in still air that is equivalent to the cargo compartment fire suppression time limit including a 15-minute safety margin.

A/C type	Cargo compartment fire suppression capability	Safety Margin	Planning Requirement
A340	260 min	15 min	245 min (1952 NM)

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8.1.5.7.1 Planning requirements for aerodromes

Type of aerodrome	Weather permissible	Aerodrome ceiling applicable for	Weather minima VIS/RVR	Minimum aerodrome classification	Maximum distance (Speed V_{MO})	Remarks
Departure aerodrome	Yes	N/A	Applicable take-off minima for DEP; OEI minima, RVR or VIS for return	OA	N/A	If it is not possible to return to the departure aerodrome for meteorological (weather below OEI minimum) or performance reasons (FLD and G/A gradient), or if the departure aerodrome closes after departure within half of the specified time frame below, a T/O may only be made if a take-off alternate is available.
Take-off alternate[1,2] ETA ±1 hr Note: The take-off alternate on the OFP is identical to the departure aerodrome. If another take-off alternate is re-	Yes	Type A or circling: Ceiling above applicable minima	OEI minima, RVR or VIS	PA	A320 (60 min): 380 NM A340 (120 min): 900 NM	The landing mass has to be considered as follows: • Landing mass < MLM: CAT III with DH ≥ 50 ft • Landing mass > MLM: CAT II (no Autoland)

Type of aerodrome	Weather permissible	Aerodrome ceiling applicable for	Weather minima VIS/ RVR	Minimum aerodrome classification	Maximum distance (Speed V_{MO})	Remarks
quired, it has to be noted on the OFP.						
Enroute alternate aerodrome (ERA)	No	N/A	N/A	BA	A320 (60 min): 400 NM A340 (90 min): 717 NM	
Oxygen Alternate	No	N/A	N/A	BA	N/A	
Terrain enroute aerodrome ETA ± 1 hr [2]	Yes	Type A or circling: Ceiling above applicable minima	OEI Minima, RVR or VIS	BA	N/A	
Destination aerodrome[1] ETA ± 1 hr	Yes	Type A or circling: Ceiling above applicable minima	Applicable minima RVR or VIS	OA	N/A	If circling minimum: applicable minimum but ceiling/visibility at least 800 ft/3400 m.
Destination alternate[3],	Yes	Alternate	Alternate	DEST ALTN:	FUEL ERA	Published OEI minima must only be considered

Type of aerodrome	Weather permissible	Aerodrome ceiling applicable for	Weather minima VIS/ RVR	Minimum aerodrome classification	Maximum distance (Speed V_{MO})	Remarks
Fuel Enroute Alternate (Fuel ERA CFS, Fuel ERA 3%) and DEST 2 (RCF)		planning minima	planning minima	OA FUEL ERA: PA DEST 2: PA	CFS: A320 (60 min): 400 NM A340 (90 min): 717 NM FUEL ERA 3%: Refer to OM A Contingency fuel → Location of fuel ERA 3% DEST 2 (RCF): N/A	if higher than the required planning minimum.
Extended Enroute alternate aerodrome (EROPS)	Yes	Type A or circling: Ceiling above applicable minima	Applicable minima RVR or VIS	BA	A320: N/A A340: 245 min	

[1] If a particular ceiling is required by the state authority for a specific procedure this is indicated on the respective chart (eg. AOI/IAC).

[2] Any limitations related to OEI operations shall be taken into account.

[3] An aerodrome should only be selected as a destination alternate aerodrome if an instrument approach procedure that does not rely on a GNSS is available either at that aerodrome or at the destination aerodrome.

Note: If the limiting suffix “R” is shown, the VIS shall be taken as RVR identical value (no conversion allowed).

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8.1.5.7.2 Alternate planning minima

Destination Alternate[3], Fuel Enroute Alternate (Fuel ERA CFS, Fuel ERA 3%) and DEST 2 (RCF) ETA ± 1 hr		
Type of approach	**Aerodrome ceiling**	**VIS/RVR**
Two or more usable Type B instrument approach operations to two separate runways	DA/H[1] + 100 ft	RVR[2] + 300 m (0.19 SM / 0.16 NM)
One usable Type B instrument approach operation	DA/H + 150 ft	RVR + 450 m (0.28 SM / 0.24 NM)
3D Type A instrument approach operations, based on a facility with a system minimum of 200 ft or less	DA/H + 200 ft	RVR/VIS[2] + 800 m (0.50 SM / 0.43 NM)
Two or more usable Type A instrument approach operations, each based on a separate navigation aid	DA/H or MDA/H[1] + 200 ft	RVR/VIS[2] +1000 m (0.62 SM / 0.54 NM)
One usable Type A instrument approach operations	DA/H or MDA/H + 400 ft	RVR/VIS + 1500 m (0.93 SM / 0.81 NM)
Circling approach operations	MDA/H + 400 ft	VIS + 1500 m (0.93 SM / 0.81 NM)
Conditions for the use of this table:		

Destination Alternate[3], Fuel Enroute Alternate (Fuel ERA CFS, Fuel ERA 3%) and DEST 2 (RCF) ETA ± 1 hr		
Type of approach	**Aerodrome ceiling**	**VIS/RVR**
• For application of aerodrome forecasts, refer to OM A Application of aerodrome forecast for planning. • Wind limitations should be applied, considering the runway conditions (dry, wet, contaminated). • The most convenient planning row can be selected if multiple rows are available. • For foreign Ops Specs, refer to OM C Appendix Foreign Ops Specs.		

[1]The higher of the usable DA/H or MDA/H.

[2] The higher of the usable RVR or VIS.

[3] An aerodrome should only be selected as a destination alternate aerodrome if an instrument approach procedure that does not rely on a GNSS is available either at that aerodrome or at the destination aerodrome.

Note: If the limiting suffix “R” is shown, the VIS shall be taken as RVR identical value (no conversion allowed).

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8.1.5.7.3 Alternate planning minima in case of unavailable flight monitoring elements

If flight monitoring according to OM A Flight Monitoring cannot be assured (e.g. failure of communications equipment, refer to OM A Means of communication), following planning minima apply:

Destination Alternate , Fuel Enroute Alternate ETA ± 1 hr		
Type of approach	**Aerodrome ceiling**	**Weather minima VIS/RVR**
Type B instrument approach operations	DA/H + 200 ft	RVR/VIS + 800 m
Type A instrument approach operations	DA/H or MDA/H + 400 ft	RVR/VIS + 1500 m
Circling approach operations	MDA/H + 400 ft	VIS + 1500 m

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8.1.5.7.4 Preflight GPS RAIM Prediction

If GPS coverage is required and no other navigational method is acceptable or available during departure, enroute, arrival and approach a GPS RAIM prediction check needs to be performed and passed.

A RAIM prediction report is included in the briefing package of the flight crew. However, this RAIM prediction report does not cover T/O alternates, enroute alternates, fuel alternates and destination alternates.

Longhaul flights:
The RAIM prediction report is analysed by OCC and an additional RAIM check is automatically done by Dispatch for T/O alternates, enroute alternates, fuel alternates and destination alternates, whenever necessary.

Shorthaul flights:
The RAIM prediction report needs to be analysed by the Flight Crew and an additional RAIM check needs to be requested for T/O alternates, enroute alternates, fuel alternates and destination alternates, whenever necessary if the navigation specifications rely on GNSS only.

The flight planning shall be adjusted if a required preflight RAIM prediction fails and exceeds the RAIM loss time limit according to the table below but only if the outage time occurs during the time of planned operation of this flight segment. For departure, enroute and arrival the estimated times overhead shall be considered. For T/O alternates, enroute alternates, fuel alternates and destination alternates ETA +/- 1 hour shall be considered.

A relevant preflight RAIM prediction failure shall be considered as applicable inflight.

The following table visualises the GPS coverage requirements within different Navigation Performance Areas:

NAVSPECS	**SENSORS**	**AREAS** ***Examples***	**Time Limit RAIM Loss (when PBN relies on GNSS only)**
RNP (RNAV) 10	GNSS or INS/IRU	Oceanic, Remote Continental *NAT HLA*	> 5 min
RNP 4	GNSS only	Oceanic, Remote Continental *PBCS Tracks*	> 25 min
RNAV 5	GNSS or INS/IRU or DME/DME or	Enroute Continental *(European B-RNAV Ops) Continental Eu-*	> 5 min

NAVSPECS	SENSORS	AREAS *Examples*	Time Limit RAIM Loss (when PBN relies on GNSS only)
	DME/DME/IRU or VOR/DME	*rope including Canaries and North Africa*	
RNAV 1 & 2	GNSS or DME/DME or DME/DME/IRU	Enroute, Continental, Terminal, Initial Approach *(P-RNAV - Terminal RNAV) AIP may specify that GPS is always required*	> 5 min
RNP 2	GNSS only	Oceanic, Remote Continental, Enroute *USA*	> 5 min
RNP 1	GNSS only	Terminal, Initial Approach	> 5 min
RNP APCH	GNSS only	Approach	> 5 min
RNP AR APCH	GNSS only	Approach	> 5 min

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8.1.5.8 Planning options

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8.1.5.8.1 General

This sub-chapter contains a list of possible planning options. It contains requirements and/or limitations in addition to those published for normal planning. It is the CMD's final decision which procedure he will use for planning.

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8.1.5.8.2 RNP/PBN based approach procedures

If planning with a destination alternate, either the destination or the alternate must have one conventional approach possibility.

An RNP/PBN approach shall not be planned if the airport is known to be affected by GPS-jamming/-spoofing according to published NOTAM.

Where the missed approach procedure is based on RNP/PBN only, two RNP/PBN systems must be operational on board the aeroplane during the planning stage.

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8.1.5.8.3 Separate runways

Runways on the same aerodrome are considered to be separate runways when:

- They are separate landing surfaces which may overlay or cross in a way that if one of the runways is blocked, it will not prevent the planned type of operations on the other runway; and
- Each of the landing surfaces has a separate approach procedure based on a separate aid.

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8.1.5.8.4 Planning without destination alternate

No destination alternate is required if the following conditions are met:

- The duration of the planned flight from take-off to landing does not exceed 6 hours or, in the event of in-flight re-planning, the remaining flying time to destination does not exceed 4 hours, and
- Two separate runways are available at the destination; and
- the meteorological conditions are such that, for ETA +/- 1 hr:
  - the ceiling is at least 2000 ft or circling height + 500 ft whichever is greater;
  - visibility at least 5 km.

> Note: A destination aerodrome with all instrument approach procedures relying solely on GNSS may be used.

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8.1.5.8.5 Planning with closed destination

Planning to a closed destination aerodrome is permitted provided:

- The flight route is planned via overhead closed destination;
- 2 destination alternates (DA) are planned and specified on the ATS flight plan;
- For fuel calculation the higher quantity of alternate fuel is considered.
- The CMD shall specify any required alternate(s) in the OFP.

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8.1.5.8.6 Isolated destination

EDW does not hold an approval to operate to an isolated aerodrome.

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8.1.5.8.7 Reduced contingency fuel procedure (RCF)

If normal planning cannot be achieved due to load, range (e.g. due to required highspeed/planned flight level) and/or fuel non-availability a flight may be planned by applying the reduced contingency fuel procedure.

- A destination 1 and a destination 2 shall be selected. Destination 1 is the commercial destination.
- A decision point has to be selected. This decision point (DP) can be at any point along the intended route to the destination 1 and 2 aerodrome, preferably as close as possible to them, in order to reduce the required amount of contingency fuel to a minimum.
- Landing mass limitations for destination 2 may be disregarded for ETO, but the time to burn off overmass must be covered in the weather forecast.

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8.1.6 Interpretation of meteorological information

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8.1.6.1 General

Planning should normally be based on the latest available standard flight documentation.

At transit or turnaround stations a reduced flight documentation may be used.

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8.1.6.2 Application of aerodrome forecast for planning

If available, the TREND forecast added to a METAR or SPECI overrules any TAF for the period of validity of the TREND.

> The TREND (incl. NOSIG) never provides an RVR forecast.

New, amended or corrected TAF: Any new, amended (AMD) or corrected (COR) TAF automatically cancels any previously issued TAF of the same type (9 hrs, 24 hrs, 18/24 hrs) and for the same validity period.

Application of aerodrome forecasts (TAF & TREND) to flight planning

Application of initial part of TAF

- Application period:
  From the start of the TAF validity period to the time of applicability of the first subsequent "FM...*" or "BECMG", or if no "FM..." or "BECMG" is given, to the end of the validity period of the TAF.

- Application of forecast:
  The forecast of the prevailing weather conditions in the initial part of the TAF shall be fully applied, with the exception of mean wind and gusts that shall be applied in accordance with the policy under column "BECMG AT and FM..." in the table below. However, this may be temporarily superseded by a "TEMPO" or "PROB**", if applicable according to the table below.

Application of forecast following change indication in TAF and TREND

	FM (alone) and **BECMG AT**:	**BECMG** (alone), **BECMG FM**, **BECMG TL**, **BECMG FM...TL**, in case of:		**TEMPO** (alone), **TEMPO FM**, **TEMPO TL**, **TEMPO FM...TL**, **PROB 30/40** (alone):			**PROB TEMPO**:
				Deterioration			
TAF or TREND for Aerodrome planned as:	Deterioration and Improvement	Deterioration	Improvement	Transient/ Shower conditions in connection with short-lived weather phenomena e.g. thunderstorms, showers	Persistent conditions in connection with e.g. haze, mist, fog, dust/ sandstorm, continuous precipitations	Improvement in any case	Deterioration and Improvement
Destination at ETA	Applicable from the start of the change	Applicable from the start of the change	Applicable from the end of the change	Not applicable	Applicable		Deterioration may be disregarded.

Application of aerodrome forecasts (TAF & TREND) to flight planning							
+/- 1 hr **Destination alternate** at ETA +/- 1 hr **Take-off alternate** at ETA +/- 1 hr **DEST 2 (RCF)** at ETA +/- 1 hr **Fuel ERA (3% CFS)** at ETA +/- 1 hr **EROPS ERA** at ETA +/- 1 hr **Terrain ERA** at ETA +/- 1 hr	Mean wind shall be within required limits Gusts exceeding crosswind limits shall be fully applied	Mean wind shall be within required limits Gusts exceeding crosswind limits shall be fully applied	Mean wind shall be within required limits Gusts exceeding crosswind limits shall be fully applied	Mean wind and gusts exceeding required limits may be disregarded	Mean wind shall be within required limits Gusts exceeding crosswind limits shall be fully applied	Shall be disregarded	Improvement shall be disregarded including mean wind and gusts.

Note 1: "Required limits" are those contained in the Operations Manual.
Note 2: If promulgated aerodrome forecasts do not comply with the provisions of ICAO Annex 3, operators shall ensure that guidance in the application of these reports is

provided.
* The space following "FM" shall always include a time group e.g. "FM1030".

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8.1.7 Determination of the quantities of fuel and oil carried

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8.1.7.1 Fuel planning policy

EDW Fuel planning policy is based on the EASA basic Fuel Scheme with variations. It allows to use EASA established variations to replace part of the prescriptive fuel planning rules. It is supported by continuous analysis of safety indicators and operational data within the AOC (e.g. a fuel consumption monitoring program) and computerised flight planning, established processes between the crew and Operations Control Center.

The fuel planning policy requires that during planning of the flight, two safe landing options are expected to remain available until the flight reaches its destination, where a decision will be made to commit to land or divert. This will typically be a runway at the destination aerodrome itself and a runway at a destination alternate aerodrome, or two separate runways at the same aerodrome if applicable.

A flight shall not be commenced or continued in the case of in-flight replanning, unless the CMD is satisfied that the aeroplane carries at least the planned amount of usable fuel and oil to complete the flight with a safe landing, taking into account the expected operating conditions and to allow for deviations from the planned operation. Fuel planning should be based on the most accurate and latest available information.

The fuel planning is based upon:

- Procedures laid down in the operations manual;
- The current aircraft-specific data derived from the fuel consumption monitoring system or, if no data from the fuel consumption monitoring system are available, the aircraft fuel consumption data provided by the aircraft manufacturer;
- Expected departure and arrival routing and runways;
- Expected routings and flight levels;
- Air traffic flow restrictions; and anticipated delays.
- The operating conditions under which the flight is to be conducted including:
    - Anticipated masses;
    - Anticipated meteorological conditions;
    - The effects of deferred maintenance items and/or configuration deviations;
    - Any other conditions that might cause increased fuel consumption.

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8.1.7.2 Fuel planning components

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8.1.7.2.1 Minimum block fuel / block fuel

Fuel Planning calculation of the required fuel components results in Minimum Block Fuel. In addition, the CMD may add Discretionary Fuel, which results in Block Fuel. At least Minimum Block Fuel shall be on board at commencement of flight (reduced by APU consumption if accounted for in the flight planning).

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8.1.7.2.2 Taxi Fuel

Taxi fuel is the fuel expected to be used prior to take-off, including APU consumption. It shall take into account local conditions at the departure aerodrome (e.g. ATC procedures, winter operations, LVP, NOTAM, meteorological conditions, collaborative decision-making (CDM), anticipated delays).

To calculate taxi fuel, statistical data is used.

The CMD may adjust (increase/decrease) taxi fuel as deemed necessary to meet actual requirements.

If there are too few values in the database, a default value of 15 minutes is used:

A320	A340
180 kg	405 kg

APU fuel consumption:

Condition	A320	A340
GEN ON only	100 kg/h	140 kg/h
GEN ON and Packs ON	130 kg/h	215 kg/h

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8.1.7.2.3 Trip fuel

Trip fuel shall include:

- fuel for take-off and climb from aerodrome elevation to initial cruising level/altitude, taking into account the expected departure routing; and
- fuel from top of climb to top of descent, including any step climb/descent; and
- fuel from top of descent to the point where the approach is initiated, taking into account the expected arrival routing; and

- fuel for approach and landing at the destination aerodrome.

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8.1.7.2.4 Contingency fuel

Fuel required to compensate for unforeseen factors that could have an influence on the fuel consumption to the destination aerodrome (e.g. deviations from forecast meteorological conditions, planned routings, cruising levels etc.).
Contingency fuel shall be either the higher of provision (a) or provision (b) below:

Provision (a), lowest of:

- 5% of the planned trip fuel or, in the event of in-flight replanning, 5% of the trip fuel for the remainder of the flight; or
- 3% of the planned trip fuel or, in the event of in-flight replanning, 3% of the trip fuel for the remainder of the flight, provided that a fuel en-route alternate (fuel ERA 3%) aerodrome is available;
  or
- an amount of fuel sufficient for 20-minutes flying time based upon the planned trip fuel consumption;
  or
- an amount of fuel based on a statistical method that ensures an appropriate statistical coverage of the deviation from the planned to the actual trip fuel (SCF).

Provision (b):

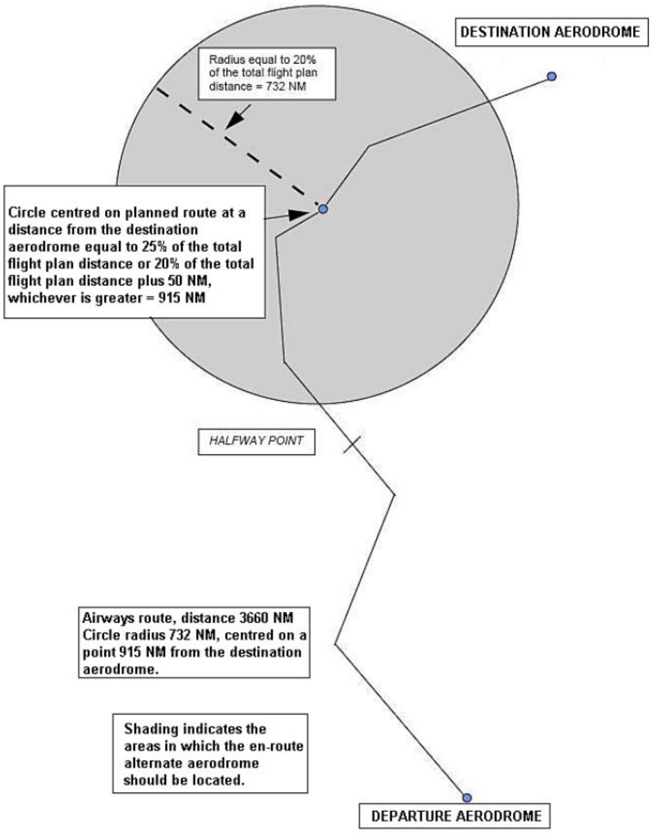
- an amount to fly for 5 min at holding speed at 1500 ft above the destination aerodrome in standard conditions.

Important: In case of unavailability of flight monitoring the contingency fuel shall be calculated according to the contingency procedure described in OM A Means of communication. The fuel ERA 3% planning option must not be used.

Note: SCF not applied by EDW

Location of the fuel ERA 3%

If planning with a fuel en-route alternate, it shall be located within a circle having a radius equal to 20% of the total flight plan distance, the centre of which lies on the planned route at a distance from the destination of 25% of the total flight plan distance, or at least 20% of the total flight plan distance plus 50 NM, whichever is greater. All distances are to be calculated in still air conditions.



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8.1.7.2.5 Destination alternate fuel

The destination alternate fuel is the fuel required for the flight to the destination alternate aerodrome.

It consists of:

- fuel for a missed approach from the applicable decision altitude/height (DA/H) or minimum descent altitude/height (MDA/H) at the destination aerodrome to missed-approach altitude, taking into account the complete missed-approach procedure; and
- fuel for climb from the missed-approach altitude to the cruising level/altitude, taking into account the expected departure routing; and
- fuel for cruising from the top of climb to the top of descent, taking into account the expected routing; and
- fuel for descent from the top of descent to the point where the approach is initiated, taking into account the expected arrival routing; and
- fuel for executing an approach and landing at the destination alternate aerodrome.

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8.1.7.2.6 Fuel requirement when planning without destination alternate

Planning without alternate requires an amount of additional fuel sufficient to hold for 15 minutes at 1'500 ft above the destination aerodrome elevation in standard conditions calculated according to the estimated aeroplane mass on arrival at the destination aerodrome.

It will be included in the OFP under "NOALTN".

> Note: A destination aerodrome with all instrument approach procedures relying solely on GNSS may be used.

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8.1.7.2.7 Final reserve fuel

Final reserve fuel, which shall be:

Fuel to fly for 30 minutes at holding speed at 1500 ft AAE in standard conditions, calculated with the estimated mass on arrival at the alternate or the destination, when no alternate is required.

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8.1.7.2.8 Additional fuel

Additional fuel may be required in the following cases.

Non-ETOPS flights:

- An amount of fuel that allows the aeroplane to proceed, in the event of an engine failure or loss of pressurisation, from the most critical point along the route to a Fuel ERA aerodrome in the relevant aircraft configuration, hold there for 15 minutes at 1'500 ft AAE in standard conditions, make an approach, and land.

However, additional fuel is only required if, at the most critical point along the route, the sum of the remaining trip fuel, destination alternate fuel, and final reserve fuel is not sufficient to cover such an event. It will be included in the OFP under "ADD CFS."

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8.1.7.2.9 Extra fuel

Fuel to cover anticipated delays or specific operational constraints that can be predicted, stipulated with a specific justification (e.g. expected holding time at destination) by relevant company departments (e.g. OCC, Flight Dispatch, Route Support, Fleet, CMD).

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8.1.7.2.10 Discretionary fuel

Fuel at the sole discretion of the CMD if deemed necessary.

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8.1.7.3 Fuel Planning

Fuel Planning comprises the calculation of the required fuel components and results in minimum block fuel.

The following components are part of the fuel planning:

- Taxi Fuel; and
- Trip Fuel; and
- Contingency Fuel; and
- Destination Alternate Fuel (if required); and
- Final Reserve Fuel; and
- Additional Fuel (as required); and
- Extra Fuel (as required).

In addition, the CMD may add:

- Discretionary Fuel.

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8.1.7.4 Reduced Contingency Fuel (RCF) Procedure

If a flight is planned to a destination 1 aerodrome (commercial destination with an RCF procedure using a decision point along the route) and a destination 2 aerodrome (optional refuelling destination), the Minimum Block Fuel shall be the greater of a. or b. below:

a. The total of:
    - Taxi Fuel; and
    - Trip Fuel to the destination 1 aerodrome via the decision point; and
    - Contingency Fuel equal to not less than 5 % of the fuel that is estimated to be consumed from the decision point to the destination 1 aerodrome; and
    - Destination Alternate Fuel or no alternate fuel if the decision point is less than 6 hours away from the destination 1 aerodrome and the requirements for planning without destination alternate aerodrome are fulfilled; and
    - Final Reserve Fuel; and
    - Additional Fuel (as required); and

- Extra Fuel (as required).

b. The total of:
   - Taxi Fuel; and
   - Trip Fuel to the destination 2 aerodrome via the decision point; and
   - Contingency Fuel equal to not less than the amount that is calculated in accordance with OM A Contingency fuel, from the departure aerodrome to the destination 2 aerodrome; and
   - Destination Alternate Fuel if a destination 2 alternate aerodrome is required; and
   - Final Reserve Fuel; and
   - Additional Fuel (as required); and
   - Extra Fuel (as required).

In addition to Minimum Block Fuel, the CMD may add Discretionary Fuel.

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8.1.7.5 Isolated destination aerodrome procedure

EDW does not hold an approval to operate to an isolated aerodrome.

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8.1.7.6 Oil quantity

Adequate oil quantity to cover the requirements of trip, contingency, alternate, reserve and taxi must be loaded prior to departure.

The minimum and maximum oil quantities and the maximum average estimated oil consumption are indicated in the FCOM.

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8.1.8 Mass and centre of gravity

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8.1.8.1 General

During any phase of operation, the loading, mass and centre of gravity of the aeroplane have to comply with the limitations specified in the approved Aeroplane Flight Manual, or the Operations Manual if more restrictive.

The mass and the centre of gravity of any aeroplane have to be established by actual weighing prior to initial entry into service and thereafter at intervals of 4 years if individual aeroplane masses are used and 9 years if fleet masses are used. The accumulated effects of modifications and repairs on the mass and balance must be accounted for and properly documented. Furthermore, aeroplanes must be reweighed if the effect of modifications on the mass and balance is not accurately known.

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8.1.8.2 Definitions

Term	Definition
Dry Operating Mass (DOM)	Operating empty mass including all items required for dispatch, except payload and usable fuel.
Take-off fuel	The mass of fuel on board at take-off.
Total traffic load	The mass of the payload including cargo, passengers and passengers bags.
Zero Fuel Mass (ZFM)	The mass obtained by addition of the total traffic load and the DOM.
Take-Off Mass (TOM)	The mass at take-off. It is equal to the addition of the zero fuel mass and the take-off fuel.
Trip Fuel (TF)	The mass of the fuel necessary to cover the normal leg without reserves.
Landing Mass	The mass at landing. It is equal to take-off mass minus the trip fuel.

The industry is adapting to SI, thus the term “weight” will gradually disappear from all documentation. However this process may take years. In daily operation, the terms “mass” and “weight” may be treated as being equivalent.

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8.1.8.3 Loadsheet

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8.1.8.3.1 Preparation

A loadsheet shall be prepared for each flight by either Edelweiss station personnel, contracted agents or by the flight crew.

Note: In case of planned intermediate landing (e.g. fuel or operational stop) the loadsheet must be prepared by the flight crew (even at EDW destinations).

The following information shall be given to the handling agent as early as possible:

- Registration
- Name of Captain
- Flight number
- Origin
- Destination
- Cabin Version
- Pantry
- Potable water level
- Number of crew
- Block fuel
- Taxi fuel
- Trip fuel
- EET
- Additional information (e.g. Stretcher, LDMCR)

As a general policy, ZFM and TOM as noted on the loadsheet shall be rounded up to the next 100 kg. Nevertheless, some ACARS loadsheets show mathematically rounded figures (62'449 kg is shown as 62.4 T) which is acceptable.

The following tolerance of DOM/DOI on the loadsheet is acceptable:

- The DOM should be correct (Minor deviations allowed within LMC tolerance for crew and potable water according LMC table. Refer to OM A Last minute change (LMC)).
- The DOI may have minor deviations (Due to slightly different rounding and calculation methods of the different systems or LMC of crew or potable water).

ACARS loadsheet procedure:

- 2 ACARS loadsheets will be sent. If needed, it is possible to print again the ACARS Loadsheet via “Received Messages”.
- The CMD signs both loadsheets, and hands one copy over to the handling agent.
- The second loadsheet stays on board and will be returned to the OCC with the flight documents.
- The paper loadsheet is not required but may be handed over to the crew for information only (see below) and without signature.
- The ACARS loadsheet contains all relevant information.

> Note: On some loadsheets (e.g. ZRH) the passenger distribution “Male/Female/Child/Infant” is missing. In case of diversion, the FS+ loadsheet shall be made with “Adult/Child/Infant”.

- The information, whether the ACARS loadsheet is approved is noted in the Flypad/SSI:

Loadsheet

by Handling (remote
Loadcontrol CLC VIE)

Acars LS approved

> Note: On all LX flights, the ACARS loadsheet is automatically approved.

- Only in urgent cases remote loadsheet control may be contacted by phone:
    - Loadcontrol ZRH: Acc. CCI ZRH
    - Remote Load Control Wien: +43 1 7007 22126
    - Remote Load Control Bangkok: +66 2 134 24 91 / 92
    - Remote Load Control Kapstadt: +27 21 415 3815

Cockpit, Operational Ground Staff

8.1.8.3.2 Departure station responsibilities

The load control procedure must ensure that:

- Before each flight a loadsheet has to be produced either by station EDP or manually by the flight crew.
- Figures on the loadsheet reflect the actual load of the aircraft prior take-off. For this matter, a cross-check of the loading instruction report and the final loadsheet is mandatory and must always be done and confirmed to the flight crew by the ramp agent prior to closing the aircraft doors.
- The aircraft is loaded in accordance with the general company and IATA regulations and the specific loading instructions for the flight concerned. Any deviations must be noted on the loading instruction. The loading instruction must reflect the actual loading.
- Aircraft structural and operational limits may not be exceeded as well as weight and balance requirements must be fulfilled. The limits are either marked on the LIR or in the weight & balance system.
- The position of the center of gravity is within the prescribed limits. For A340 flights, a MACTOW of ≥28% shall be targeted whenever possible, within reason. Loading sequence and ground stability rules however, are to be prioritised (Refer to OM B A320 Ground stability or OM B A340 Ground stability).

The Handling Agent shall have a loadcontrol process which contains at least:

- Assemblage of all data relating to the aircraft load (originating and en-route stations), including reporting of special passengers groups or baggage

categories which may fall outside weight/volume allowances normally applied for weight and balance calculation.
- Planning of the load for ready accessibility.
- Planning of special loads according to restrictions, maximum quantities, separation and segregation requirements.
- Consideration of centre of gravity parameters affecting aircraft fuel consumption.

It shall be ensured that procedures are in place for identification and communication to load control:

- Hold baggage, individual or cumulative weights, that exceed normal allowances
- Gate delivery items, including individual or cumulative weights that exceed normal allowances
- Other non-normal items that must be considered in the load control process. This includes medical equipment, sport equipment, AVIH from check-in, weapons, other bulky or oversized bag/piece, etc.

Standard baggage weight may not be used for bags which are much above the average weight. If applicable, this has to be mentioned on the LIR and transmitted to loadcontrol. Changes in load control setup shall be communicated to EDW, especially in the case of a Centralised Load Control Environment.

Cockpit, Operational Ground Staff

8.1.8.3.3 Checking of loadsheet

Before each departure, the loadsheet must be checked by the CMD and the F/O with respect to the following:

- The date, flight number, departure/destination airport and aircraft registration are correct for the respective flight;
- The fuel figures must correspond to the planned quantities on the OFP and fuelling-calculation;
- The actual mass does not exceed the structural and operational limits for take-off, landing and zero fuel mass;
- The CG is within limits (ZFM, TOM);
- The number of crew members and the pantry code is correct for the respective flight;
- The total number of passengers does not deviate from the seating and safety equipment limitations according to the aeroplane certification.

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8.1.8.3.4 Acceptance of loadsheet

By signing the loadsheet (EDP, ACARS or FS+ loadsheet) the CMD certifies on behalf of the company that (responsible person in brackets):

- The aeroplane is carrying all necessary legal documents (T) and ELB (CMD);
- The aeroplane is airworthy according to the respective minimum requirements and maintenance status (maintenance organisation at home base, station engineer, or CMD) and is maintenance released;
- The aeroplane load is correctly distributed and secured for save flight (station manager or supervisor).

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8.1.8.4 Determination of mass

- Passengers including hand baggage:
    - Standard mass.
- Baggage:
    - Standard masses or weighed at check-in.
- Freight:
    - Must be always weighed.
- Crew:
    - Standard mass.

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8.1.8.5 Fuel

The mass of the fuel load must be calculated using actual density values. Whenever possible and practicable, the actual density of the fuel, as obtained from the fuelling crew, shall be used. If no actual density is available to the crew, the standard value 0.8 kg/l shall be used. In case of missing actual values and fuel difference out of tolerance when using standard value, the following values shall be used.

Delivery temperature [°C]	Fuel density [kg/l]
-5	0.8143
-4	0.8136

Delivery temperature [°C]	Fuel density [kg/l]
-3	0.8129
-2	0.8122
-1	0.8115
0	0.8108
1	0.8100
2	0.8093
3	0.8086
4	0.8079
5	0.8072
6	0.8065
7	0.8058
8	0.8050
9	0.8043
10	0.8036
11	0.8029
12	0.8022
13	0.8014
14	0.8007
15	0.8000
16	0.7993
17	0.7986
18	0.7978
19	0.7971
20	0.7964
21	0.7956
22	0.7949
23	0.7942
24	0.7934

Delivery temperature [°C]	Fuel density [kg/l]
25	0.7927
26	0.7920
27	0.7912
28	0.7905
29	0.7898
30	0.7890
31	0.7883
32	0.7876
33	0.7868
34	0.7860
35	0.7852

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8.1.8.6 Policy of using standard masses

Cockpit, Operational Ground Staff

8.1.8.6.1 Passengers and Crew

When standard mass values are used, check-in, operations and cabin staff and loading personnel report to the CMD or take appropriate action when a flight is identified as carrying a significant number of passengers whose masses, including hand baggage, are expected to exceed the standard passenger mass, and/or groups of passengers carrying exceptionally heavy baggage (e.g. military personnel or sports teams). In this case, the total mass should be determined by weighing (the passengers together with their unchecked baggage) immediately prior to boarding.

The standard includes the mass of any infant below 2 years of age carried by an adult on one passenger seat. Infants occupying separate passenger seats must be considered children. Cabin baggage weight is included in the passenger's weight.

The authority may approve standard masses other than standard. These values may only be used for a specific area of operation.

Applicable standard masses:

Scheduled flights

All Adult	84 kg
Female	70 kg
Male	88 kg
Child	35 kg
Infant	0 kg

Note: Female and male weights can be used if more than 23% of the PAX are female.

Holiday charter operation

A holiday charter refers to a charter flight that is part of a holiday travel package. On such flights, the entire passenger capacity is hired by one or more charter companies for the carriage of passengers who are travelling, all or in part by air, on a round- or circle-trip basis for holiday purposes. The holiday charter mass values apply provided that not more than 5 % of passenger seats installed in the aircraft are used for the non-revenue carriage of certain categories of passengers. Categories of passengers such as company personnel, tour operator staff, press representatives, authority officials etc. can be included within the 5% without negating the use of holiday charter mass values.

All Adult	76 kg
Female	69 kg
Male	83 kg
Child	35 kg
Infant	0 kg

Note: Female and male weights can be used if more than 23% of the PAX are female.

Flight and cabin crew

Flight crew	85 kg incl. crew bag
Cabin crew	75 kg incl. crew bag
Crew luggage (long-haul flights and short-haul rotations with night stop)	15 kg/piece

Note: Dead Head Crew always need a ticket and are counted as passengers for load sheet purposes. Additionally, they are listed on the GEN DEC as DHC.

Cockpit, Operational Ground Staff

8.1.8.6.2 Baggage, Containers and LDMCR

If a significant proportion of the whole baggage load consists of pieces of baggage whose individual mass is substantially above the standard mass, the mass must be established by weighing.

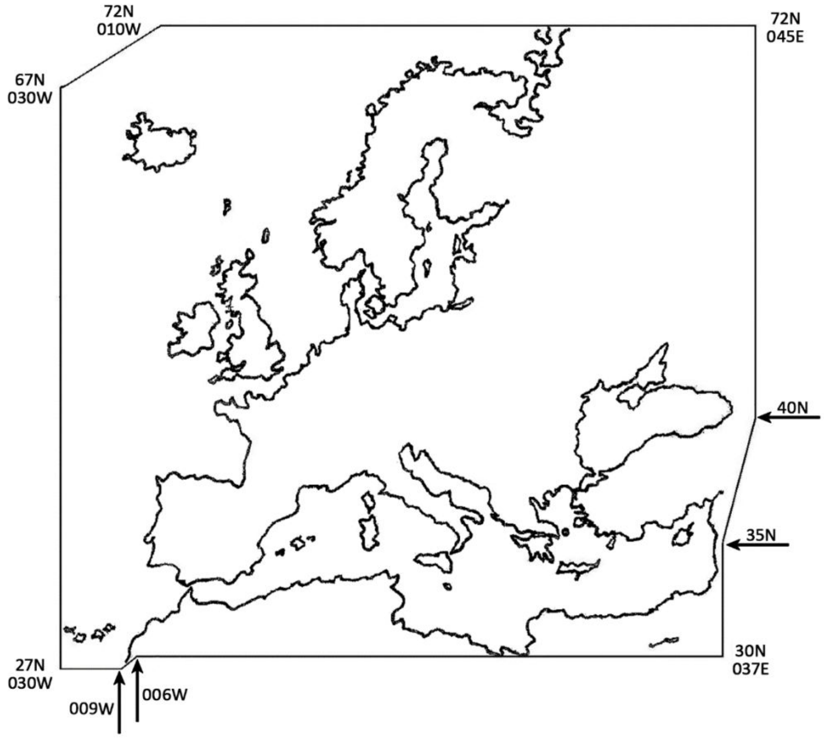
Applicable standard masses:

Baggage and containers	Mass
Baggage domestic (with origin and destination within the borders of one state)	11 kg / piece
Baggage within the european region (refer to chart below)	13 kg / piece
Baggage intercontinental (beyond the european region with origin and destination in different continents)	15 kg / piece
Special flight kit	506 kg incl. container
Standard LD3 Container	82 kg
Standard Palette	110 kg

A340: On all flights the LDMCR is normally installed and included in the DOM/DOI. If the LDMCR is not installed, the DOM/DOI without LDMCR shall be used.

European region:

Note: The European region is only used to determine the standard masses in this region and should not be confused with the definition for shorthaul flights.



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8.1.8.7 Last minute change (LMC)

The load sheet has to reflect the actual loading state of the aeroplane prior to take-off. In order to comply with this requirement, it is often necessary to adjust the load sheet after completion. Such adjustments are called last-minute changes (LMC). Last-minute changes may be conveyed to the flight crew either verbally or in writing in accordance with the CMD.

The changes may be applied in a cumulative way (e.g. 200 kg dead load and 300 kg fuel difference) and the tolerances are applicable for plus and minus differences.

The previously calculated trim conditions shall not be corrected if the changes do not exceed the values given in the table below.

A320 LMC tolerance (+/-)				
Crew (Cockpit or Cabin)	Number of passengers per section[1]		Potable water / dead load[2]	Fuel
	OA	OB+OC		
0	4	4	200 kg	300 kg
1	2	2		
2	0	0		

A340 LMC tolerance (+/-)				
Crew (Cockpit or Cabin)	Number of passengers per class[1]		Potable water / dead load[2]	Fuel
	Y-max	C / Y		
0	6	6	400 kg	500 kg
1	4	4		
2	2	2		

[1] Reseating (e.g. due to upgrading of PAX) is allowed up to the max PAX number shown in the columns, e.g. on A320 (without crew LMC) max 4 PAX can be reseated from OB+OC to OA.

[2] Shifting of loads from one hold into another is only allowed up to half of the max LMC concerned, e.g. on A320 max 100 kg may be shifted.

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8.1.8.8 Inflight reseating

- Reseatings after takeoff are only allowed after confirmation from cockpit crew.
- The MAX allowable number of reseatings is reduced by the number of PAX LMC's applied on ground before takeoff.
- Reseatings within one section (OA, OB or OC) have no restrictions.
- Any other reseating not covered by the table below must be calculated with the FS+ loadsheet module and the result must be within limits.

The following tables show the applicable restrictions, based on the actual ZFMCG:

- **A320:**

ZFMCG <26%	26%< ZFMCG <33%	ZFMCG >33%
MAX 6 PAX may be reseated towards the tail to any section	MAX 6 PAX may be reseated towards any adjacent section	MAX 6 PAX may be reseated towards the nose to any section

- **A340:**

ZFMCG <28%	28%< ZFMCG <35%	ZFMCG >35%
MAX 12 PAX may be reseated towards the tail	MAX 12 Y-PAX may be reseated from	MAX 12 PAX may be reseated towards the nose

ZFMCG <28%	28%< ZFMCG <35%	ZFMCG >35%
• OB → OC or • OA → OB or • OA → OC	• OB → OC or • OC → OB or • OA into C-class MAX 6 PAX may be reseated from OB/OC → OA	• OC → OB or • OB → OA or • OC → OA

Cockpit, Operational Ground Staff

8.1.8.9 Specific gravity of fuel and oil

JET A / A1	0.800 kg/ltr
Oil	0.88 kg/ltr

Cockpit, Operational Ground Staff

8.1.8.10 Seating policy / procedures

The load sheet is prepared to assume a particular passenger seating distribution. If a seat allocation system is used in connection with the preparation of the load sheet, the CG position is calculated correctly, provided the passengers are seated as allocated.

Free seating, however, might require a passenger repositioning in the cabin. The CMD shall instruct the cabin crew to reseat passengers so as to create the actual seating distribution in compliance with the assumed distribution on the load sheet.

Where required, the load distribution can be checked by the FCM by using the weight and balance computation.

The following procedure is required to produce load sheets with PAD on jump seats:

- DCS load sheet:
  a. The handling agent will allocate a jump seat to the PAD in the system before issuing the load sheet.
  b. The handling agent will make a handwritten LMC on the load sheet.

- Manual load sheet:
  a. Add the PAD to the Crew (cockpit or cabin, as required according to the position of the respective jump seat).
  b. Adjust the PAX figures only in the field “PAX PER CLASS”.

The following applies to flights with FSE:

- Each FSE has a 3-letter code and will be planned as “MECH” in the ENZIAN. He is in this context a crew member included in the GENDEC and in the DOM/DOI for the load sheet.
- The FSE attends the cabin crew briefing in uniform and shall receive his own GENDEC.
- He receives from OCC a so-called “paper ticket” (no check-in possible, only for insurance issues).
- The FSE has a blocked seat. If available, he shall be upgraded to C-class. The FSE is excluded from the guest count as he is part of the crew.
- The FSE has his own LDMCR key and the assigned crew bunk number 2.
- For takeoff and landing, the FSE shall be seated in the cockpit as he is included in the DOM/DOI as cockpit crew. In case of 4 pilots or if he is not seated in the cockpit for takeoff or landing, a crew LMC shall be applied.

Cockpit, Operational Ground Staff

8.1.9 ATS flight plan

Cockpit, Operational Ground Staff

8.1.9.1 General

In accordance with ICAO document 4444, a flight plan must be filed for:

- flights to be provided with ATS;
- IFR flights in advisory airspace;
- when required by the authorities;
- flights across international borders.

Cockpit, Operational Ground Staff

8.1.9.2 Content of ATS flight plan

The ATS flight plan shall include at least:

- Flight rules (Item 10a)
- Type of flight (Item 10b)
- Aircraft type
- Aircraft registration
- Equipment and Capabilities
- Date of flight
- Departure and Destination airport
- Destination ALTN (if required)
- Schedule/estimate departure time
- En-route elapse time

- Routing, Flight levels and speed
- EROPS en-route ALTN

Cockpit, Operational Ground Staff

8.1.9.3 Crew routine

OCC or handling company is responsible for the correct filing of AFP including changes prior to departure. Once an AFP is filed and the OFP is changed in points that are part of the AFP (e.g. by crew during preflight planning) the AFP has to be adapted by OCC or the handling company. Examples for such changes are:

- Aircraft change
- Routing change
- Change from planning without destination ALTN to planning with ALTN and vice versa
- Change of Destination ALTN

Close cooperation between OCC and the crew is important in order that both are aware of such changes and that the AFP is always up to date.

A copy of the accepted ATS flight plan is mentioned on the OFP and has to be carried on board. Changes of the ATS flight plan are kept along with the other flight documents at the OCC.

Cockpit, Operational Ground Staff

8.1.9.4 Filing of ATS flight plan

The procedure to fill an ATC flight plan is indicated in the Lido Route Manual RAR.

Cockpit, Operational Ground Staff

8.1.10 Operational flight plan

Cockpit, Operational Ground Staff

8.1.10.1 General

For all flights, an OFP must be prepared. The OFP covers the flight from departure to destination and alternate (if applicable). It serves as a flight/radio log.

The OFP shall include at least:

a. Aircraft registration
b. Aircraft type and variant

c. Date of flight and flight identification
d. Departure airport, STD, STA, destination airport
e. Types of operation (IFR, EROPS, Ferry flight etc.)
f. Route and route segments with checkpoints/waypoints, distances, time and tracks
g. Planned cruising speed and flying times between waypoints/checkpoints
h. Planned altitude and flight levels
i. Fuel calculations
j. Fuel on board when starting engines
k. Destination alternate(s) and, where applicable, take-off and en-route alternate(s), including information required acc. to items f) to i)
l. Relevant meteorological information

FPM and/or eFM are used to complete the flight planning.

On short-haul flights, the eFM Trip Log module shall be used as the primary format of OFP handling.

On long-haul flights, the hardcopy OFP shall be used. The eFM Trip Log module will be implemented at a later stage.

Cockpit, Operational Ground Staff

8.1.10.2 eFM fuel calculation (short-haul only)

FCM shall use the eFM Edit Mode for online fuel calculation and updating the flight planning data during the briefing. In case of unavailability of the eFM Edit Mode, refer to OM A Contingency procedure.

On multileg flights after landing, the eFM shall be updated via mobile network and the return flight calculated using the eFM Edit Mode. Thereafter the flight must be signed off in the Sign Off module by the FCM according to OM A Signatures. The fuel planning should be done in advance to expedite the process on ground.

In case of OFP changes by OCC, communication is defined as follows:

>120 min prior to STD/ETD	No notification to FCM by OCC.
<120 min prior to STD/ETD	OCC must notify FCM about any OFP change via ACARS or mobile. FCM must confirm the retrieval of the new OFP.

Specifics

Outbound (Ex ZRH)	FCM shall use the Order Fuel function in eFM to transmit the final fuel figures to Load Control in ZRH. The notes section of the fuel order will not be transmitted to

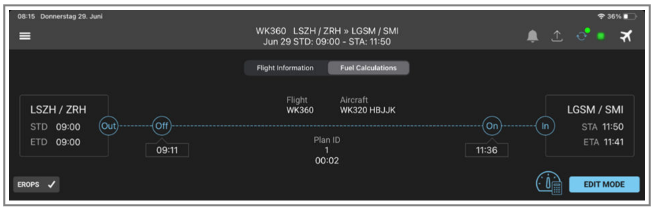
	load control. Therefore, water uplift other than standard (i.e. not identical to the planned Flypad value) must be communicated to load control by phone.

eFM Edit Mode

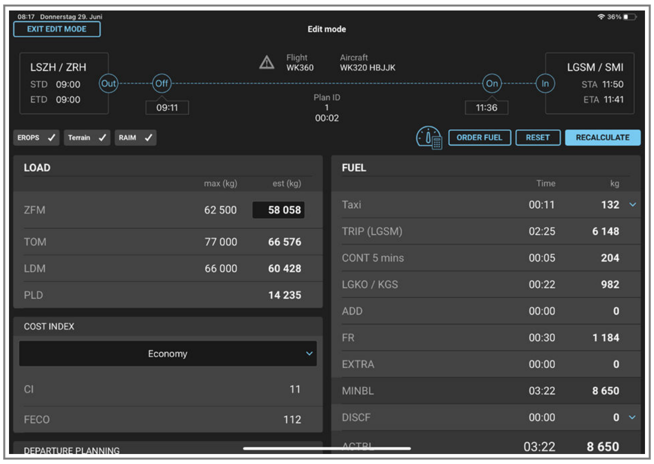
FCM shall use the eFM edit mode for online fuel calculation and to update the flight planning data such as final fuel figures, EZFM, runway and SID, destination alternates etc. After recalculation and exiting the edit mode, the OFP is updated and will be available in the eFM Briefing.

Caution: Whenever a new calculation is done, FPM does a suitability check of the DEST ALTN with the latest weather and NOTAM in the system. This can trigger a change, and therefore, it shall be checked if such a change has occurred.

The eFM Edit Mode is accessed as follows:



eFM Flight Details → Fuel Calculations → Edit Mode



Note: EF95 has to be checked on the OFP in the Briefing Package module.

The eFM User Guide is available in EFB PPM Appendix User Guides.

Cockpit, Operational Ground Staff

8.1.10.3 Signatures

Signatures and flight acceptance in the eFM Sign Off module

Crew signature
With the crew signature, the crew certifies that the prescribed flight planning procedures for the flight leg to be flown have been strictly adhered to.

Flight acceptance
By accepting the OFP, the CMD certifies that the flight has been planned following the valid regulations and policies as stipulated in the OM. In addition, he confirms that he has performed a check of the fuel calculation and the OFP.

Signatures on hardcopy/ACARS OFP

By signing the OFP, the CMD certifies that the flight has been planned following the valid regulations and policies as stipulated in the OM. In addition, he confirms that he has performed a check of the fuel calculation and the OFP.

By signing the OFP, the F/O and CRP certify that the prescribed flight planning procedures for the flight leg to be flown have been strictly adhered to.

Cockpit, Operational Ground Staff

8.1.10.4 Contingency procedure

eFM not available	Hardcopy briefing package shall be requested from OCC.
eFM Edit Mode not available	**At Homebase** **First leg:** Hardcopy OFP shall be requested from OCC. **Subsequent legs:** The OFP shall be pulled via ACARS “AOC Menu / AOC OFP” once onboard the aircraft, however, no earlier than 120 minutes prior to STD/ETD of the respective flight leg. Due to possible VHF data communication issues on ground, it is strongly recommended to pull the subsequent ACARS OFP already in flight.
	At Outstation The OFP shall be pulled via ACARS “AOC Menu / AOC OFP” once onboard the aircraft.

ACARS not available (MEL/ Company Data-link Standby)	Hardcopy OFP shall be requested from OCC (at outstation handover via station).
ACARS printer mal-function	
Fuel order unavailable	The final fuel figures shall be transmitted to Load Control by phone or via handling agent.

Cockpit, Operational Ground Staff

8.1.10.5 Handling of the OFP

Cockpit, Operational Ground Staff

8.1.10.5.1 eFM Trip Log

The handling of the OFP is delegated to the PM. He is responsible for recording the required data and archiving and closing the flight at the arrival station.

> The PM shall only archive and close the flight after ensuring no ramp check will take place. After archiving and closing, the flight is shown as “Completed” and is no longer accessible to show the recorded data.

Cockpit, Operational Ground Staff

8.1.10.5.2 Hardcopy / ACARS OFP

The handling of the OFP is delegated to the PM. He is responsible for OFP completion (according to OM A Completion of the OFP) and submission (EDW briefing room).

Cockpit, Operational Ground Staff

8.1.10.6 Fuel calculation criteria used in the FPM

a. The calculated trip fuel considers the shortest SID at the departure aerodrome and the longest STAR for the destination. For ZRH and other airports where deemed justified and well-founded the fuel calculation can be based on the expected SID and STAR.

b. The destination alternate fuel is calculated via the shortest SID at destination and the longest STAR at the alternate, or will be decided upon, based on operational experience.

Cockpit, Operational Ground Staff

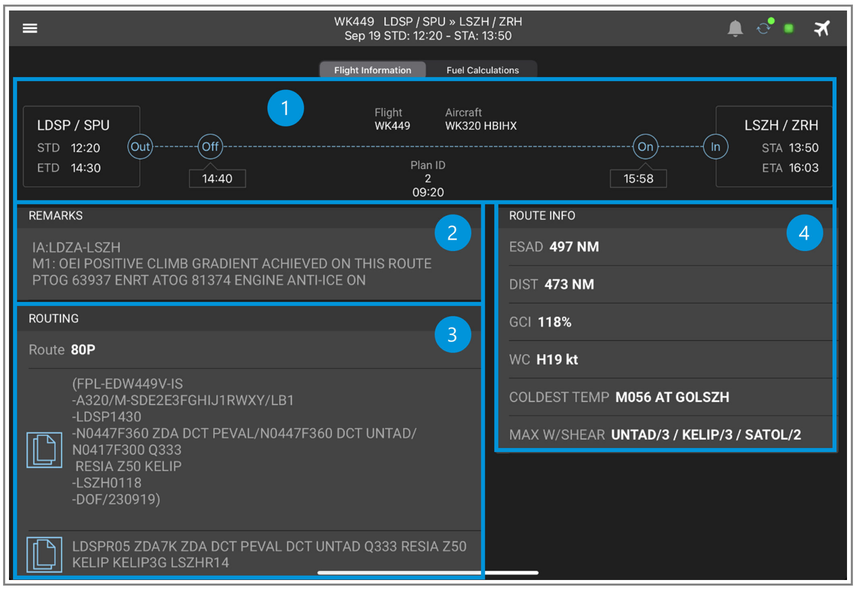
8.1.10.7 eOFP Description

The eOFP includes the Flight Details, Sign Off and Trip Log modules in the eFM. The PM shall use these modules to note all relevant data.

The eFM User Guide is available in EFB PPM User Guides.

Cockpit, Operational Ground Staff

8.1.10.7.1 Flight Details Module



1 Overview	
LDSP/SPU	Departure airport (ICAO/IATA code)
STD 12:20	Scheduled departure time (UTC)
ETD 14:30	Estimated departure time (UTC)
Off 14:40	Take off time: ETD plus OFP taxi time (UTC)
Flight WK449	Flight number
Aircraft WK320 HB-IHX	Aircraft type and registration.
Plan ID 2 09:20	OFP release number and last creation time (UTC)
On 15:58	Landing time: ETA minus 5min taxi time (UTC)
LSZH/ZRH	Destination airport (ICAO/IATA code)
STA 13:50	Scheduled departure time (UTC)

1 Overview	
ETA 16:03	Scheduled departure time (UTC)

2 Remarks	
IA: LDZA-LSZH	Enroute alternate planning scenario.
M1: OEI POSITIVE CLIMB GRADIENT ACHIEVED ON THIS ROUTE PTOG 63937 ENRT ATOG 81374 ENGINE ANTI-ICE ON	Terrain analysis for OEI performance.

3 Routing	
Route 80P	Route identification number.
(FPL-EDW449V-IS • A320/M-SDE2E3FGHIJ1RWXY/LB1 • LDSP1430 • N0447F360 ZDA DCT PEVAL/N0447F360 DCT UNTAD/N0417F300 Q333 RESIA Z50 KELIP • LSZH0118 • DOF/230919)	ATC Flightplan. Blue button: cCopy function.
LDSPR05 ZDA7K ZDA DCT PEVAL DCT UNTAD Q333 RESIA Z50 KELIP KELIP3G LSZHR14	mPilot Flightplan. Blue button: Ddirect export to mPilot.

4 Route Info	
ESAD 497 NM	Equivalent still air distance (NM)
DIST 473 NM	Ground distance (NM)
GCI 118%	Great Circle Index (%): Percent of ground distance compared to great circle distance
WC H19 kt	Average wind component (kts), H (headwind) or T (tailwind)
Coldest Temp M056 AT GOLSZH	Lowest temperature on the routing (°C) at WPT

4 Route Info	
Max W/Shear UNTAD/3 KELIP/3 SATOL/3	Maximum shear rate and waypoint/ coordinates of occurrence Shear rate SR is a turbulence indicator and can have values between 0 and 15: • 0-4 light • 5-9 medium • 10-15 severe

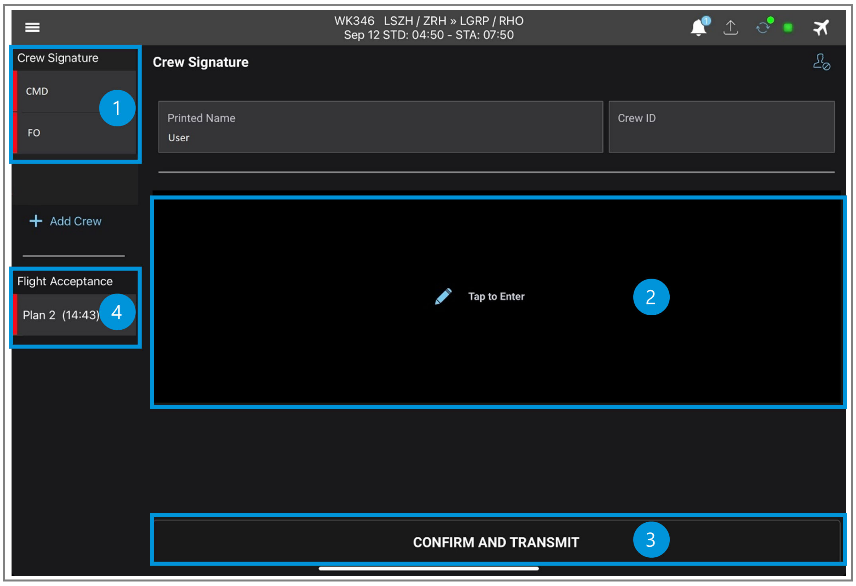
Cockpit, Operational Ground Staff

8.1.10.7.2 Sign Off Module

The Sign Off Module contains the Crew Signature and Flight Acceptance.

Each FCM shall sign under Crew Signature and transmit the signature with CONFIRM AND TRANSMIT.

The CMD shall accept the eOFP by signing under Flight Acceptance.



Sign Off Module	
1 Crew Signature	FCM shall select himself.
2 Tap to Enter	Tap and sign.
3 Confirm and transmit	Select CONFIRM AND TRANSMIT.

Sign Off Module	
4 Flight Acceptance	CMD shall sign and transmit the flight acceptance. Other FCM may sign on behalf of the CMD (e.g. personal device is u/s).

Once a signature is transmitted, the colour on the left side of the field changes to green.

Once all FCM have signed, confirmed and transmitted and the flight has been accepted by the CMD, the icon on the Sign Off menu bar changes.

Before: 

After: 

Note: If a new release with a new Plan ID has been issued, the flight acceptance has to be done again.

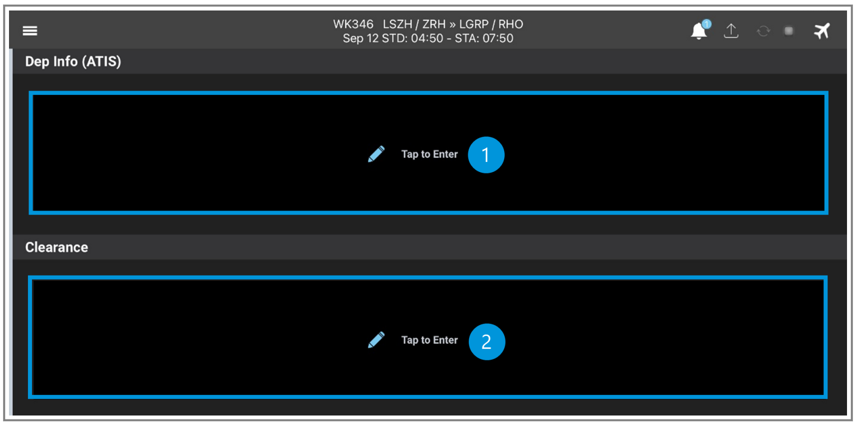
Cockpit, Operational Ground Staff

8.1.10.7.3 Trip Log Module

Departure tab

Departure ATIS and clearance shall be noted in the Departure tab, either by drawing or using the keyboard.

Note: If the ATIS or clearance DEP CLR was received by ACARS, it is not necessary to note it in full. All ACARS/CPDLC messages are stored. A note that the info message has been received by ACARS shall be inserted (e.g. ACARS Info H, CLR number etc.).



The total amount of fuel shall be noted at pushback. This value will be used for the fuel checks in the Navlog tab. The planned fuel is taken automatically from the fuel calculation.

Trip Log Module Departure	
1 Departure ATIS	Tap to enter the departure ATIS.
2 Departure Clearance	Tap to enter the departure clearance DEP CLR.
3 Off Block Fuel	Enter the amount of fuel at block off.
4 Departure Times	Enter the off block (Out Time) and take off (Off Time) times.

Navlog Tab

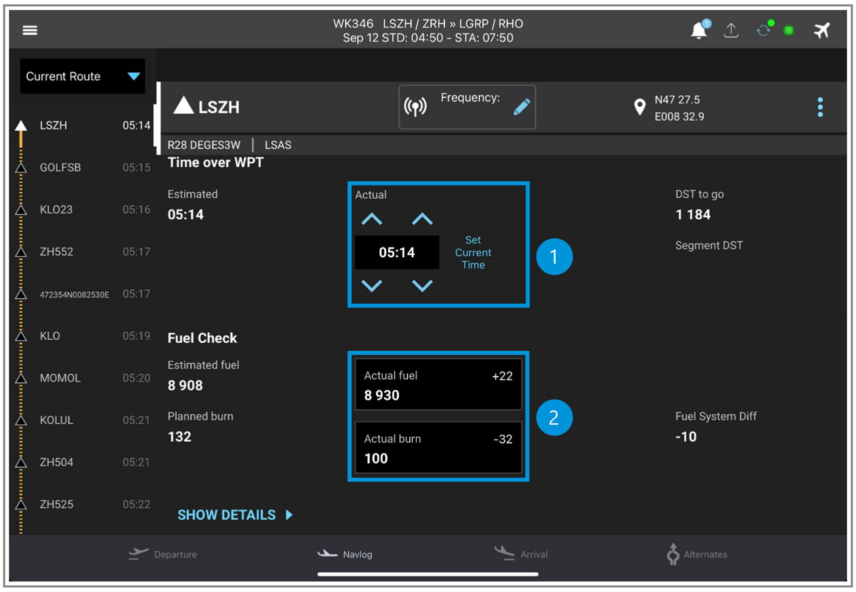
A fuel check can be done at every WPT throughout the flight. Fuel checks shall be done according to OM A Fuel checks. eFM proposes a fuel check every 60 minutes.

This is depicted as follows:

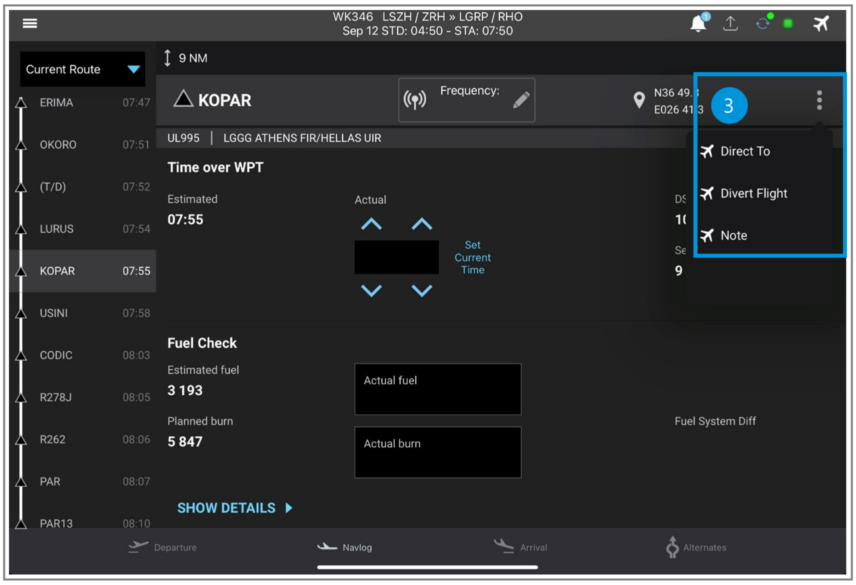
The ATO of the departure WPT uses the off time. The ETO of all following WPT are calculated according to the off time and not according to the OFP. Therefore, the time difference between ATO and ETO displays a gain or loss in time and does not reflect if the flight is on time.

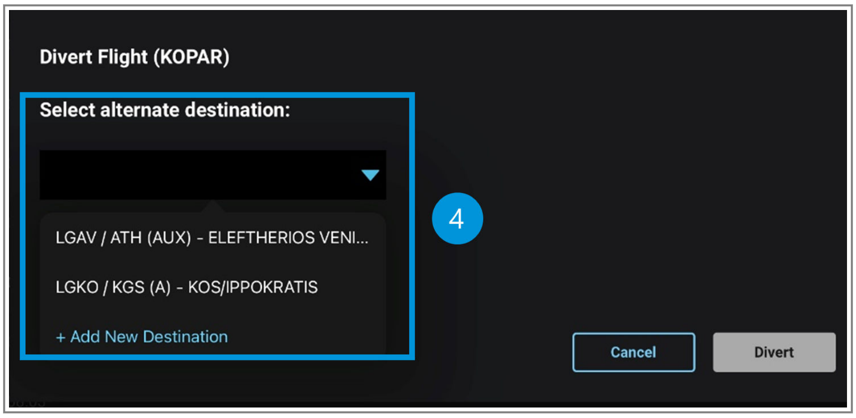
Note: The calculation between ATO and ETO might have a rounding issue.

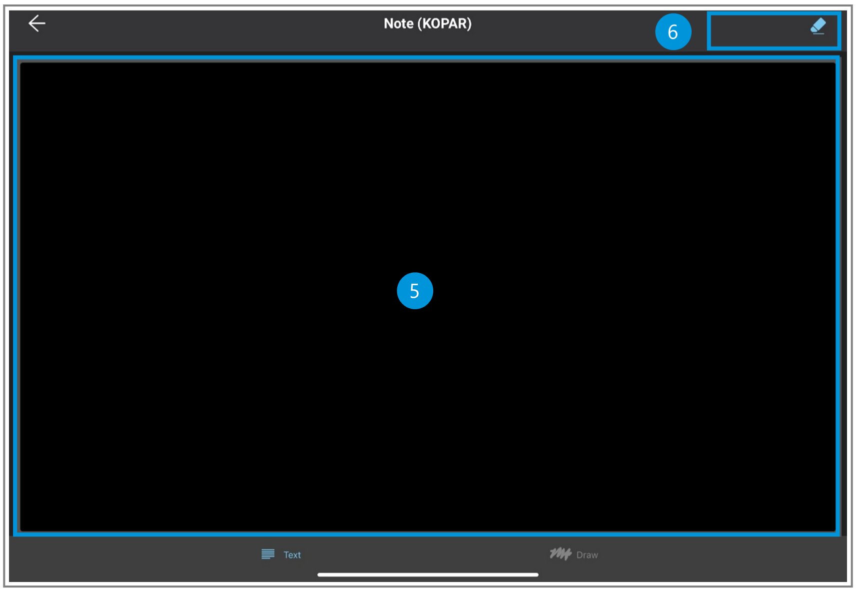
The estimated fuel is calculated from block-off fuel and planned burn. The tool calculates the fuel system difference, as well as fuel savings or excess consumption.



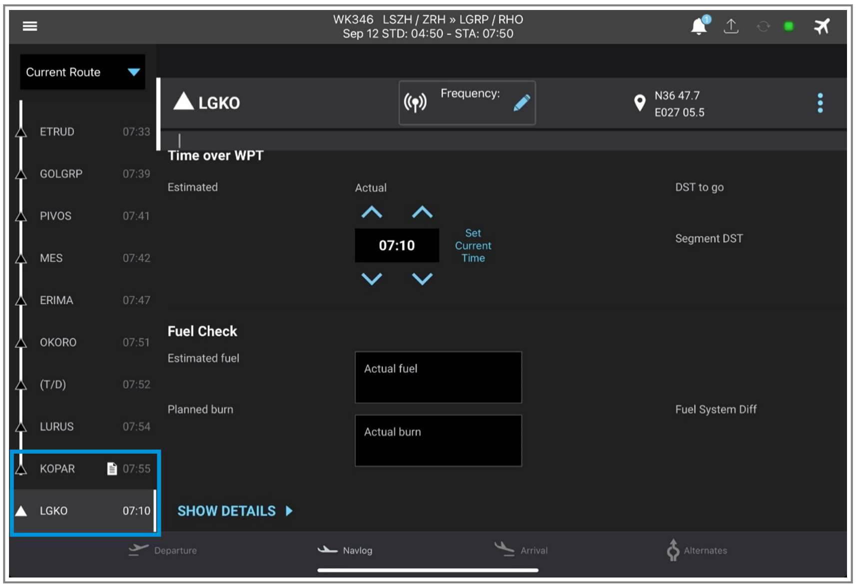
At each WPT, there is the possibility to enter a direct to the next WPT, to divert the flight to an alternate airport or to record a note. If the flight is diverted, the divert to function shall be used at the last WPT flown over. For inflight clearances, the note function shall be used for recording.







A note is displayed with a “note icon” at the corresponding WPT. After selecting an alternate, the routing will be adapted, allowing to enter the on-block fuel and fuel burn correctly.



Trip Log Module Navlog	
1 Time Check	Set the ATO.
2 Fuel Check	Insert the actual fuel and actual burn.
3 WPT Options	Tab the three points to select one of the options (Direct To, Divert Flight or Note).
4 Alternate Destination	Select or add the chosen alternate.
5 Note	Tab to take a note.
6 Erase Button	To erase the note.

Arrival Tab

The arrival ATIS and the landing and block time are recorded in the Arrival tab. Flight time and block time are calculated automatically.

As for the departure tab, the entire ATIS must only be recorded if not received by ACARS. A note that the info message has been received by ACARS shall be inserted (e.g. ACARS Info H etc.).

Trip Log Module Arrival	
1 Arrival ATIS	Tap to enter the arrival ATIS.
2 Arrival Times	Set the landing (On Time) and on block (In Time) times.

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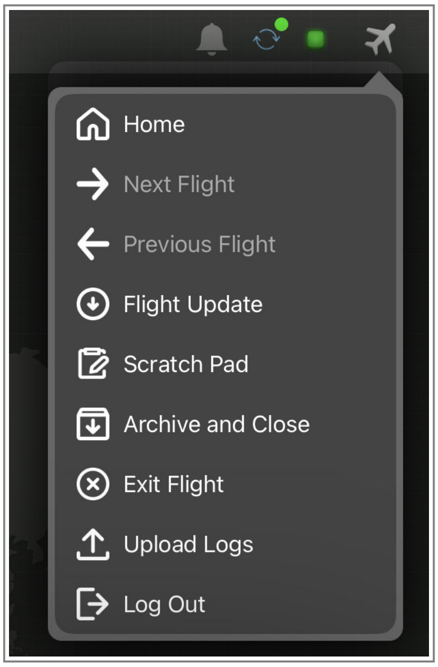
8.1.10.7.4 Archiving the flight data

Once the flight has been completed, FCM shall archive the data entered into the eFM.

Touch the aircraft icon on the toolbar to open the drop list. Tap "Archive and Close" to transmit the data.



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8.1.10.8 Hardcopy OFP Description

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8.1.10.8.1 Basic data

WK10	26Oct22Z	ZRH/YVR	RLS 1 / 26Oct22 11.26Z	1	1/9
EDW10	LSZH/ZRH	11.00z (11.00z)	Taxi out .10	2	
HB-JMG	CYVR/YVR	22.00z (22.46z)	Taxi in .05		
A343		11.00 (11.46)			
Remarks				3	
MEL/CDL: ITEMS AFFECTING OFP NOT CONSIDERED				4	

1 Header	
WK10 WK10X	Flight identification: Airline’s IATA Code + flight number; or Airline's IATA Code + flight number + operational suffix.
26Oct22Z	Date of flight
ZRH/YVR	Departure and destination airport
RLS 1	Release number from dispatch

1 Header	
/ 26Oct22	Last creation date (UTC)
11.26Z	Last creation time (UTC)
1/9	Page number/total pages (1 of 9)

2 General info	
EDW10	ATC Callsign
HB-JMG	Full aircraft registration
A343	ICAO aircraft type designator
LSZH/ZRH	Departure airport (ICAO/IATA code)
CYVR/YVR	Destination airport (ICAO/IATA code)
11.00z (11.00z)	STD and ETD in brackets
22.00z (22.46z)	STA and ETA in brackets
11.00 (11.46)	Block time and estimated flight time
.10	Statistical taxi out time
.05	Statistical taxi in time
Empty fields on the far right	Empty fields to record the following times: • ATD / T/O • ATA / LDG • Block time / actual flight time

3 Remarks free text section	
Free text	OFP remarks entered by the dispatcher

4 MEL/CDL Items	
Free text	This section is not used by EDW

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8.1.10.8.2 Route ID

```
Route ID: PE1   | APPL DIVERSION TIME: 105MIN
DIST 5169 | GCI 115 | CP  H7
MIN TEMP M61 @ (N5033.6 W11901.6) | MAX SHR 10 @ (N5033.6 W11901.6)     1
Speed: CI0
Steps: F220 TORPA/F320 MIMKU/F340 5630N/F350 ALLRY/F360 DUSMA/F380
```


1 Route ID	
Route ID	Route identification number
APPL DIVERSION TIME	Applicable diversion time (min) used for planning
DIST 5169	Ground distance (NM)
GCI 115	Great Circle Index (%): Percent of ground distance compared to great circle distance
CP H8	Average wind component (kts), H (head wind) or T (tail wind)
MIN TEMP M61 @ (N5033.6 W11901.6)	Lowest temperature on the routing (°C) and coordinates of occurrence
MAX SHR 10 @ (N5033.6 W11901.6)	Maximum shear rate and waypoint/coordinates of occurence Shear rate SR is a turbulence indicator and can have values between 0 and 15: • 0-4 light • 5-9 medium • 10-15 severe
Speed: CI0	Planned speed schedule (Cost Index CI) For further infos refer to FOSI EDW Speed Policy
Steps:	F220 TORPA/F320 MIMKU/F340 5630N/F350 ALLRY/F360 DUSMA/F380 First TOC, waypoint for start of CLB or DSC / next TOC or TOD

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8.1.10.8.3 FMS init / weights / notes

```
N4727.5 E00832.9                      Departure ATIS
1417ft
FL220/M24/38525       1
Wind 246/018

                                      ATC Departure Clearance
ZFW        172000  181000S
TOF         82226                                          3
TOW        254226  275000S
TRIP        75746                     Arrival ATIS
LW         178480   192000
REMF         6480
REMT              2    1.11
```

1 FMS init	
N4727.5 E00832.9	Latitude, longitude of departure airport reference point
1417 ft	Airport elevation
FL220	Flight Level of the first TOC after the terminal procedure (initial TOC)
M24/38525	Temperature (°C) and tropopause height (ft) at initial TOC
Wind 246/018	Average wind direction/speed

2 FMS masses	
ZFW 172000 181000S	Estimated ZFM (kg) and maximum structural ZFM (kg)
TOF 82226	Take-off fuel (kg) Calculated as required fuel minus taxi out fuel
TOW 254226 275000S	Planned TOM and maximum structural TOM
TRIP 75746	Trip fuel
LW 178480 192000	Planned LM and maximum structural LM
REMF 6480	Remaining fuel This value is calculated as TOF minus TRIP
REMT 1.11	Remaining time (h.min)
S or U	Limitation indicator for maximum ZFM/TOM/LM • U = Limitation by dispatcher (user) • S = Structural limitation Bold letters are used when the structural limitation is restricting

3 Notes
Notes section to record the following information: • Departure ATIS • ATC Departure Clearance • Arrival ATIS

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8.1.10.8.4 Fuel information

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8.1.10.8.4.1 Fuel tables

3%ERA CYEG						PERF +2.00	
TAXI	400	.13				IFR / EROPS	
TRIP	63488	10.04				T/O ALTN LSZH	
CONT3%	1905	.18					
ALTN KSEA	3466	.33				EF95	P620kg /6min
ADD	1					MAX TCAP 89.7t	2
EXTRA							
FINAL RES	2542	.30					
MIN BLOCK	71801	11.25					
DISCF							
BLOCK							

BASIC			**RCF DP YRM**			PERF +2.00	
TAXI	400	.13	TAXI	400	.13	IFR | EROPS	
TRIP	75746	11.31	TRIP CYYC	72839	10.59	T/O ALTN NIL	
CONT MIN	450	.04	CONT20	2186	.20		
ALTN KSEA	3406	.32	ALTN CYEG	4008	.39	EF95	P620kg / 6min
ADD				3		MAX TCAP 96.1t	
EXTRA			EXTRA				
FINAL RES	2624	.30	FINAL RES	2624	.30		
MIN BLOCK	82626	12.37	MIN BLOCK	82057	12.28		
DISCF							
BLOCK							

1 Fuel planning with 3% Contingency Fuel	
3%ERA CYEG	3% Fuel Enroute Alternate For further info about the location of the 3% ERA refer to OM A Contingency fuel
TAXI 400 .13	Planned taxi out fuel (kg) and time (min) Refer to OM A Taxi Fuel

1 Fuel planning with 3% Contingency Fuel	
TRIP 63488 10.04	Planned trip fuel (kg) and time (hh.mm) Refer to OM A Trip fuel
CONT3% 1905 .18	Planned contingency fuel and time Refer to OM A Contingency fuel
ALTN KSEA 3466 .33	ICAO code of the alternate aerdrome, required fuel and time. Refer to OM A Destination alternate fuel Planning without an alternate destination will be noted as "NOALTN". Refer to OM A Fuel requirement when planning without destination alternate
ADD	Additional fuel planning Refer to OM A Additional fuel
EXTRA	Planned extra fuel Refer to OM A Extra fuel
FINAL RES 2542 .30	Planned final reserve fuel and time Refer to OM A Final reserve fuel
MIN BLOCK 71801 11.25	Minimum required block fuel and time calculated as the sum of all fuel values above
DISCF	Discretionary fuel at the discretion of the CMD. Mass and time shall be noted on the OFP Refer to OM A Discretionary fuel
BLOCK	Total block fuel and time. Calculated as the sum of the minimum required block fuel and the discretionary fuel. Mass and time shall be noted on the OFP Refer to OM A Minimum block fuel / block fuel

2 Further info and fuel burn	
PERF +2.00	Performance factor/fuel bias (%) of the aircraft
IFR / STOPS	Applied rules
T/O ALTN LSZH	Take-off alternate and ICAO code of the aerodrome If no take-off alternate was planned, label NIL will be shown instead of the ICAO code
EF95	The EF95 value indicates the difference between the maximum amount of fuel used in 95% of the analysed flights and the current flight plan (TAXI+TRIP+CONT). The calculation and result is shown in flight time (minutes) on the basis of the final reserve fuel flow and is therefore independent of mass and ACFT type.

2 Further info and fuel burn	
	• P (plus) = excess consumption • M (minus) = less consumption For further details refer to FOSI EF95.
MAX TCAP 89.7t	Maximum tank capacity (t) of the aircraft respecting MTOM/MLM calculated with a fuel density of 0.800

3 RCF calculation
RCF calculation with the two planning options according to OM A Reduced Contingency Fuel (RCF) Procedure

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8.1.10.8.4.2 Tankering and next leg

```
Tankering: LOSS FOR EXTRA FUEL: -436 USD/T          1
Next Leg: n/a
+1t      /+276kg/+.00                                       -1 FL        /+593kg/-.02
-1t      /-274kg/+.00     +1 FL    /+49kg/+.00      2       -2 FL        /+1856kg/+.00
Optional DEST ALTN: Not analysed for critical fuel scenario.
NOALTN  80532/1312         KPDX    84485/5265       3     CYYC    86724/7504

CMD                   CRP                   F/O
                                                    4
```

1 Tankering	
Tankering: LOSS FOR EXTRA FUEL: -436 USD/T	GAIN or LOSS per ton fuel tankering (USD)
Next Leg: n/a	Forecast for next leg

2 Tankering	
+1t /+276kg/+.00 -1t /-274kg/+.00 +1 FL /+49kg/+.00 -1 FL /+593kg/-.02 -2 FL /+1856kg/+.00	This section provides TRIP fuel and time figures as difference to the main flight plan values for mass and flight level adjustments. • +/- 1 FL: Change in flight level of 2’000 ft according to ICAO cruising levels • +/-276kg: Trip fuel difference to the main flight plan • +/-.02: Time difference to the main flight plan

3 Optional destination alternate	
Optional DEST ALTN: Not analysed for critical fuel scenario	Alternate routes are not analysed for critical fuel scenarios. A maximum of 6 optional destination alternates can be displayed.
NOALTN 80532/1312	Planning scenario without a destination alternate. Required minimum block fuel (kg) and additional fuel sufficient to hold for 15 min at 1'500 ft AAE. Refer to OM A Fuel requirement when planning without destination alternate
KPDX 84485/5265 CYYC 86724/7504	ICAO code of the optional destination alternate, required minimum block fuel and planned trip fuel to the alternate (calculated GW, DIST of ALTN routing + 40 NM manoeuvring DIST, no wind)

4 Signatures
Signatures of the FCM. The two letter code is to be used to unambiguously allocate the signature.

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8.1.10.8.5 MEL/CDL Items / Route Summary

```
WK10         26Oct22Z     ZRH/YVR      RLS 1 / 26Oct22 11.26Z           2/9

MEL/CDL Items
Items affecting OFP not considered.                    1

Route Summary
LSZHR16 VEBIT4S VEBIT T51 LASUN T14 LUMEL T10 TORPA UT10 RLP UL613 KOTUN DCT
AMAXA DCT VESAN UL613 SOVAT L613 SANDY UN601 L 2 A UP6 RODOL UM65 TENSO L603
BELOX DCT MIMKU DCT KESIX DCT SUNOT NATC ALLRY DCT EXPOS DCT MEMSO DCT DUSMA DCT
55N090W DCT 55N099W DCT 53N110W DCT YRM DCT 50N120W DCT MERYT DCT BOOTH CANUC5
CYVRR26R
```

1 MEL/CDL Items
This section is not used by EDW

2 Route Summary	
LSZHR16 VEBIT4S VEBIT T51 LASUN T14 LUMEL T10 TORPA UT10 RLP UL613 KOTUN DCT AMAXA DCT VESAN UL613 SOVAT L613 SANDY UN601 LESTA UP6 RODOL UM65 TENSO L603 BELOX DCT MIMKU DCT KESIX DCT SUNOT NATC ALLRY DCT EXPOS DCT MEM-	ROUTE ICAO ATC format with the following exceptions: • TAS and FL (initial and changes) will NOT be shown • Airport identifiers will have the planned runway ID as a suffix

2 Route Summary	
SO DCT DUSMA DCT 55N090W DCT 55N099W DCT 53N110W DCT YRM DCT 50N120W DCT MERYT DCT BOOTH CANUC5 CYVRR26R	• SID and STAR ID's will ALWAYS be shown Note: NAT tracks are shown with the respective designator and without coordinates.

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8.1.10.8.6 Airport time window information / RAIM Prediction

Airport List			
LSZH	DEP	1110-1210	
LSZH	IA	1010-1416	RTE: DCT
EGPF	IA	1200-1614	RTE: DCT
BIKF	IA	1354-1756	RTE: DCT
BIKF	EROPS	1656-1853	RTE: DCT
CYYR	EROPS	1717-1854	RTE: DCT
CYYR	IA	1654-2050	RTE: DCT
CYUL	IA	1831-2205 **1**	RTE: DCT
CYWG	IA	1936-2303	RTE: DCT
CYYC	IA	2047-2344	RTE: DCT
CYVR	IA	2136-2344	RTE: DCT
KMSP	FUEL ERA 3%	1935-0030	RTE: DCT
CYYC	DEST2	2109-2309	RTE: YRM DCT IGVEP IGVEP6 CYYC
CYEG	DEST2 ALTN	2148-2348	RTE: CYYC DCT YYC DCT YEG DCT CYEG
KSEA	DEST ALTN	2213-0013	RTE: CYVR DCT YVR DCT KSEA
CYVR	DEST	2141-2341	

Terrain Analysis
OEI positive climb gradient achiev **2** n this route with TOW up to 277497kg

Raim Prediction		
LSZH (DEP)	No Outages **3**	
CYVR (DEST)	No Outages	

1 Airport List	
LZSH	ICAO code
 DEP IA EROPS ERA FUEL ERA 3% DEST ALTN DEST DEST 2 DEST 2 ALTN	Type of airport usage: Departure airport Intermediate alternate airport EROPS alternate En-route alternate Fuel En-route Alternate Destination alternate Destination airport Destination 2 airport (RCF planning) Destination 2 alternate (RCF planning)
1450-1650	Airport's suitability period (from 1 h before earliest arrival - until 1 h after latest arrival)
RTE: DCT RTE: CYVR DCT YVR DCT KSEA	ATS route description for the routing to the corresponding airport Only to be shown at the following airports: Take-off alternate if not same as DEP, Destination alternates, Re-clearance Airport, Reclearance Alternate DCT: Great circle distance The FPM uses a predefined routing to the alternate. If no route is available and the distance between DEST and ALTN is less than 80 NM, FPM uses the great circle distance plus 40 NM manoeuvring distance. With a distance between DEST and ALTN of more than 80 NM FPM generates automatically a route and adds 40 NM manoeuvring distance. If no route can be found it reverts to great circle distance plus 40 NM manoeuvring distance.

2 Terrain Analysis
Terrain analysis for OEI performance

3 Raim Prediction	
LSZH (DEP) No Outages	No outages detected at the departure airport
CYVR (DEST) No Outages	No outages detected at the destination airport

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8.1.10.8.7 EDW Notes

EDW Notes	
Actual Burn:	Fuel REM:
Total:	Difference: 1

1 Fuel Burn notes	
Actual Burn:	Actual fuel burn shall be noted
Fuel REM:	Remaining fuel shall be noted
Total:	Actual Burn + Fuel REM
Difference:	Difference shall be noted (Total - Fuel check at block off)

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8.1.10.8.8 Main routing

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8.1.10.8.8.1 General

DEP: RWY 16 VEBIT4S VEBIT/ GD 31

AWY MOCA MGA	MT (TT) DIST FL	IAS MACH	WIND T/D180 SHR	POSITION FULLNAME FIR	TTM ETO SC	CBURN BURN SC	REQ FOB	EF TOT SC
				LSZH		0	...	... ...
TAXI				LSZH16	0.00	0.4	82.2 ...	... ...
VEBIT4S 43 117	152(156) 31 CLB		264/026 2	VEBIT	0.09	2.9	79.7 ...	... ...
T51 54 117	292(295) 22 CLB		284/028 1	LASUN	0.13	3.9	78.8 ...	... ...
T14 57 78	266(269) 16 CLB		288/030 1	LUMEL	0.15	4.5	78.2 ...	... ...
TOC 48 78	279(282) 3 CLB		290/031 1	TOC	0.15	4.6	78.1 ...	... ...
TOD 86 111	249(265) 15 380	257 0.81	330/109 M60/P0 7	TOD	11.04	75.4	6.8 ...	... ...
DCT 80 111	249(265) 23 DSC		334/082 7	MERYT	11.07	75.4	6.8 ...	... ...
DCT 88 115	224(240) 50 DSC		284/029 2	BOOTH	11.16	75.6	6.6 ...	... ...
CANUC5 85 115	223(238) 56 DSC		230/018 0	CYVR26R	11.31	76.1	6.0 ...	... ...
TAXI				CYVR		76.1	6.0 ...	 ... ...

ARR: BOOTH CANUC5 RWY 26R GD 56

1 Departure	
RWY 16	Planned departure RWY
VEBIT4S	Planned SID
VEBIT	Last SID waypoint
GD 31	Ground distance of the SID

2 Routing information and fuel consumption			
A	AWY	VEBIT4S	ICAO Code of airway from last to current routing position.
	MOCA	43	Minimum Obstacle Clearance Altitude (ICAO) / Minimum Obstruction Clearance Altitude (FAA) from last displayed to current routing position.
	MGA	117	Minimum Grid Altitude from last displayed to current routing position.
B	MT (TT) DIST FL	152 (156) 31 CLB or 370 or DSC	Initial Magnetic Track, True Track in brackets Trip distance from previous displayed to current routing position. CLB if climbing; or FL at present position; or DSC if descending.
C	IAS MACH	322 0.72	Indicated Airspeed at present position. Planned mach number at present position.
D	WIND T/D180 SHR	264/026 M17/P12 1	Mean wind between last displayed real waypoint and current real waypoint. Temparature at current FL and delta to ISA at FL180 Max shear rate between last displayed to current routing position.
E	POSITION	RLP	Waypoint ARINC Code.
		ENTRY1 or EX-IT1 ETP1	ENTRY or EXIT followed by number of the EROPS Area. ETP (STOPS / EROPS) followed by the number of ETP (starts with 1 and increments by 1 at each ETP).
		TER1	Terrain Relevant Point (begin or end of terrain relevant area)
		PNR1	PNR of terrain relevant portion of flight.
		TOC or TOD	Top of climb or Top of descent.

2 Routing information and fuel consumption			
		BDRY CZUL	If BDRY not coherent with WYPT followed by ICAO Code of FIR/UIR.
	FULLNAME	ROLAMPONT or 4430N	Full name if WYPT is NAVAID; or LATLONG if point is ENTRY, ETP, EXIT, TER, PNR, BDRY not WYPT.
	FIR	TER428 or 428TER or GOTXKF	If EROPS ENTRY: IATA code of airport followed by distance. If EROPS EXIT: Distance followed by airport IATA code. Distance equals approved diversion time multiplied by diversion speed, e.g. TER428. If ETP: GO & ICAO code of the next planned APT.
F	TTM ETO SC	0.09	Trip Time from departure to current routing position. Estimated time overhead (to be inserted by pilot in UTC time). Difference between ETO and actual UTC time in minutes.
G	CBURN BURN SC	2.9	Trip fuel from off block (engine start) to current routing position. Actual burn according aircraft fuel gauges. Difference between CBURN and BURN in kg.
I	REQ FOB	79.7 ...	Required fuel without extra, taxi and contingency fuel. Actual fuel on board according aircraft indication.
J	EF TOT SC	... ...	Estimated fuel at landing according FMS. Total fuel sum from BURN + FOB. Difference between FOB before engine start and TOT.

3 Arrival	
BOOTH	First waypoint of STAR
CANUC5	Name of STAR
RWY 26R	Planned RWY
GD 56	Ground distance of STAR

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8.1.10.8.8.2 Routing from destination to destination alternate

DEST TO DEST AlTERNATE CYVR/KSEA
EET 0.33 MIN FUEL 6008 FL150 WIND T0

1

AWY MOCA MGA	MT DIST FL	IAS MACH	WIND T/D180 SHR	POSITION FULLNAME FIR	TTM ETO SC	CBURN BURN SC	REQ FOB	EF TOT SC
				CYVR	2 .00	0.0	6.0 ...	... ...
DCT 44 113	152 28 CLB		038/014 2	YVR VANCOUVER	0.06	1.8	4.2 ...	... ...
TOC 20 113	144 1 CLB		032/014 2	TOC	0.07	1.9	4.1 ...	... ...
TOD 38 113	145 61 150	254 0.50	044/015 M4/P11 4	TOD	0.18	2.9	3.1 ...	... ...
DCT 34 87	146 62 DSC		346/015 0	KSEA	0.33	3.5	2.5 ...	... ...

1 General information	
EET 0.33	Estimated elapsed time
MIN FUEL 6008	Required minimum fuel
FL150	Planned flight level
WIND T0	Average wind component

2 Routing information and fuel consumption
Refer to OM A Main Routing - General

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8.1.10.8.8.3 Waypoint filter criteria

- At least every 30 min a WYPT is displayed if possible.
- Only first and last WYPT are shown of an airway segment. This includes DCT to WYPT's. All other WYPT, unless needed to comply with 30 min. rule, are hidden.
- Decision point / pre-determined point is shown if planning based upon.
- Tactical WYPT's (EROPS ENTRY, ETP, EXIT, DD and DC related points, FIR BDYS) are shown.
- The last real WYPT before tactical WYPT is shown.

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8.1.10.8.8.4 Reclearance / alternate routing

In case of reduced contingency fuel- or predetermined point planning flights a similar section is displayed containing the routing planned from decision point to destination 2 (RCF) or destination alternate (PDP). Additionally the routing to the destination alternate is shown after the main routing part. The log always follows the same rules as the main routing.

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8.1.10.8.8.5 Critical Fuel Scenario

Critical Fuel Scenario						**Rule:**	EROPS 90/105			TAS 478/478	
ENTRY1		KEF717		N5437.8W03721.5						Scenario 3	
	DIVT	DIST	MIN	FOB	PROC	FL	V	WCP	AGW	ICE	APU
BIKF	2:19	720	15.8	49.7	DC	100	LRC	H012	221.7	No	No
ETP3		KEFYYR		N5415.4W03857.9						Scenario 4	
	DIVT	DIST	MIN	FOB	PROC	FL	V	WCP	AGW	ICE	APU
BIKF	2:30	769	18.0	48.9	DC	100	LRC	H013	220.8	Yes	No
CYYR	2:30	763	18.5	48.9	DC	100	LRC	H023	220.8	Yes	No
EXIT1		717YYR		N5356.6W04014.0						Scenario 5	
	DIVT	DIST	MIN	FOB	PROC	FL	V	WCP	AGW	ICE	APU
CYYR	2:23	720	16.5	48.2	DC	100	LRC	H024	220.1	No	No
ETP7		YYCYVR		N5033.6W11901.6		**MOST CRITICAL**				Scenario 9	
	DIVT	DIST	MIN	FOB	PROC	FL	V	WCP	AGW	ICE	APU
CYYC	0:38	194	5.0	7.7	DC	100	LRC	T006	179.6	No	No
CYVR	0:39	181	5.2	7.7	DC	100	LRC	H026	179.6	No	No

1 Planning rule	
Rule: EROPS 90 / 105	STOPS: Border time (A320: 60 min / A340: 90 min) or EROPS: Border time (min)/Applied diversion time (min)
TAS 478 / 478	Applicable diversion speed

2 Scenarios	
ENTRY 1 or ETP 1 or EXIT1	Entry Point or Equal Time Point or Exit Point
KEF717 or KEFYYR	ENTRY/EXIT: IATA code of corresponding STOPS/EROPS alter-nate and distance The distance equals the approved diversion time multiplied by the diversion speed ETP: IATA code of first airport followed by IATA code of second airport
N5437.8W03721.5	Latitude & longitude of the current STOPS/EROPS ENTRY, ETP or EXIT point.
MOST CRITICAL	Only shown for the most critical among the critical fuel scenarios (i.e. least difference between MINFOB).
Scenario 3	Scenario designator
BIKF	ICAO code of corresponding STOPS/EROPS alternate
DIVT 2:19	Diversion time to corresponding STOPS/EROPS alternate
DIST 720	Distance to corresponding STOPS/EROPS alternate
MIN 15.8	Minimum fuel required to corresponding STOPS/EROPS alternate
FOB 49.7	Fuel on board at the current STOPS/EROPS ENTRY, ETP or EXIT point.
PROC DC	Procedure for the respective position: DX – one engine out with pressurisation failure DC – pressurisation failure only 1X – one engine out 2X – two engine out
FL 100	Planned flight level to corresponding STOPS/EROPS alternate
V LRC or V MAX or V T300	Speed according to used policy
WCP H012	Average wind component of routing from current STOPS/EROPS ENTRY, ETP or EXIT to corresponding STOPS/EROPS alternate
AGW 221.7	Actual gross mass at the current STOPS/EROPS ENTRY, ETP or EXIT position

2 Scenarios	
ICE No or ICE Yes	STOPS scenarios are calculated without ICE correction. All EROPS scenarios are calculated with ENG+WING A/ICE ON during 100% of the diversion time (7% trip fuel).
APU No or ICE Yes	Calculation of APU usage

Cockpit, Operational Ground Staff

8.1.10.8.8.6 Wind data for FMS entry

WIND FOR FMS ENTRY

WYPT	FL50	FL100	FL150	FL200	FL250	FL300
Climb	060/012	054/007	012/014	1 348/023	350/033	344/037

WYPT	°C/PD FL	FL400	FL370	FL340	FL320	FL280
TORPA	-17/220	308/024	306/032	308/032	312/027	322/023
REKLA	-30/275	308/024	306/032	308/032	312/027	322/023
RLP	-43/324	286/022	286/028	2 288/025	290/020	298/016
ROTSI	-47/340	282/024	282/032	286/028	286/024	288/020
KOTUN	-47/340	266/024	262/030	268/024	266/021	268/018
VESAN	-48/340	250/033	250/035	252/036	254/032	258/027
MOGLI	-48/340	244/053	244/057	244/059	246/056	246/050

WYPT	FL350	FL300	FL200	FL150	FL100	FL50
Descent	358/028	002/026	006/019	3 044/011	102/005	026/009

1 Climb	
WYPT Climb	Wind data for the climb phase from FL50 to FL300
FL50 060/012	Average wind direction and speed at FL50

2 En-route	
WYPT TORPA	Wind data for waypoint TORPA
°C/PD FL -17/220	Temperature at the planned flight level

3 Descent	
WYPT Descent	Wind data for the descent phase from FL350 to FL50
FL380 358/028	Average wind direction and speed at FL50

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8.1.10.8.9 Completion of the OFP

The following parts (yellow boxes) of the OFP shall be filled in:

WK10	26Oct22Z	ZRH/YVR	RLS 1 / 26Oct22 11.26Z	1/9

EDW10	LSZH/ZRH 11.00z (11.00z)	Taxi out	.10	
HB-JMG	CYVR/YVR 22.00z (22.46z)	Taxi in	.05	
A343	11.00 (11.46)			

Remarks

MEL/CDL: ITEMS AFFECTING OFP NOT CONSIDERED

Route ID: PE1 | APPL DIVERSION TIME: 105MIN
DIST 5169 | GCI 115 | CP H7
MIN TEMP M61 @ (N5033.6 W11901.6) | MAX SHR 10 @ (N5033.6 W11901.6)
Speed: CI0
Steps: F220 TORPA/F320 MIMKU/F340 5630N/F350 ALLRY/F360 DUSMA/F380

N4727.5 E00832.9
1417ft
FL220/M24/38525
Wind 246/018

ZFW	172000	181000S
TOF	82226	
TOW	254226	275000S
TRIP	75746	
LW	178480	192000
REMF	6480	
REMT		1.11

Departure ATIS

ATC Departure Clearance

Arrival ATIS

BASIC			RCF DP YRM			PERF +2.00
TAXI	400	.13	TAXI	400	.13	IFR | EROPS
TRIP	75746	11.31	TRIP CYYC	72839	10.59	T/O ALTN NIL
CONT MIN	450	.04	CONT20	2186	.20	
ALTN KSEA	3406	.32	ALTN CYEG	4008	.39	EF95 No EF95 available
ADD						MAX TCAP 96.1t
EXTRA			EXTRA			
FINAL RES	2624	.30	FINAL RES	2624	.30	
MIN BLOCK	82626	12.37	MIN BLOCK	82057	12.28	
DISCF						
BLOCK						

Tankering: LOSS FOR EXTRA FUEL: -436 USD/T
Next Leg: n/a

+1t	/+276kg/+.00			-1 FL	/+593kg/-.02
-1t	/-274kg/+.00	+1 FL	/+49kg/+.00	-2 FL	/+1856kg/+.00

Optional DEST ALTN: Not analysed for critical fuel scenario.
NOALTN 80532/1312 KPDX 84485/5265 CYYC 86724/7504

CMD	CRP	F/O	

WK10	26Oct22Z	ZRH/YVR	RLS 1 / 26Oct22 11.26Z	4/9

EDW Notes	
Actual Burn:	Fuel REM:
Total:	Difference:

> Note: Signatures of the FCM: The two letter code is to be used to unambiguously allocate the signature.

Fuel checks shall be done at waypoints around an hourly interval.
The marked values (yellow boxes) shall be filled in at the respective waypoints.

AWY MOCA MGA	MT (TT) DIST FL	IAS MACH	WIND T/D180 SHR	POSITION FULLNAME FIR	TTM ETO SC	CBURN BURN SC	REQ FOB	EF TOT SC
L613 36 36	331(330) 29 340	277 0.80	246/063 M49/P9 1	ABKAT	1.28	13.7	56.2 ...	... ...
L613 44 42	330(330) 95 340	278 0.80	236/067 M50/P8 2	TLA TALLA	1.40	15.0	54.9 ...	... ...
DCT 48 57	319(317) 302 340	277 0.80	204/066 M53/P5 2	BALIX EGGX	2.19 1 ... 2 ...	19.3 3 ... 4 ...	50.6 5 ...	6 ... 7 ... 8 ...
DCT 73 86	325(321) 416 340	277 0.80	102/010 M55/P3 2	6420N	3.10	24.9	45.0 ...	... ...

			6) EF: Estimated FOB acc. to FMS
1) ETO: Estimated Time Overhead	**3)** BURN: Effective fuel burn	**5)** FOB: Fuel On Board	**7)** TOT: Total Fuel On Board
2) SC: Score (+ = earlier; - = later)	**4)** SC: Score (+ = less used; - = more used)		**8)** SC: Score (+ = more TOT; - = less TOT)

> Note: Assigned HF frequency shall be recorded on the left side of the OFP adjacent to the respective waypoint.

Cockpit, Operational Ground Staff

8.1.10.9 ACARS OFP

```
WK285     20DEC22Z  FNC/ZRH   RLS 2 / 20DEC22 10.29Z

EDW27D  LPMA/FNC  13.55Z (13.55Z)  TAXI OUT   .08 ..../...
HB-JJK  LSZH/ZRH  17.50Z (17.37Z)  TAXI IN    .05     .
A320              03.55  (03.42)                  ..../...
                                                      .
                                                  ..../...
                                                      .

ROUTE ID 801 OPTIMIZED-
DIST 1529 / GCI 105 / CP  T31
MIN TEMP M64 AT  (N4432.0 E00300.4)
MAX SHR 5 AT  (N3717.2 W01103.2)
SPEED CI7
STEPS F380 LTP/F320 KINNI/F280 LAMUR/F220
```

Basic Data & Route ID	
1	Header
2	General info
3	Route ID

```
N3241.7 W01646.7          DEPARTURE ATIS
191FT
FL380/M61/41888
WIND 238/045
ZFW      52200   62500S   ATC DEPARTURE CLEARANCE
TOF      10503
TOW      62703   77000S
TRIP      8003
LW       54700   66000S   ARRIVAL ATIS
REMF      2500
REMT               1.06
```

FMS init / masses / notes	
1	FMS init
2	FMS masses

FMS init / masses / notes	
3	Notes

```
3%ERA LFBO
TAXI              96    .08
TRIP            8003   3.29
CONT3PCT         241    .06
ALTN LFSB       1169    .29           1

ADD
EXTRA
FINAL RES       1090    .30
MIN BLOCK      10599   4.34
DISCF
BLOCK
```

```
PERF +5.50      T/O ALTN NIL       2    EF95
IFR / NON-EXT   MAX TCAP 19.0T          M142kg / 4min
```

Fuel tables	
1	Fuel planning (3% Contingency Fuel in this example)
2	Further info and fuel burn

```
TANKERING LOSS FOR DISC FUEL: -346 USD/T
NEXT LEG N/A                               1
ECON CI 0 (1KG/+0MIN)
+1T/+95KG/+.00                             -1 FL/+119KG/+.03
-1T/-93KG/+.00     +1 FL/-29KG/+.00     2  -2 FL/+304KG/+.06

OPTIONAL DEST ALTN - NOT ANALYSED FOR CRITICAL FUEL
SCENARIO.                                3
NOALTN 9975/545    EDDS    10813/1383  LSGG    10920/1490
LIMC   11148/1718  LFLL    11296/1866  LOWW    12105/2675

CMD...          F/O...          CRP...   4
```

Tankering and next leg	
1	Tankering
2	Impact to trip fuel & time figures due to mass and flight level adjustments

Tankering and next leg	
3	Optional destination alternate
4	Signature

```
MEL/CDL ITEMS
ITEMS AFFECTING OFP NOT CONSIDERED.
```

```
ROUTE SUMMARY
LPMAR05 DEGUN1E DEGUN DCT NARTA DCT VAGAR DCT RIVRO DCT
TOSDI DCT ZMR DCT NEA DCT DGO DCT LPA DCT GOSVI DCT
TOPTU DCT TOU DCT GAI DCT MEN DCT NINUN UN871 OMASI DCT
KINNI DCT LAMUR Z57 DOPIL DOPIL2G LSZHR14
```

MEL/CDL items and route summary	
1	MEL/CDL items
2	Route summary

```
AIRPORT LIST
LPMA DEP              1403-1503
LPPS IA               1313-1711  DCT

LEMD IA               1501-1839  DCT

LSZH IA               1627-1838  DCT

LFBO FUEL ERA 3%      1534-1918  DCT
LFSB DEST ALTN        1701-1901  LSZH DCT TRA DCT ALINE DCT
                                 LFSB
LSZH DEST             1632-1832
```

```
TERRAIN ANALYSIS
OEI POSITIVE CLIMB GRADIENT ACHIEVED ON THIS ROUTE WITH
TOW UP TO 87549KG
```

```
RAIM PREDICTION
LPMA (DEP)      NO OUTAGES
LSZH (DEST)     NO OUTAGES
```

Airport time window information / RAIM prediction	
1	Airport list and time window information
2	Terrain analysis
3	RAIM prediction

```
EDW NOTES
Actual Burn:                      Fuel REM:
            ...............                  ...............
Total:                            Difference:
            ...............                  ...............
```

EDW notes	
1	Fuel burn notes

POSN		MT	DIST	IAS/M	SHR	TTM	CBURN	REQ
LPMA05					0	00.00	0.1	10.3
DEGUN		048	79		2	00.14	1.4	9.0
TOC		047	71		1	00.23	1.9	8.5
NARTA		047	150	246/.78	3	00.44	2.7	7.7
VAGAR		047	208	239/.76	2	01.12	3.7	6.6
RIVRO		046	181	237/.75	1	01.35	4.6	5.8
TOSDI		043	30	237/.75	1	01.39	4.7	5.6
ZMR		043	44	236/.75	1	01.44	4.9	5.4
NEA		067	75	236/.75	3	01.54	5.3	5.1
DGO		065	61	236/.75	3	02.01	5.5	4.8
LPA		089	25	237/.75	4	02.04	5.6	4.7
GOSVI		077	44	236/.75	4	02.10	5.8	4.5
TOPTU		077	54	236/.75	4	02.17	6.1	4.3
TOU	1	050	85	236/.75	3	02.27	6.4	3.9
ETP3		053	20	236/.75	2	02.30	6.5	3.8
GAI		053	8	236/.75	2	02.31	6.6	3.8
MEN		054	70	236/.75	2	02.39	6.8	3.5
NINUN		059	20	236/.75	4	02.42	6.9	3.4
TOD		059	77	235/.75	3	02.51	7.3	3.1
OMASI		058	52	242/.68	2	02.58	7.4	2.9
TOD		040	2	242/.68	2	02.58	7.4	2.9
KINNI		040	13		2	03.00	7.5	2.9
TOD		052	33	250/.64	2	03.04	7.6	2.7
LAMUR		052	19		1	03.07	7.6	2.7
TOD		038	32	246/.56	1	03.12	7.8	2.5
DOPIL		049	13		1	03.14	7.9	2.5
LSZH14		040	63		0	03.29	8.1	2.3
LSZH							8.1	2.3

```
FUEL CHECKS
WAYPOINT                ETO        BURN        FOB       TOTAL
                         SC          SC                     SC

...........         .......    .......    .......    .......
                      .....      .....                  .....

...........         .......    .......    .......    .......
                      .....      .....                  .....

...........         .......    .......    .......    .......
                      .....      .....                  .....

...........         .......    .......    .......    .......
                      .....      .....                  .....

...........         .......    .......    .......    .......
                      .....      .....                  .....
```

Main routing and fuel checks	
1	Main routing
2	Fuel checks As the ACARS OFP offers limited space for notes, the waypoints for the fuel checks must be transferred manually to the separate fuel checklist.

```
DEST TO DEST ALTERNATE LSZH/LFSB
EET 0.29  MIN FUEL  2259   FL80  WIND H16

WAYPOINT        MT  DIST     IAS/M SHR    TTM  CBURN    REQ
LSZH                   0    0/0.00   0   0.00    0.0    2.3
TOC            339     9             3   0.03    0.3    1.9
TRA            338    26  234/0.41   3   0.09    0.6    1.7
ALINE          302    25  233/0.41   4   0.14    0.8    1.5
TOD            217    24  242/0.42   4   0.20    1.0    1.2
LFSB           217    23             0   0.29    1.2    1.1
```

```
CRITICAL FUEL SCENARIO // RULE NON-EXT 60 // TAS 405/405
      DIVT DIST  MIN   FOB PROC  FL    V  WCP   AGW ICE APU

ETP3             MADZRH     N4353.0E00141.4      SCENARIO 3
LEMD  1:06  311  3.7   3.9  DC 100  LRC H032  56.0  NO  NO
LSZH  1:03  360  3.5   3.9  DC 100  LRC T031  56.0  NO  NO
```

Routing from DEST to ALTN and critical fuel scenario	
1	Routing from destination to destination alternate
2	Critical fuel scenario

```
WIND FOR FMS ENTRY
           1     FL50   FL100   FL150   FL200   FL250   FL300
CLIMB         256/010 322/010 298/015 292/022 310/030 318/041

              C/PD FL   FL400   FL370   FL340   FL320   FL280
NARTA         -62/380 302/052 310/057 316/059 312/060 304/054
RIVRO         -60/380 260/058 262/058 264/057 266/064 268/072
DGO        2  -59/380 242/051 234/059 230/063 222/064 216/058
GAI           -63/380 226/058 222/063 222/066 220/061 220/055
ETREK         -64/380 242/051 238/061 236/062 232/058 230/051
GIPNO         -51/320 242/051 238/061 236/062 232/058 230/051
GUDAX         -25/220 240/048 240/051 250/056 248/053 244/047

           3    FL350   FL300   FL200   FL150   FL100    FL50
DESCENT       248/049 252/045 246/039 240/032 224/021 264/010

WIND REFERENCE 2022-12-20 / 00.00Z / ESAD 1421
CLASSIFICATION INTERNAL / LHG ACARS COFP V2022-12-01
           4
```

Wind data for FMS entry	
1	Climb
2	En-route
3	Descent
4	Wind reference

Cockpit, Operational Ground Staff

8.1.10.10 FPM Receiver autonomous integrity monitoring (RAIM) Prediction Report

Cockpit, Operational Ground Staff

8.1.10.10.1 Header

```
RAIM PREDICTION FOR.
EDW 25/1 05OCT21 MMUN 0420 LSZH 1422 WK343 HBJMD
-----------------------------------------------------------------
```

Example	General description
EDW 25 / 1 Or EDW 28 / 2	Flight identification: Airline's ICAO Code + flight number + Leg 1 or Airline's ICAO Code + flight number + Leg 2 (e.g.PUJ-MBJ)
05OCT21	Date of flight
MMUN 0420	Departure airport and STD in UTC
LSZH 1422	Destination airport and planned on-block time in UTC
WK343	Aircraft type
HBJMD	Full aircraft registration

Cockpit, Operational Ground Staff

8.1.10.10.2 Result summary

```
-----------------------------------------------------------------
RESULTS SUMMARY
-----------------------------------------------------------------
DEPARTURE TERMINAL CHECK.      PASS
DESTINATION TERMINAL CHECK.    FAIL   1
MAIN FLIGHTPLAN ENROUTE CHECK. PASS
```

Example	General description
Departure Terminal Check. Destination Terminal Check. Main Flightplan en-route Check.	PASS = No RAIM Outages FAIL 1 = RAIM Outages number 1 FAIL 2 = RAIM Outages number 2 etc.

Cockpit, Operational Ground Staff

8.1.10.10.3 Calculation details

```
-----------------------------------------------------------------
CALCULATION DETAILS
-----------------------------------------------------------------
CALCULATION TIME.        2021-10-05 04.44.19 UTC
ALMANAC.                 130.319488
NANUS.                   2021035.2021051
START TIME.              2021-10-05 03.20.00 UTC
END TIME.                2021-10-05 18.22.00 UTC
GPS RECEIVER TYPE.       129
ALGORITHM.               FDE
SELECTIVE AVAILABILITY. NO
BARO AIDED.              NO
MASK ANGLE.              5.0000
```


Example	General description
Calculation Time	Date and time of RAIM Prediction in UTC
Almanac 130.319488	Almanac is a health, time, position check of the Satellites 130 = week 319488 = time of applicability in seconds
NANUS 2021035	Present NANUs (Notice Advisory to Navstar Users) 2021 = Year 035 = PRN (Pseudorandom noise)
Start Time	Start time of RAIM prediction Date and time in UTC
End Time	End time of RAIM prediction Date and time in UTC
GPS Receiver Type	Receiver Type 129
Algorithm	FDE = Fault Detection and Exclusion
Selective Availability	Always set to No
Baro Aided	No = Baro Aided not included in RAIM prediction. (No VNAV APCH) Yes = Baro Aided included in RAIM prediction (VNAV APCH)
Mask Angle	The minimum acceptable elevation above horizon that a GPS satellite has to be at to avoid blockage of line-of-sight. 5.0000 = 5°

Cockpit, Operational Ground Staff

8.1.10.10.4 Terminal RAIM check

```
-----------------------------------------------------------------
TERMINAL RAIM CHECK
-----------------------------------------------------------------
DEPARTURE
MMUN/CUN     CANCUN                        N21.04/W86.87      0
ELEVATION.          22 FT
INTEGRITY LEVEL.    TERMINAL
TIME PERIOD.        2021-10-05 03.20.00 UTC - 2021-10-05 08.20.00 UTC
```

```
DESTINATION
LSZH/ZRH      ZURICH                              N47.45/E8.54      1
ELEVATION.              1417 FT
INTEGRITY LEVEL.        NPA
TIME PERIOD.            2021-09-23 12.04.00 UTC - 2021-09-23 17.04.00 UTC

       OUTAGE 1         14.27 - 14.40
```

Example	General description
Departure MMUN / CUN Cancun N21.04 / W86.87	Departure Airport Departure Airport ICAO / IATA / Name of Airport Latitude, Longitude of Departure Airport reference point.
Destination LSZH / ZRH Zurich N47.45 / E8.54	Destination Airport Destination Airport ICAO / IATA / Name of Airport Latitude, Longitude of Destination Airport reference point.
Elevation	Height of Airport in feet
Integrity Level	Level of predicted integrity: NPA = RNP 0.3 Terminal = RNP 1.0
Time Period 2021-10-05 03.20.00 UTC – 2021-10-05 08.20.00 UTC	Timeframe of RAIM prediction From/to Date and time in UTC
Outage 1 14.27 – 14.40	Outage number 1 Time of RAIM outage in UTC

Cockpit, Operational Ground Staff

8.1.10.10.5 Enroute RAIM check

```
-----------------------------------------------------------------
ENROUTE RAIM CHECK
-----------------------------------------------------------------
MAIN ROUTE
TIME PERIOD.        2021-10-05 03.20.00 UTC - 2021-10-05 18.22.00 UTC
WAYPOINT NAME   RNP          ETO        ALT  MIN DUR    RESULT
LAT/LNG
MMUN            TERMINAL     04.30      0FT  00.05.00   TRUE
N21.04/W86.87
4NCP            TERMINAL     04.33   2500FT  00.05.00   TRUE
N21.00/W86.79
R125G           TERMINAL     04.34     FL54  00.05.00   TRUE
N20.97/W86.74
210030N0864406W TERMINAL     04.34     FL73  00.05.00   TRUE
```

FLL N26.07/W80.16	ENROUTE	05.38	FL370	00.05.00	TRUE
NUCAR N28.12/W77.63	RNP10	06.01	FL370	00.05.00	TRUE
HOOKY N28.21/W77.47	RNP10	06.02	FL380	00.05.00	TRUE
LOUIZ N28.47/W77.00	ENROUTE	06.06	FL390	00.05.00	TRUE
SUMRS N28.71/W76.55	RNP10	06.10	FL390	00.05.00	TRUE

PILON N48.00/E5.69	BRNAV	13.52	FL362	00.05.00	TRUE
TIRSO N47.80/E6.67	BRNAV	13.58	FL235	00.05.00	TRUE
PEVIT N47.69/E7.19	BRNAV	14.01	FL165	00.05.00	TRUE

ZH713 N47.59/E8.23	TERMINAL	14.10	4000FT	00.05.00	TRUE
ZH714 N47.62/E8.33	TERMINAL	14.11	2500FT	00.05.00	TRUE
OSNEM N47.58/E8.40	TERMINAL	14.13	1600FT	00.05.00	TRUE
IKL40 N47.52/E8.47	NPA	14.14	900FT	00.05.00	TRUE
LSZH N47.45/E8.54	NPA	14.17	0FT	00.05.00	TRUE

Example	General description
Time Period	Timeframe of RAIM prediction From/to Date and time in UTC
Waypoint Name	Waypoints = Departure & Destination Airport, en-route and SID / STAR Waypoints = Latitude, Longitude of Waypoint
RNP	Navigation Specification per Waypoint NPA = RNP 0.3 Terminal = RNP 1.0 EN-Route = RNP 2.0 (might be more restrictive as required e.g. NAT HLA) RNP 4 = RNP 4.0 BRNAV = RNAV 5.0 RNP 10 = RNP 10.0
ETO	Estimate Time Overhead in UTC
ALT	Flight Level

Example	General description
MIN DUR	Minimum duration at Waypoint = default value
Result	TRUE = No RAIM Outages FALSE = RAIM Outages.

Cockpit, Operational Ground Staff

8.1.10.10.6 Supplemental information

CAE FPM might apply a more restrictive navigation specification than necessary according to the specific airspace (requirement RNP 2 instead of RNP 4 for PBCS Tracks or RNP 10 for NAT HLA). This is due to the unavailability of customisation.

Cabin, Cockpit, Operational Ground Staff

8.1.11 Operator's aeroplane Technical Log

Cabin, Cockpit, Operational Ground Staff

8.1.11.1 General

The Technical Log is designed to allow recording of defects, malfunctions and maintenance performed on the aircraft to which it applies whilst the aircraft is operating between scheduled maintenance inspections. In addition it includes maintenance information required by the operating crew and is used for recording operating information relevant to flight safety.

The Technical Log is carried, at all times, on all EDW aircraft.

Cabin, Cockpit, Operational Ground Staff

8.1.11.1.1 Preflight Check (PFC)

Prior to each flight, a Preflight Check (PFC) shall be performed by the CMD or delegated either to a qualified flight crew member or authorised maintenance personnel.

The PFC shall include an exterior aircraft inspection (walk-around).

The execution of the Preflight Check shall be confirmed by the respective entry in the Electronic Log Book (ELB).

The training is conducted according to OM D PFC Training.

Cabin, Cockpit, Operational Ground Staff

8.1.11.2 Electronic Log Book

Cabin, Cockpit, Operational Ground Staff

8.1.11.2.1 Description of the Aircraft Log

The Aircraft Log is the legal medium on board of each aircraft which makes the latest information about its operational and technical status available to the flight crew and maintenance personnel.

The Aircraft Log consists of:

- Electronic Log Book (ELB);
- Additional Documentation and Special Forms.

Detailed information about the Aircraft Log content as well as the respective procedures and handling instructions are published in the ALPM - Aircraft Log Procedure Manual (ELB 2).

Cabin, Cockpit, Operational Ground Staff

8.1.11.2.2 Electronic Log Book

The Electronic Log Book (ELB), an integrated part of the Aircraft Log, consists of:

- two electronic devices, a flight deck device (master ELB) and a cabin device (slave ELB);
- a defined number of memory sticks, required for the backup in case of synchronisation problems.

The ELB provides the following information/data:

- operationally relevant information/data;
- technical information/data;
- Aircraft Status.

Handling instructions

The ELB shall be used by the flight crew to record:

- the CMD's acceptance of the aircraft before flight;
- operational relevant data;
- maintenance relevant data (complaint, defects and malfunctions) discovered during operation;

- the execution of the Pre Flight Check if executed by the flight crew.

The ELB shall be used by the maintenance personnel:

- to record continuing airworthiness relevant action(s) carried out, including the respective Maintenance Release (sign off), whilst the aircraft is in operation between the scheduled maintenance visits;
- to provide all essential information about the current airworthiness status of the aircraft by means of the Aircraft Status, the Certificate of Release to Service and Additional Documentation, as required;
- to record the execution of the Pre Flight Check if executed by the authorised maintenance personnel.

For every leg a flight has to be opened in the Electronic Log Book (ELB) and the following actions shall be documented:

- execution of the Pre Flight Check;
- maintenance release to service;
- acceptance of the aircraft by the CMD.

In addition the following operationally & technically relevant data shall be recorded by the flight crew, if applicable:

- de- and anti-icing treatment data;
- autoland statistical data;
- fuel uplift data;
- A/C type specific operational tests and records;
- airworthiness related and/or maintenance relevant complaints (including those transferred from the cabin device);
- transfer of deferrable defects, including MEL/CDL items.

And in addition:

- every tripped circuit breaker or computer reset;
- number of landings made on training or maintenance check flights;
- all Rejected Take-off's (RTO) including reason, rejection speed (IAS), actual take-off mass and break peak temperature;
- aircraft type specific entries (e.g AIDS/ACMS printouts);
- spare material such as printer paper needed to be restocked.

For detailed information about the Electronic Log Book (ELB) handling refer to ALPM - Aircraft Log Procedure Manual (ELB 2).

Cabin, Cockpit, Operational Ground Staff

8.1.11.2.3 Aircraft Status

The Aircraft Status is a list of essential technical information within the Electronic Log Book (ELB). The list provides an overview of the current status of the aircraft to the crew. It shall be up to date at the time of the acceptance of the aircraft by the CMD. In case of a discrepancy the Aircraft Status overrules any contradictory TOI entry.

The Aircraft Status contains:

- open defects
- MEL/CDL relevant Deferred Items as well as non-MEL/CDL relevant Deferred Items which are of importance for the crew;
- Briefing Cards;
- cabin items;
- recently closed items;
- Additional Info (e.g. Dent and Buckle Chart).

For more detailed information refer to ALPM - Aircraft Log Procedure Manual (ELB 2).

Cabin, Cockpit, Operational Ground Staff

8.1.11.2.4 Maintenance release to service

A maintenance release to service declares the aircraft to be in an airworthy condition.

There are two different types of maintenance release:

- Aircraft Certificate of Release to Service (CRS):
  - Is a signed form, which shall always be issued after a letter check (A-check or higher) by the approved Part-145 maintenance organisation (e.g. SWISS Technics) who executed the work.
- Release to Service in the Electronic Log Book (ELB):
  - Is an ELB entry signed by an authorised person (certifying staff) to certify that the necessary action was carried out in accordance with the manufacturer or company instructions. With the release to service the certifying staff declares the aircraft airworthy, even with non-safety relevant ELB entries still open.

For more detailed information refer to ALPM - Aircraft Log Procedure Manual (ELB 2).

Cabin, Cockpit, Operational Ground Staff

8.1.11.2.5 Additional Documentation and Special Forms

For detailed information about additional documents and special forms refer to ALPM - Aircraft Log Procedure Manual (ELB 2) and ships library.

Cabin, Cockpit, Operational Ground Staff

8.1.12 List of documents, forms and additional information to be carried

Cockpit, Operational Ground Staff

8.1.12.1 Flight documents

The following forms are considered flight documents and have to be dispatched after the flight:

- Operational Flight Plan
- Loadsheet
- Cargo Manifest

A duplicate (either as a hard copy or an EDP file) must be available on ground to the personnel in charge (Edelweiss, or contracting agent).

Cockpit, Operational Ground Staff

8.1.12.2 Completion of forms

All reports and forms must be completed before take-off, respectively after landing. They shall be clearly written in English. After completion they shall be forwarded or filed in due time.

Cockpit, Operational Ground Staff

8.1.12.3 Responsibility of the commander

The designated CMD is responsible that all flight documents are completed according to relevant instructions. Where only his signature is required, he signs for the correctness of the contents. For correct completion he will normally make spot-checks.

Although the CMD remains responsible, he may delegate signature authority for flight documents, forms, reports, etc. to a pilot undergoing initial upgrading or to any other CMD under training.

Cockpit, Operational Ground Staff

8.1.12.4 File storage

Reports and forms are to be kept in a place accessible to authorised persons only. Flight documents have to be kept on file at the disposition of the FOCA. Other documents must be kept until the flight is terminated.

Cockpit, Operational Ground Staff

8.1.12.5 Aircraft documents to be carried on board

Based on requirements stipulated by the FOCA as well as on operational necessity, the following documents, books and papers shall be carried on board the aeroplane:

- The certificate of registration;
- The certificate of airworthiness;
- The original or a copy of the noise certificate;
- The certified true copy of the Air Operator Certificate (AOC);
- The operations specifications relevant to the aircraft type;
- The aeroplane radio licence;
- The original or a copy of the third party liability insurance certificate;
- The technical log including aeroplane certificate of release to service and maintenance statement;
- Special permits for flights through certain areas.
- Each flight crew member shall, on each flight, carry a valid flight crew licence with the appropriate ratings for the purpose of the flight.

In case of loss or theft of documents specified above, the operation may continue until the flight reaches its destination or a place where replacement documents can be provided.

Cockpit, Operational Ground Staff

8.1.12.6 Manuals to be carried on board

- OM A (EFB: Yonder);
- OM B (EFB: Yonder);
- AFM (EFB: FS+ OLB (for operational use) and Yonder (for info only));
- FCOM (EFB: FS+ OLB (for operational use) and Yonder (for info only));
- QRH (1 paper, FS+ eQRH);
- MEL (EFB: FS+ OLB (for operational use) and Yonder (for info only));
- CSPM (EFB: Yonder);
- OM C (EFB mPilot and Yonder);
- FOSI (EFB: Yonder);

- GOM (EFB: Yonder).

Cabin, Cockpit, Operational Ground Staff

8.1.12.7 Personal documents to be carried on board

Crew members shall carry the following documents:

Documents	FCM	CCM
Passport (valid for at least 6 months)	✓	✓
Crew qualification (Flypad)	✓	✓
Crew member certificate	✓	✓
Certificates of vaccination	✓	✓
License (additionally for non CH.FCL license holders: ICAO attachment to automatically validate licences)	✓	
Medical certificate	✓	
Cabin crew attestation		✓
Medical report		✓

Cockpit, Operational Ground Staff

8.1.12.8 Presentation of documentation

The Commander shall:

- Give any person authorised by the authority access to any documents and records which are related to flight operations or maintenance; and
- Present all such documents, records and those documents required to be carried on board, when requested to do so by the authority, within a reasonable period of time;

An aeroplane without valid documents can be considered as not being in conformity with international regulations and can therefore be grounded by any aerodrome authority.

Cabin, Cockpit, Operational Ground Staff

8.2 Ground Handling Instructions

This chapters records processes, instructions and information, as well as all policies and work instructions for EDW personnel.

Information/instructions for ground handling service providers are described in the GOM.

Cockpit, Operational Ground Staff

8.2.1 Fuelling procedures

Cockpit, Operational Ground Staff

8.2.1.1 Ordering of Fuel

The fuel calculation has to be established and completed on all flights, well prior to departure, for ordering the amount of fuel.

The block fuel amount to be ordered is shown on the OFP prepared for the appropriate route leg. Due consideration shall be given to the technical minimum/maximum amount of fuel according to the FCOM.

As soon as the final amount of block fuel is determined, the respective station personnel have to be duly informed.

Cockpit, Operational Ground Staff

8.2.1.1.1 Ordering of fuel at intermediate stations with short ground stop

Fuel uplift at the originating station shall include fuel for the leg after an intermediate destination:

- If the payload situation permits.
- If the procedure is recommended in the OFP (Tankering: Gain for extra fuel, refer to OM A Economical Fuelling) or the CMD deems it appropriate.

Cockpit, Operational Ground Staff

8.2.1.2 Responsibility

The CMD is responsible:

a. That the fuel-uplift has the correct specification, is free from contamination, and correctly recorded; and
b. That sufficient fuel is ordered and on board for the completion of the planned flight. This has to be assured by comparing the figure of the completed fuelling-calculation (ELB), OFP and cockpit fuel indications.

Cockpit, Operational Ground Staff

8.2.1.3 Safety Precautions

a. Make certain, that the tanker and the aeroplane are properly grounded from the beginning until the end of the fuelling operation (i.e. bonding first, de-bonding last), that the grounding cable is connected to the aeroplane grounding point on the main landing gear; and

b. Refuelling or de-fuelling is not permitted if there is a risk of lightning in the aerodrome area (thunderstorm, tropical rainstorm);
c. Fuelling in the hangar is not permitted for operational reasons;
d. Ground power units shall be connected and switched on before re/de-fuelling commences and must not be switched off or disconnected before refuelling or de-fuelling is completed;
e. For further restriction refer to FCOM PRO-NOR-SUP-Fuel (A320 / A340)

No vehicles, equipment and load shall be parked in the venting areas (a spherical zone around the fuel vents within a radius of 3m for JET A1 or kerosene turbine fuel, 8m for Jet B or JP-4 turbine fuel and/or mixture of kerosene and JP-4 fuel) whilst re/de-fuelling is in progress, nor shall these areas be passed by any person or vehicle unless specifically required to do so for re/de-fuelling purposes. The above requirements can best be met if the following simple rule is strictly observed by all concerned: Do not pass or drive under the wing tips.

Cockpit, Operational Ground Staff

8.2.1.4 Fuel Spillage

If a fuel spillage occurs, covering more than 2 m² surfaces, the following actions must be taken immediately:

- Call the aerodrome fire brigade;
- Stop all engines, the APU and all machinery located within the danger zone;
- All activity within the immediate vicinity of the danger zone must be interrupted;
- Engines and equipment must not be started / switched on;
- Fuel trucks must not be moved until danger eliminated;
- Personnel and vehicles not involved must be kept out of the danger zone at the minimum distance of 15 m;
- Spilled fuel must be removed using suitable absorbent material or a neutralising agent;
- Depending on the degree of danger associated with the incident, the aerodrome fire brigade should cover the area affected by the fuel spill with foam;
- Care must be taken to ensure that the devices to be used for removing spilled fuel do not generate any sparks;
- The aeroplane under which the fuel spill occured must be moved to another location.

Cockpit, Operational Ground Staff

8.2.1.5 Preliminary Refuelling

Where circumstances so require, the authorised person will start refuelling based on the "minimum fuel" figures only.

The responsible person either obtains the final "fuel required" figures from the CMD or via a fuel/load computer system, where applicable.

Cockpit, Operational Ground Staff

8.2.1.6 Supervision of Refuelling and Fuel Check

The refuelling, according to the fuel calculation, shall be supervised, and the quantity checked by the responsible person, i.e. the authorised tanker, stations mechanic, ground engineer or the CMD. If deemed necessary by the CMD or requested by a NOTAM, a fuel-water check has to be performed.

To assure that the requested amount of fuel according to the OFP and the fuel calculation is on board, a double check has to be performed by either a fuel quantity check by means of ACARS (Fuelling) according to FCOM PRO-NOR-SOP-06 Fuel on Board (A320 / A340) or a dipstick check.

Cockpit, Operational Ground Staff

8.2.1.7 Economical Fuelling

Cockpit, Operational Ground Staff

8.2.1.7.1 General

The following additional information is important concerning fuel tankering (according to OFP):

- Tankering information does not consider higher operating costs due to higher GM (e.g. less FLX possible, wear of wheels and brakes).
- It is at the discretion of the crew at which GAIN to apply economical fuelling. Nevertheless, with a LOSS or GAIN around zero, it is possible to uplift fuel for operational reserves at no costs.
- The fuelling process is prolonged, and "Fuelling Supervision" may be necessary (OM A Refuelling /De-Fuelling with Passengers on Board and/or during Boarding). In ZRH, a coordinator shall be requested via SWP.
- Do not delay the flight due to fuel tankering, e.g. LMF and no "Fuelling Supervision" available.
- The takeoff performance will be reduced and thus, a less favourable runway may be necessary (e.g. in ZRH RWY 16 with a possible delay iso RWY 28 without delay).
- Inbound ZRH check next flight, if necessary contact OCC (MTOM/MLM of next flight).

- On long-haul flights, the tankering fuel should be a maximum 10 t due to the resulting very high GM and environmental reasons.

Cockpit, Operational Ground Staff

8.2.1.7.2 Economical Fuelling Recommended

When an economical tankage is recommended, the next landing may be envisaged at maximum landing weight. However, a careful evaluation of all pertinent factors, e.g. possible fuel savings enroute, is of utmost importance. No overweight landing is authorised.

When applying economical tankage, extra fuel shall also be taken when a lower flight level has to be selected due to increased aeroplane gross mass.

Cockpit, Operational Ground Staff

8.2.1.7.3 No Economical Fuelling Recommended

- If the runway for take-off is wet or contaminated and runway length is marginal; or
- If the landing runway must be expected to be contaminated and available landing distance is marginal; or
- The risk of wing icing exists at the destination.

Cockpit, Operational Ground Staff

8.2.1.8 Use of Manual Magnetic Indicators (MMI)

The accuracy of the MMI readings is approximately +/- 5 % and thus worse than FQI system accuracy. MMI's should only be used when required by an (m) procedure (e.g the FQI system is inoperative), or the crosscheck shows a difference greater than the values stipulated in FCOM PRO-NOR-SOP-Cockpit Preparation-Fuel on Board (A320 / A340).

Before applying the MMI, if the uplift difference is exceeded consider following:

- Crosscheck remaining fuel from the ELB with the value from MCC
- Consider correct density and crosscheck the fuel uplift on the fuel receipt with the fueler
- Consider APU fuel used

Refer to FCOM EFB-LOD-FUL-Fuel of Manual Magnetic Indicators (MMI) (A320)

> Note: The MMI for the A340 is not published in the FCOM, as this is always a maintenance task.

Cabin, Cockpit, Operational Ground Staff

8.2.1.9 Refuelling /De-Fuelling with Passengers on Board and/or during Boarding

During fuelling/defuelling operations, there is an increased risk of fire. Fuelling/defuelling with passengers on board is only permitted when the aeroplane is pressure-filled with fuels classified as JET-A or JET-A1. Special precautions must therefore be taken to ensure that passengers and crew can quickly be evacuated in case of an emergency.

8.2.1.9.1 Precautions

- One flight crew member must stay on the flight deck during fuelling operations with passengers on board. This person must be capable of handling emergency procedures concerning fire protection and fire fighting, handling communications and initiating and directing an evacuation.

- To ensure good communication for the purpose of a quick evacuation in case of an emergency, a minimum number of cabin crew must stay on board, and the appropriate doors must be watched (refer to emergency procedures of respective aeroplane type);

Type	Minimum C/C on board	Doors to be watched
A320	4	1L and 2L
A340	8	1L, 2L and 4L

- At least one loading bridge or boarding step will be positioned, see table below. In exceptional cases (e.g. after a diversion) the door may remain closed with no loading bridge or a boarding step positioned provided a clear area is ensured on the tarmac below the exit.

- A second loading bridge/boarding step or a “clear area” must be provided on the tarmac below the exit intended for emergency evacuation and slide deployment. The responsible C/C shall supervise the “clear area”.

- The doors where loading bridges/boarding steps are positioned must be open and free from obstruction. These doors must remain open until fuelling/defuelling is completed. If necessary, the aircraft should primarily be evacuated through these doors.

Type	Required doors	
	Loading bridge/boarding step	2nd loading bridge/boarding step or “clear area”
A320	1L	2L
A340	1L or 2L	4L

- If for some reason, e.g. Catering high-loader in position, a specific door cannot be used for evacuation, ground staff will indicate alternate door an S/C must order a C/C to watch this door instead;
- Those passenger entrance doors where no boarding step or loading bridges are positioned remain closed. Closed doors and exits shall be kept free of obstruction (e.g. luggage).
- Ground servicing activities and work inside the aircraft, such as catering and cleaning, should be conducted in such a manner that they do not create a hazard and allow emergency evacuation to take place through those aisles and exits intended for emergency evacuation.
- The S/C will be informed by ground personnel if persons with reduced mobility/ wheelchair passengers should disembark.
- The “NO SMOKING” sign must be on
- The “FASTEN SEAT BELT” signs must be switched off.
- The cabin interior lighting must be illuminated (to enable emergency exits to be identified).

8.2.1.9.2 Communication between flight and cabin crew

- The CMD or delegated flight crew member must inform the cabin crew that fuelling will take place and receive confirmation from the S/C that all the above precautions are fulfilled before instructing ground handling to begin fuelling.
- The CMD or delegated flight crew member must inform the cabin crew by PA “CABIN CREW, (DE)FUELLING in PROGRESS” whenever fuelling is in progress.
- The S/C or delegated cabin crew member confirms either personally on, or by telephone to the flight deck that the information has been received.

- Whenever a dense fuel smell or any other potential danger is noted in the cabin, C/C must immediately inform the flight crew.

- Should the “clear area” at door 2L (A320) or 4L (A340) become obstructed, the C/C shall inform the flight crew immediately.

- The CMD or delegated flight crew member must inform the S/C and C/C when fuelling is completed by PA: “CABIN CREW - (DE)FUELLING COMPLETED”.

8.2.1.9.3 Communication between flight crew and ground

Two way communications between the flight crew and the person on ground supervising the refuelling (ground service provider/handling agent, maintenance staff, flight crew member) shall be established and shall remain available throughout the refuelling/ defuelling process. It is the responsibility of the CMD to organise the exact procedure.

The communication between the flight deck and the person on ground shall be established via interphone (Person on ground: Either plugged in at the nose-wheel or the engine connection).

If the cabin or flight crew detects fuel vapour inside the aircraft, or any other hazard arises, the person on ground shall be informed in order to stop the refuelling/defuelling immediately.

> Note: The GROUND MECHANIC CALL may be used as mean to get attention (flight crew alerting the person on ground and vice versa).
> Refer to FCOM DSC-23-20-30-10 (A320 / A340)

8.2.1.9.4 Passenger Briefing

- The S/C or delegated cabin crew member must inform passengers by PA system that fuelling is taking place, to unfasten their seat belts and to refrain from smoking.

- If fuelling is taking place during boarding, the announcement to the passengers should be made at 5 minute intervals during boarding as long as fuelling is in progress, to ensure that all passengers are made aware of the requirements

8.2.1.9.5 Emergency Situation

All persons involved shall be aware that an alerting call or sign may come at any time and might result in an emergency situation.

- In case an evacuation is required, all doors without loading bridge or boarding steps, unless ground servicing trucks are positioned, shall be armed. These doors and the overwing exits (A320) should also be used for evacuation if the situation requires and outside condition permits;

- In case of an evacuation, stretcher patients shall be evacuated through the nearest available door.

Cockpit, Operational Ground Staff

8.2.1.10 Mixed Fuelling

The term "mixed refuelling/de-fuelling" is used when an aircraft is:

- Fuelled with wide-cut-type fuel;
- or Fuelled with kerosene-type into wide-cut-type fuel, or into a mixture of kerosene-type and wide-cut-type fuel.

Wide-cut fuel (designated JET B, JP-4 or AVTAG) is an aviation turbine fuel that falls between gasoline and kerosene in the distillation range and consequently, compared to kerosene (JET A or JET A1), it has the properties of higher volatility (vapour pressure), lower flash point and lower freezing point.

Caution: Wide-cut and mixed fuelling is not allowed.

Cockpit, Operational Ground Staff

8.2.1.11 Refuelling with 1 Engine running

Refuelling with one engine running is only authorised at aerodromes where no external ground pneumatic power is available and only when the APU is unserviceable.

Refer to FCOM PRO-NOR-SUP-Fuel (A320 / A340).

No flights shall be planned to a destination if it is known that both APU and external ground pneumatic power are unservicable.

Cabin, Cockpit, Operational Ground Staff

8.2.2 Aircraft, passenger and cargo handling related to safety

Cabin, Cockpit, Operational Ground Staff

8.2.2.1 Special categories of passengers

Refer to CSPM Special categories of passengers (SCPs).

Cabin, Cockpit, Operational Ground Staff

8.2.2.2 Permissible size and mass of hand baggage

Max permissible size and mass of hand baggage:

- 55 x 40 x 23 cm
- 8 kg

Cabin, Cockpit, Operational Ground Staff

8.2.2.3 Loading and securing of items in the aircraft

8.2.2.3.1 Cabin load

Cabin load of cargo including dangerous goods, other than those expressly permitted by government regulation, is not accepted in an aircraft cabin or flight deck.

Exceptions:

- Stretchers and/or medical equipment (cabin)
- Live human organ (cabin or cockpit)
  It must be ensured that the shipment is properly secured by a safety belt or restraint device having enough strength to eliminate the possibility of shifting under all normal anticipated flight and ground conditions
- Company mail (cabin or cockpit)

For further info refer to CSPM Taxi, take-off and landing preparation and CSPM Stretchers (STCR).

Cockpit, Operational Ground Staff

8.2.2.3.2 Hold load

Loose special cargo load bearing orientation labels and dangerous goods must be secured in the aircraft in a manner that will prevent any movement in flight which would change the orientation of or cause damage to the package.

The following general guidelines apply to bulk load:

- The max. loading line must be adhered to in all compartments.
- Compartment nets must be kept inside the aircraft compartments and not left hanging outside, to avoid clips and attachment points from striking fuselage or inadvertently hooked on GSE and pulled out of the aircraft.
- Loads must be treated with care to avoid damage to the aeroplane and load.
- Special loads must be handled according to the special handling labels used (e.g. , ”fragile”, ”this side up”).
- The condition of the load must be inspected prior to loading, in order to detect leaking or damaged shipments.
- Leaking shipments may not be loaded.
- Any noticed damage must be reported to the appropriate departments (e.g. baggage tracing, cargo department, mail handling).
  Refer to CSPM Reporting of freight damage by the crew.

- Any load with missing identification (e.g. missing baggage tag, cargo label) must be identified before loading.
- The available separation nets must be properly secured to prevent shifting of load during flight.
- Heavy loads must be stowed at the bottom; if necessary, put heavy loads on spreaders in order not to exceed the maximum floor load and running load limitations.

Following items must always be secured inside the aircraft:

- Barrels or drums filled with liquids
- Cages or boxes of live animals (AVI)
- Heavy pieces (HEA) weighing 150 kg or more
- Coffins with human remains (HUM)
- Dangerous Goods
- Powered mobility devices
- Loads that must be separated
- Fragile loads
- Items weighing 150 kg or more, irrespective whether the compartment or net section is volumetrically full or not.
- Items with an individual mass between 50 kg and 150 kg, if the compartment is not volumetrically full.
- Items with an individual mass of less than 50 kg, but having a density of more than 240 kg/m^3 (high density load, e.g. pieces of machinery, metal bars); lashing is not required if the compartment or net section is volumetric full and remains full up to the point of unloading of these items.
- Any other individual items which by their nature, shape or density may constitute a hazard, must be restrained by either filling the compartment or net section to its volumetric capacity or by using the previous method.
- Items described above must be tied down to the tie-down tracks of the compartment by means of tie-down fittings and ropes or straps.

8.2.2.3.3 Securing of load

All load must be secured in such a way that it cannot come loose and cause hazardous displacement of the centre of gravity of the aeroplane, injure passengers and crew, or damage the aeroplane. Load must be restrained against shifting forwards, backwards, sidewards and upwards (force directions). Long load or load which is sensitive against shocks or tilting, wet cargo, pipes, tubes, bars, beams, planks, poles or other objects of a penetrating nature must be secured.

Load factors, expressed in units of "G", must be applied for the calculation of restraint requirements.

Cockpit, Operational Ground Staff

8.2.2.3.4 Loading principles for containers

Before loading container units, the serviceability of the material shall be checked. Unserviceable units are to be excluded from cargo traffic. Unserviceable containers shall not be used for cargo transportation. A container shall be filled exclusively with baggage, cargo or mail. Mixing of loads must be avoided, with the exception of LMC. Heavy items shall be loaded on pallets or on the bottom of the container if unavoidable. Containers shall be handled with extreme care to avoid damage. The height of the containers does not permit further loading on their top. Never attempt to stow flat cargo on top of a container. ULD shall always be properly closed when being loaded, regardless of whether they are empty or not.

Cockpit, Operational Ground Staff

8.2.2.3.5 Securing within load containers

Inside lashing is required:

- If pieces with high individual weight or cargo sensitive against jolts and tilting is loaded as single item.
- If the container is not filled up to ⅔ of is loading height and contains mainly small pieces with high individual weights (high density). Planks shall be spread across all items to ensure an efficient lashing.

Dangerous Goods shall be secured in such a manner that will prevent any movement in flight that could change the orientation of or cause damage to the package.

Cockpit, Operational Ground Staff

8.2.2.4 Positioning of ground equipment

Ground support equipment must be positioned behind the equipment restraint line prior to arrival of the aircraft at the parking position.

Chocks must be kept clear of the guide-in line and in a safe area away from arriving aircraft and engine.

Elevating devices may not be driven towards the aircraft in the elevated position, except for final positioning.

The aircraft cannot be approached by ground support equipment until it has come to a complete stop at the assigned parking position.

When approaching the aircraft, equipment and vehicles may not drive faster than walking speed.

When ground support equipment is positioned at the aircraft, full allowance must be made for up and down movements of the aircraft due to weight changes.

Equipment and vehicles may not be positioned higher than the markings on the fuselage below each cabin door, if available.

When ground support equipment is positioned at the aircraft, full allowance must be made for up and down movements of the aircraft due to weight changes. Before loading and fuelling the aircraft, check that stairs and bridges have following vertical safety distance to adjacent doors:

Door	A320	A340
Doors 1 & 2	20 cm	20 cm
Door 4	n/a	30 cm

> Note: Connected jetties are usually equipped with automatic height adjustment devices. Therefore, for these connections, the safety distance to the doors is not a critical issue

Equipment must be placed at the aircraft in the following sequence:

Sequence	Equipment
1	2 temporary wheel chocks forward and aft of nose landing gear (NLG) wheels
2	Ground power unit(s), if required
3	4 Wheel chocks forward and aft of outer main landing gear (MLG) wheels after the engines have been shut down and the anti-collision light has been switched off. Then, remove temporary wheel chocks from NLG. Safety cones must be placed below wing tips, in front of engine and in front of the aircraft nose. Inform flight deck crew that chocks are inserted.
4	Damage walk around check
5	Passenger steps or passenger loading bridges, loading and servicing equipment
6	Fuel truck

Cabin, Cockpit, Operational Ground Staff

8.2.2.5 Operation of aircraft doors

Refer to CSPM Door operation.

Cabin, Cockpit, Operational Ground Staff

8.2.2.6 Safety on the aerodrome, including fire prevention and safety in blast and suction areas

Ramp safety is crucial to a safe airline operation. Aircraft damages (even minor ones) do not only have a direct cost impact, but also affect the operation through delays, schedule disruptions and the resulting follow up costs. Accident prevention must be the highest priority of handling providers worldwide. The designated handling company is responsible for the safety of the aircraft, passengers and dead load as soon as the aircraft comes to rest on the tarmac until it leaves the tarmac for a flight.

In the event of fire, time is a crucial factor. The sooner the fire can be fought, the greater the chance of preventing a major disaster. The ramp personnel have means at their disposal for preventing the fire from spreading. Ground personnel must refrain from fighting engine fires with fire extinguishers available in the aircraft. Such fires are normally fought by the flight crew by means of the engine fire extinguisher. In the event of fire on or in the vicinity of an aircraft, the aerodrome fire brigade must be called at once. In addition, the flight crew or personnel on board must be alerted immediately so that evacuation can be initiated.

For inlet and exhaust danger areas refer to FCOM PRO-NOR-SOP-ENGINE START-GROUND RUN UP-DANGER AREAS (A320 / A340).

Cockpit, Operational Ground Staff

8.2.2.7 Start-up, ramp departure and arrival procedure

Refer to:

- FCOM PRO-NOR-SOP-BEFORE PUSBACK OR START (A320 / A340)
- FCOM PRO-NOR-SOP-ENGINE START (A320 / A340)
- FCOM PRO-NOR-SOP-AFTER START (A320 / A340)
- FCOM PRO-NOR-SOP-PARKING (A320 / A340)
- Lido Route Manual 1.2.2.3

Cockpit, Operational Ground Staff

8.2.2.8 Servicing of aircraft

Ground servicing activities and work inside the aircraft (e.g. catering and cleaning) must be conducted in a manner that they do not create a hazard.

Special care must be taken when servicing the aircraft while:

- an engine is running (e.g. engine run-up, intermediate stop with no APU and ground power available)
- fuelling takes place with passengers embarking, on board or disembarking

Servicing of aircraft at destinations with station engineer

Immediately after ATA, the station engineer has to contact the CMD in order to coordinate turnaround / nightstop / extended ground stop process.

The station engineer is responsible for:

- ground servicing of aircraft including draining of potable water immediately, if required
- switching off APU/battery upon completion of ground servicing
- closing of door
- sealing of aircraft (according to aircraft type specific checksheet)
- opening of aircraft after nightstop

The handling agent is responsible for:

- connection of GPU / EXT PWR
- cabin cleaning
- removal of ground equipment (stairs, ladders, GPU, etc.) from the aircraft to a reasonable distance

Servicing of aircraft at destinations without station engineer

The CMD is responsible for

- switching off APU/battery upon completion of ground servicing
- upload or draining of potable water (if applicable)
- closing of doors
- sealing of aircraft (according to aircraft type specific checksheet)

The handling agent is responsible for:

- installation of GPU / EXT PWR
- cabin cleaning
- ground servicing of aircraft
- removal of ground equipment (stairs, ladders, GPU, etc.) from the aircraft to a reasonable distance in cooperation with the crew

Cockpit, Operational Ground Staff

8.2.2.9 Documents and forms for aircraft handling

Refer to OM A Loadsheet

Refer to OM A Information to the commander (NOTOC)

Cockpit, Operational Ground Staff

8.2.2.10 Special loads and classification of load compartments

For classification of compartments refer to OM B Cargo compartments (A320 / A340)

Loading instructions are published in the GOM and include all kind of permitted cargo including special load such as:

- Dangerous goods
- Live animals
- Miscellaneous special loads

The carriage of temperature sensitive load, such as certain dangerous goods, perishable goods, live animals shall be reported to the CMD by means of the "Special load information to CMD" (NOTOC) or as SI (Supplementary Information) on the loadsheet. Refer to OM A Information to the commander (NOTOC).

> Note: NOTOC is only used to indicate dangerous goods and special loads coming from Cargo. Any dangerous goods and special loads permitted for carriage in Pax or Crew baggage will be added as "supplementary information" remark on the loadsheet (not on the NOTOC).

Cargo compartment temperature settings

Cargo compartment temperature should be set as requested if technically and operationally possible.

Refer to FCOM DSC-21-CARGO (A320 / A340)

In case of contradictory requests (AVI and COL), the temperature of the respective cargo compartment must be set according to AVI requirements.

Cabin, Cockpit, Operational Ground Staff

8.2.2.11 Multiple occupancy of aircraft seats

Refer to CSPM Method of carriage of passengers.

Cabin, Cockpit, Operational Ground Staff

8.2.3 Procedures for the refusal of embarkation

Refer to CSPM Intoxicated/drugged passengers.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4 De-icing and anti-icing on the ground

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.1 Definitions of de-/anti-icing procedures

Procedure	Explanation
De-icing	De-Icing is a procedure by which frost, ice or snow is removed from an aeroplane in order to provide clean surfaces.
Anti-icing	Anti-Icing is a precautionary procedure which prevents frost, ice and snow forming or accumulating on the surfaces of an aeroplane for a limited period of time (Holdover Time). Holdover time is achieved by anti-icing fluid remaining on the surfaces of an aeroplane. The time of protection depends on the type of fluid, the mixture ratio, the outside air temperature and the weather conditions.
One step de-icing	One step de-icing means that de-icing and anti-icing are carried out at the same time using a mixture of anti-icing fluid and water.
Two-step de-icing	Two-step de-icing means that de-icing and anti-icing are carried out in two separate steps. The aeroplane is first de-iced using either heated water only or a heated mixture of water and anti-icing fluid. After completion of the de-icing operation a film of anti-icing fluid only or a mixture of anti-icing fluid and water is to be sprayed onto the clean aeroplane surfaces.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.2 Policy

Take-off shall not be commenced unless the critical surfaces are clear of any deposit (e.g. slush, snow, ice or frost) that might adversely affect the performance and/or controllability of the aircraft. Exceptions are stated in the FCOM. Dry snow shall not be left to blow off during the take-off run.

In all cases where the formation of ice or frost on wings and control surfaces must be expected, e.g. cold wings, temperature just above freezing and high moisture content of the air, it is considered appropriate that the CMD makes a walk-around inspection to check the condition of the aeroplane before taxi.

The time interval between de-icing/anti-icing and take-off shall be as short as possible. De-icing/anti-icing shall be performed with doors closed and the aeroplane ready for departure (exception: Refer to OM A De-icing with open passenger door (early de-icing on stand)).

After de-icing/anti-icing and when within the holdover time (HOT), the CMD shall make spot-checks (pre-take-off-check) of the aeroplane condition whenever he has doubts concerning the efficacy of the de-icing/anti-icing or during prolonged taxi in heavy precipitation.

If the holdover time has expired, a visual pre-take-off contamination check of the wings shall be conducted within 5 minutes prior to take-off. If the check from inside the cabin is not possible due to soiled windows or insufficient lighting, the wings have to be re-inspected from outside the aeroplane. If the check is unsatisfactory, the de-icing/anti-icing treatment has to be repeated.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.3 Responsibilities

Action	Responsi-bility
A/C condition check[1]	CMD[2]
De-icing	CMD[3]
A/C condition check after de-icing	CMD, in close cooperation with de-icing crew

[1] Conditions for Check: In icing conditions, the aeroplane shall be checked for snow, slush and ice deposit. This includes the check of the wings, stabilizers, engine inlets, fan blades, landing gear.

[2] After night stop in ZRH, responsibility and deposit removal (engine inlets, fan blades, landing gear) by SWISS Technics.

[3] In close cooperation with de-icing coordinator (mixture ratio, 1 or 2 step procedure, remote de-icing).

CAUTION: The final responsibility for the aeroplane de-icing and the aeroplane being free from snow or ice lies always with the CMD.

In all circumstances, it is the CMD's authority to decide whether or not to de-/anti-ice the aeroplane or to order a repeated treatment.

In ZRH, if required, the CMD may ask the maintenance team to perform the condition check of engine, landing gear and wing (upper surfaces).

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.4 Fluid characteristics

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.4.1 SAE type I fluids

ISO/SAE type I fluids are un-thickened de-icing/anti-icing fluids on a glycol basis. They provide protection when no precipitation occurs. Under continuous precipitation, the protection provided by type I fluids diminish rapidly because the fluid film on the aeroplane is diluted by the precipitation and eventually washed off.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.4.2 SAE type II/IV fluids

ISO/SAE type II/IV fluids are de-icing/anti-icing fluids which contain a thickening agent. They provide protection against formation of ice or frost or accumulation of snow on treated surfaces also under continuous precipitation, because the thickening agent considerably improves adhesion of the fluid film to the aeroplane surfaces.

> Caution: An aeroplane that has been anti-iced with type II/IV fluid shall not receive a further coating of anti-icing fluid directly on top of the existing film under any circumstances. If it is necessary for an aeroplane to be re-protected prior to the next flight, the external surfaces shall first be de-iced with a heated mixture of fluid and water before a further application of anti-icing fluid is made.

The aeroplane shall be treated symmetrically which means that the left-hand and right-hand side shall receive the same treatment.

When holdover time is critical, the two-step procedure using undiluted anti-icing fluid only for anti-icing (second step) is to be applied.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.4.3 Fluid handling

Concentration of the anti-icing fluid within the fluid water mixture is expressed as a percentage by volume.

With a one step de/anti-icing procedure, holdover time begins at the start of the operation and with a two-step procedure, the time begins at the start of the second (anti-icing) step.

Holdover time will have effectively run out, when frozen deposits start to form/ accumulate on aeroplane surfaces.

The following tables are guidelines for the application of Type I, II and IV fluid/water mixtures (minimum concentration in vol.%/vol.%) as a function of OAT.

Note: Type III fluids are not approved by Airbus Industries and must not be used on Edelweiss aircraft.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.5 De- and anti-icing procedures

De-icing and anti-icing may be performed on stand or remotely.

The supervisor / PAD coordinator responsible must inform the flight crew of the beginning and completion of the de-icing/anti-icing operations. After completion of the de-icing/anti-icing operations, the following information must be communicated to the flight crew:

- Type of fluid applied;
- Percentage of fluid/water mixtures by volume used;
- Local time of start of last application for a two-step procedure (anti-icing) or local time of start for a one-step (de/anti-icing) procedure;
- Date, if applicable.

Proper communication is as important as proper de-/anti-icing. When communicating and verifying the process between the ground crew and the aircraft crew, there must not be any doubt about any of the following: the procedure, fluid used, holdover time, areas covered.

For procedure and limitations refer to FCOM PRO-NP-SUP-ADVERSE WEATHER (A320 / A340).

For initial check of the wings' upper surface, look initially through the cabin windows. Pay special attention and check carefully the engines' inlet to be free from snow or ice and the back of the fan blades for ice build-up. Fan blades shall be deiced with hot air (Call MCC and request an engine fan blade de-icing).

Deposit on top of the engines shall be removed before start up if there is the risk that ice could be ingested (Ice suspected in front of the security line marking the ingestion zone of the engine). Ice can form under a snow layer due to engine heat. Ingested ice pieces contribute to high compressor wear. Ask the de-icing coordinator ZRH for an on-stand engine cowling de-icing. The de-icing truck operator informs the captain if the whole plane will be de-iced on stand, or if the plane has to proceed via the deicing pad after the on-stand engine cowling de-icing. (Decided by Zurich-Airport to optimise the deicing sequencing).

After on-stand engine cowling de-icing perform a normal start up (without receiving any further de-icing information). Inform delivery at start up that you proceed via the deicing pad.

CAUTION: The final responsibility for the aeroplane de-icing and the aeroplane being free from snow or ice lies always with the CMD.

a. Transit stop (ZRH) If required, the CMD may request SWISS Technics (via MCC) to perform the aeroplane condition check of engine, landing gear and wing (upper surfaces). Swissport does not provide condition checks.
b. Outside stations Contact the handling agent for suitable equipment and/or qualified ground staff.

No HOT is applicable for deicing only. The following tables are guidelines for holdover times anticipated for type I, II and IV fluid mixtures as a function of weather conditions and OAT.

With regard to holdover time provided by the applied fluid, the objective is that it be equal to or greater than the estimated time from start of anti-icing to start of take-off based on existing weather conditions. The lower limit of the published time span is used to indicate the estimated time of protection during moderate precipitation and the upper limit indicates the estimated time of protection during light precipitation.

Holdover time during intermittent precipitation

Once the HOT time clock has been started it must not be stopped for intermittent precipitation. Intermittent precipitation conditions, during ground icing operations, are a common occurrence at some airports. As precipitation falls on an aircraft that has been anti-iced, the fluid is being diluted. The more diluted the fluid becomes, the more readily it flows off the aircraft, and the higher the freezing point becomes

Even if the precipitation stops falling, the diluted fluid will continue to flow off the aircraft due to gravity. There is no practical way to determine how much residual anti-icing fluid is on the wing under these circumstances. HOT values under these conditions have not been assessed.

Therefore, after the anti-icing HOT clock has been started, it must not be stopped.

HOT credit cannot be given due to the fact that the precipitation has temporarily stopped falling.

CAUTION: The time of protection will be shortened in heavy weather conditions. Heavy precipitation rates or high moisture content, high wind velocity or jet blast may reduce holdover time below the lowest time stated in the range. Holdover time may also be reduced when the aircraft skin temperature is lower than OAT. Therefore, the indicated times should be used only in conjunction with a pre-takeoff check.

De-icing/anti-icing fluids used during ground de-icing/anti-icing are not intended for - and do not provide - protection during flight.

Note: A table for type III fluids is not published.

Procedure for ZRH:

The CMD decides in close cooperation with the De-Icing Coordinator about the type of de-icing to be applied (e.g. 1 or 2 step) according to the actual condition of the aeroplane and the actual weather situation. The responsibility to apply the chosen procedure correctly lies with Swissport.

If the proposal from the PAD Coordinator seems to be improvable the crew should advise the coordinator about the desired procedure before starting the spraying operation. Type IV can only be applied with 100%.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.5.1 Fluid Application Tables and Holdover Times (HOT Tables)

For the respective fluid application tables and holdover times (HOT Tables), refer to OM A Appendix.

Generic Holdover Time (HOT) tables:

Table	Link to OM A Appendix
Type I fluid/water mixtures	Guidelines for the application of Type I fluid / water mixtures (minimum concentrations)
Type II and IV fluid/water mixtures	Guidelines for the application of Type II and IV fluid / water mixtures (minimum concentrations)
Snowfall Intensities	Snowfall Intensities as a Function for Prevailing Visibility table
HOT for active frost conditions	Guideline for HOT for Type I, II, and IV fluid mixtures in Active Frost conditions
HOT Type I	HOT Type I
HOT Type II	HOT Type II
HOT Type IV	HOT Type IV
HOT for mixed snow and freezing fog	HOT for mixed snow and freezing fog for Type I, II and IV fluids

Brand name Holdover Time (HOT) tables:

The following fluids are of higher quality and have considerably longer hold over time than the ones stipulated in the generic Type IV HOT table. These fluids are only used at specific airports.

The application of these fluids has to be confirmed by the cockpit crew after the completion of the de-icing/anti-icing procedure.

HOT KILFROST	HOT KILFROST ABC-S PLUS - ZRH / FRA / VIE / LHR
HOT CLARIANT	HOT CLARIANT SAFEWING MP IV LAUNCH - BOS / GVA
HOT CRYOTECH	HOT CRYOTECH POLAR GUARD ADVANCE - ORD
HOT DOW CHEMICAL	HOT DOW CHEMICAL UCAR ENDURANCE EG106 - YUL
	HOT DOW CHEMICAL UCAR FLIGHTGUARD AD-49 - EWR / JFK

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.6 Removal of Local Area Contamination (ROLAC)

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.6.1 General

In some cases a full or complete de-icing is not necessary. When the presence of frost is limited to localized areas on the wing and no precipitation is falling or expected and therefore no hold over time is likely to be required. The ROLAC procedure may be applied. In this procedure only the contaminated areas will require treatment.

Note: Holdover times do not apply.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.6.2 Treatment

- Only localised areas on the wing upper side may be treated (MLG fitting area, spoiler panels or similar);
- Both sides of the aeroplane must be treated identically (same areas, same amount and type of fluid, same mixture strength), even if the contamination is only present on one side;
- Not allowed with actual or expected precipitation;
- HOT is not applicable.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.6.3 Procedure for ZRH

- Normal request for De-Icing;
- In contact with pad coordinator or De-Icing personnel, decide about the actual procedure “REMOVAL OF LOCAL AREA CONTAMINATION”;
- CMD proceed according the De-Icing checklist;
- After treatment flight crew will not receive any Anti-Icing code. The following wording will be reported “LOCAL AREA DE-ICING ONLY. HOLDOVER TIMES DO NOT APPLY”;

The final decision about which procedure (ROLAC or normal De-Icing procedure) will be applied has to be agreed upon both, the CMD and the De-Icing personnel.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.6.4 Other stations

All stations abroad, where Edelweiss aeroplanes will be de-iced, are generally in possession of the DAM. Nevertheless it might be necessary, that the cockpit crew has to support the ground crew to decide which procedure shall be applied.

It is the responsibility of the De-Icing Operator to ensure that the treatment is performed symmetrically and that on completion all frozen deposits have been removed.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.7 De-icing with open passenger door (early de-icing on stand)

"Early de-icing on stand" means, that the de-icing may start when passengers are still boarding and all ramp services are completed. This procedure will apply, provided the following conditions are fulfilled:

- Valid Airport Briefing / CCI entry which allows the “early de-icing on stand” procedure.
- Aircraft is parked at dockstand and jetty is connected.
- In advance coordination required between ground staff (turnaround coordinator) and the CMD. Procedure shall be judged on a flight-by-flight basis, depending on weather and wind conditions.
- CMD shall agree on the application of the “early de-icing” procedure.
- All ramp services (fuel, water, ext. air conditioning etc.) shall be completed.
- All doors (incl. cargo) shall be closed, except door 1L (A340: and/or door 2L) with the jetty connected.
- Communication between CMD and de-icing crew is required before initiation and after termination of de-icing.

- Only de-icing of wings and/or stabilizer or local wing frost removal allowed.
- de-icing of fuselage is not allowed.
- Cockpit Crew shall perform the de-icing checklist “AIRFRAME DEICING / ANTI-ICING PROCEDURE ON GROUND” except that door 1L (A340: and/or door 2L) is/are still open with the jetty connected.
- After completion of the boarding, the crew may close door 1L (A340: and/or door 2L), even if the "early de-icing on stand" is still in progress.
- Cockpit Crew shall inform Cabin Crew about de-icing during boarding. From an evacuation point of view, the situation corresponds to the ' de-icing before engine start with all doors closed', except that door 1L (A340: and/or door 2L) is/are still open.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.8 Under-wing de-icing procedures

Treatments must be symmetrical and may include flaps lower surface. Spray the affected areas with a heated fluid/water mix suitable for a One-Step Procedure or a Two-Step procedure (see note below), and then spray the same areas under the other wing. Both wings must be treated identically (same areas, same amount and type of fluid, same mixture strength), even if the frozen contamination is only present under one wing. A trained and qualified person must check that the treatment was done symmetrically and that all frozen deposits have been removed, and then report the details of the treatment to the Commander. No holdover times apply to underwing treatments.

Note: Underwing frost and ice are usually caused by very cold fuel in the wing tanks. Use a fluid/water mix with a higher concentration of glycol than is usually required by the OAT to prevent refreezing.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.9 Forced Air Technology

Some of our de-icing providers (e.g. GVA) have the equipment to perform de-icing with forced air (Druckluft). We are allowed to accept this procedure. Our DAM (De-Icing/Anti-Icing Manual) 8.6 states the following:

Forced Air Technology utilises an air stream to remove accumulations of frozen contamination from the aircraft, either with or without fluid. Forced Air Technology may be used as a "Pre-De-Icing step" prior to the conventional De-Icing/Anti-Icing procedure or, in the case of dry and non-adhering snow, for "De-Icing only".

CAUTION: Forced Air may not remove adhering contaminants and does not provide any holdover time. Therefore, usually, it will not eliminate the need for the De-Icing/Anti-Icing procedures in accordance with DAM 3 De-Icing/Anti-Icing Procedures.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.10 Local frost prevention

Local frost prevention procedures are not allowed on EDW aircraft.

Local frost prevention procedure is neither a substitute for standard de-icing and anti-icing procedures in accordance with de-/anti-icing fluid application strategy or any other aircraft manufacturer requirement, nor a substitute for the requirement that aircraft surfaces shall be clear of frost, snow, slush, or ice accumulations.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.11 Ice Shedding Procedures

The high power setting required for the ice shedding procedure will result in danger areas behind the engines. Refer to FCOM PRO-NOR-SOP-ENGINE START-GROUND RUN UP-DANGER AREAS (A320 / A340). It shall be ensured that the aircraft is in a location where there is no risk of creating damage when setting high thrust.

Perform the ice shedding procedure just prior to T/O once aligned on the RWY with the required level of thrust, even if the previous ice shedding was performed in less than the published interval.

The prolonged RWY occupancy time shall be taken into consideration.

If freezing conditions requiring the application of ice shedding procedures exist, expect other aeroplanes to perform equal procedures and additional taxi time should be taken into consideration.

The Ice Shedding Procedure is described in FCOM PRO-NOR-SUP-ADVWXR-ENGINE OPERATIONS ON GROUND IN ICING CONDITIONS (A320 / A340).

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.12 Frost above Outer Tanks on A320

To avoid build-up of frost on the wing section above the outer tanks after landing, the cold fuel within the tanks can be forced to transfer to the inner tanks by opening the transfer valves. This is achieved by pulling the circuit breakers A10 or A11 on the overhead panel after the completion of the parking check. They have to be pushed back in latest before starting refueling

This is not a routine procedure and has to be used only under certain meteorological conditions (high humididity, no precipitation) and with cold fuel in outer tanks, when the risk of frost build-up on the respective wing section is existing and with the purpose to avoid the need of de-icing of those surfaces.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.13 Low fuel temperature in outer tanks

If the fuel temperature on ground is still near the low temperature limit according FCOM/QRH the fuel in the outer tanks can be forced to transfer to the inner tanks by pulling CB A10 and A11 (A320) after the completion of the parking check (A320) and with the outer TK XFR P/B during the after landing checklist (A340).

This opens the transfer valves. They have to be closed latest before starting refuelling.

Cockpit, Operational Ground Staff, Winter Ops

8.2.4.14 Pre-de-icing/anti-icing

Aircraft may be de-iced/anti-iced up to 3 hours before departure without a crew on board if weather conditions permit a long holdover time.

The pre-de-icing/anti-icing procedure will only be applied under the following conditions:

- No precipitation is present or forecasted.
- The treatment may be applied a maximum of 3 h before ETD.
- Allowed fluid/water mixtures for anti-icing:
    - 100%/0% Type II or IV
    - 75%/25% Type II or IV
- If no crew is on board, the ground engineer will confirm whether treatment is required and that the aircraft is parked according to the parking checklist.

When the treatment has been performed, the CMD shall obtain the de-icing/anti-icing code and start time via de-icing coordination.

Whenever possible, a two-step procedure will be performed.

If no crew is on board, the ground engineer shall set all switching back to normal after the treatment according to the Aircraft Maintenance Manual.

For the detailed pre-de-icing/anti-icing process, refer to OM A Appendix Pre-de-icing/anti-icing Process.

The final responsibility for de-icing/anti-icing and the aircraft being free from snow or ice always lies with the CMD. In all circumstances, the CMD's authority is to order repeated treatment. Refer to OM A Responsibilities.

A320, A340, Cabin, Cockpit, Operational Ground Staff

8.3 Flight Procedures

Cockpit, Operational Ground Staff

8.3.1 VFR / IFR policy

Cockpit, Operational Ground Staff

8.3.1.1 General

The CMD shall not require a crew member to perform any activities during critical phases of the flight other than those required for the safe operation of the aircraft.

The CMD shall ensure that Air Traffic Services are used for all flights whenever available.

All route flights shall normally be operated in accordance with IFR and an IFR flight plan must be filed.

No cancellation of an IFR flight plan is authorised. This does not preclude the use of a clearance subject to maintain VMC for a limited and specified portion of a flight.

Wherever possible all route flights shall be operated within controlled airspace, airspace with advisory service or airspace with positive radar control, except:

- When authorised in the RM or by the NPFO; or
- when the situation so warrants (e.g. thunderstorm).

Cockpit, Operational Ground Staff

8.3.1.2 En-route operating minima for VFR flights or VFR portions of a flight

Refer to OM A En-route VFR minima.

Cockpit, Operational Ground Staff

8.3.1.3 Flights operating into and out of uncontrolled airspace and/or aerodromes

No aeroplane shall cancel IFR and continue to operate into uncontrolled airspace and/or aerodrome unless observed and reported meteorological conditions permit to maintain VMC from that point where IFR is cancelled until landing.

No aeroplane shall take-off from an uncontrolled aerodrome and/or into uncontrolled airspace unless full VMC or applicable VFR-minima can be maintained, until the IFR clearance becomes effective.

Cockpit, Operational Ground Staff

8.3.1.4 VFR flights

Cockpit, Operational Ground Staff

8.3.1.4.1 General

There may be routes, or portions thereof, that do not allow IFR-flights due to missing navigation facilities and/or traffic control services.

All flights under VFR do require the crew to have adequate navigation charts and other flight related information (e.g. NOTAM, airspace restrictions, shooting areas) on board.

Operation is then subject to the procedures below.

Cockpit, Operational Ground Staff

8.3.1.4.2 Pure VFR flights

The NPFO may - with the approval of the competent authority - specify exceptions from the general policy to operate under IFR permitting pure VFR flights on some very short routes or when operating non revenue flights or local sight-seeing flights.

VFR flights shall not be commenced unless current meteorological reports or a combination of current reports and forecasts indicate that the conditions along the route or along that part of the route to be flown under VFR are, and will continue to be such as to make it possible for the flight to be conducted in accordance with VFR.

Cockpit, Operational Ground Staff

8.3.1.5 IFR clearance subject to maintain VMC

Clearances subject to maintain VMC for a limited portion of an IFR flight (e.g. to shorten flight path, to allow climb or descent, to circumnavigate thunderstorms) shall only be accepted/requested in VMC conditions.

Cockpit, Operational Ground Staff

8.3.1.5.1 IFR clearance to maintain own traffic separation in VMC

Such a clearance may only be accepted/requested if the involved traffic can be visually identified and kept in sight until clear of.

Cockpit, Operational Ground Staff

8.3.1.5.2 IFR clearance to maintain own terrain separation in VMC

Such a clearance may only be accepted/requested if visual separation to the terrain can be maintained.

A320, A340, Cockpit, Operational Ground Staff

8.3.2 Navigation procedures

Cockpit, Operational Ground Staff

8.3.2.1 General

An aeroplane shall not be operated unless the navigation equipment required or otherwise installed is approved in accordance with the applicable requirements including operational and airworthiness requirements. A failure of a single unit required for operation shall not result in the inability to operate safely on the route to be flown. Detailed information about the required operational status of equipment is provided in the FCOM, QRH and MEL.

Cockpit, Operational Ground Staff

8.3.2.2 Definitions

Navigation and communication equipment is installed to enable or to assist flight crews to perform and/or to optimise flights with regard to safety, comfort and economy. The pilots are responsible for the correct use of the equipment in accordance with the limitations. Continuous monitoring of the equipment and its performance is mandatory during any use of it.

2D Approach Operation: Is an instrument approach using lateral navigation guidance only.

3D Approach Operation: Is an instrument approach using both lateral and vertical guidance.

Cockpit, Operational Ground Staff

8.3.2.3 Principles

Redundancy is the most important principle governing the performance of all navigation Tasks.

Whether navigating on manually-tuned nav aids, on the navigation system (RNP/PBN) or on radar vectors, crosschecks with primary nav aids are essential.

Flight plans activated in the navigation system shall be checked by both pilots - waypoint by waypoint (or stored airways if available) - against the OFP. Where FMS is also suitable and authorised for pre-flight planning (when an OFP is not available) and for in-flight re-planning, all available means (e.g. RFC) shall be used to crosscheck the corresponding data.

For re-planning, pilots shall not only check if the fuel requirements will be met, but also if the available navigational aids for the re-planned route and/or the re-planned destination as well as the airborne equipment will be sufficient and satisfactory for a safe conclusion of the flight.

Cockpit, Operational Ground Staff

8.3.2.4 Navigational procedures

Notwithstanding the overall responsibility of the CMD for precise navigation and proper use and handling of navigation systems, the PF is responsible for the selection of the navigation aids and the required navigation system configuration.

Any changes by the PM shall be made at the request of and be checked by the PF.

The pilots shall inform each other about any doubts concerning the reliability of a navigation aid or a system.

Whether navigating on manually tuned navigation aids, on the navigation system or radar vectors, cross-checks are essential. The sole use of the FMS may not be adequate for all phases of flight and must be supplemented by continuous position checks against displayed navigation aids.

If the departure procedures are not stored in the navigation database, take-off and climb shall be performed according to conventional radio navigation.

ILS facilities of all categories are known to produce false beams outside their coverage sectors. To ensure proper localizer and GS beam capture, the ILS mode shall not be armed until the vicinity of the beam has been ascertained and checked by independent means like navigation aids (VOR/ADF), and the capture shall be monitored by the same means.

A DME (or FMS distance) altitude check at the intercept of the vertical path shall be performed whenever possible. In addition, an altitude check shall be performed at the FAF/FAP position.

PBN APP: A “Direct to” clearance to the IF may only be accepted, provided that the aircraft will be established on the final approach track at least 2 NM before the FAF. A “Direct to” clearance to the FAF is not acceptable. Modifying the procedure to intercept the final approach track prior to the FAF is acceptable for radar-vectored arrivals or with ATC approval.

Cockpit, Operational Ground Staff

8.3.2.5 Procedures in the event of system degradation

Refer to FCOM / FCTM / QRH.

Cockpit, Operational Ground Staff

8.3.2.6 Use of navigation aids

Adequate selection of navigation aids shall be ensured for cross-checks. Distance information for cross-checks shall be used only if a DME is colocated with a VOR which coincides with a waypoint. DME colocated to an ILS shall not be used for navigational purposes other than the final approach.

Locators in a TMA normally provide reliable guidance within 25 NM only.

The ILS localiser beam normally has a width of 3° on either side of the centreline and a range of 25 NM. Within 30° on either side of this sector, coverage is provided normally to the extent that a full-scale deflection to the correct side is available.

The coverage in azimuth extends 8° on either side of the localiser centreline to a distance of 10 NM.

The elevation available for guidance ranges normally from at least 2° above to 1,5° below the nominal glide path, below which full-scale fly-up deflection is available.

Manually tuned navigation aids shall be positively identified at the time of selection. Whenever elements of information relative to the position are contradictory, the reliability of any relevant navigation aid(s) shall be verified by additional independent means.

Published minima apply to the unrestricted availability of approach aids. When reported to be "on maintenance", "unreliable", "ground checked only", "flight checked only", "not calibrated", or "on test", Navaids shall not be relied on.

Navaids reported unserviceable (u/s) in terminal areas shall be deselected from the FMS navigation.

Cockpit, Operational Ground Staff

8.3.2.7 Use of FMS

FMS shall be used for Area Navigation according to the limitations and according FCOM PRO-NOR-SOP. FMS may not be used for approach purposes, unless:

- Appropriate approach charts are published;
- the approach procedure is stored in the FMS database;
- the system capability is certified;
- IAF, FAP/FAF, inbound courses and distances between them are checked via the MCDU according FCOM PRO-NOR-SOP-APPROACH-AIRCRAFT GUIDANCE MANAGEMENT (A320 / A340).

Where raw data are available they shall always be used to monitor the integrity of the FMS (VOR, DME, NDB displayed as second course or RMI information).

Great care shall be exercised in case of FMS malfunction, unexpected behaviour or short term reprogramming.

In these cases the following policy applies:

Whenever in doubt about the FMS accuracy the PF shall revert to conventional navigation using autopilot modes such as HDG SEL and VERT SPEED until the FMS has been satisfactorily reprogrammed.

For RNAV 1, RNAV 2, RNP 1, RNP 2, and RNP APCH, the flight crew shall neither insert nor modify waypoints by manual entry into a procedure (departure, arrival or approach) that has been retrieved from the database. User-defined data may be entered and used for waypoint altitude/speed constraints on a procedure where said constraints are not included in the navigation database coding.

For RNP 4 operations, the flight crew shall not modify waypoints that have been retrieved from the database. User-defined data (e.g. for flex-track routes) may be entered and used.

Cockpit, Operational Ground Staff

8.3.2.8 Routings

Actual planned routings may change from standard routings and are shown on the OFP. Routings filed have to be prepared in accordance with official and Edelweiss Air regulations.

Cockpit, Operational Ground Staff

8.3.2.9 Danger areas

Crossing of danger areas must be avoided, if possible. For instructions and exceptions, refer to the RM or NOTAM.

Cockpit, Operational Ground Staff

8.3.2.10 In-flight re-planning

When deviating from a routing or when a route has been chosen for which no routing is given, the below mentioned factors have to be considered:

- Ground facilities and enroute navigation, communication, and emergency aerodromes etc;
- Terrain to be overflown and aerodrome performance;
- Regulations issued by countries overflown, e.g. danger areas, overflight permission;
- Meteorological conditions and services;
- Search and rescue facilities;

Cockpit, Operational Ground Staff

8.3.2.11 Maps and charts

Flying in IMC and/or darkness may only be done with maps, charts, routing etc., approved by Edelweiss and referenced in the Lido Route Manual.

For special operations outside the area covered by the Lido Route Manual, the necessary documentation will be forwarded automatically by the OCC.

Cockpit, Operational Ground Staff

8.3.2.12 Noise abatement procedures

The planning and execution of all flights in terms of route and altitude shall take into account the need to minimise the effect of aircraft noise.
The published noise abatement procedures are strictly to be followed as long as safety is not compromised.

Cockpit, Operational Ground Staff

8.3.2.13 Instrument departure and approach procedures

Cockpit, Operational Ground Staff

8.3.2.13.1 General

Instrument departure and approach procedures established by the state in which the aerodrome is located must be used.

Cockpit, Operational Ground Staff

8.3.2.13.2 Exceptions

The CMD of a flight may accept an ATC clearance to deviate from a published departure or arrival route, provided obstacle clearance criteria are observed and full account is taken of the operating conditions. The final approach must be flown visually or in accordance with the established instrument approach procedure.

Cockpit, Operational Ground Staff

8.3.2.14 Use of weather radar

The primary purpose of the airborne radar is to assist crews in identifying and avoiding thunderstorms.

Airborne radar is not to be used for terrain avoidance. However, it may be utilised in the “MAP” mode to establish the relative position of the aerodrome with respect to large bodies of water, high terrain and other dominant ground features.

Cockpit, Operational Ground Staff

8.3.2.15 ATC communication

Cockpit, Operational Ground Staff

8.3.2.15.1 General

Normally both pilots shall guard the ATC channels. They shall inform each other if this guard is lifted temporarily.

Communication shall normally be handled by the PM according to procedures laid down in the Lido Route Manual 1.6 Communication.

Standard phraseology shall be used with ATC and in cockpit communication during all flight phases in order to minimise the risk of misunderstandings.

When communicating with ATC:

- it shall be conducted in English language;
- use of standard R/T phraseology is mandatory;
- the wording must be clear, precise and unmistakable;
- stick to operational related communication only.

Company communications will be used according to OM and at the CMD's discretion. ATC communications and flight deck work have priority. The ATC transponder code (SSR) shall be set according to instructions received by ATC or published in the Lido Route Manual.

ATC must always be advised whenever a relevant part of the communication equipment fails or becomes unreliable.

All hazardous flight conditions with potential to pose a safety risk and inadequacy of any facility/infrastructure (e.g. meteorological conditions, volcanic ash, security breaches, wildlife, undesired navigation aid performance, aircraft performance, lasers, dangerous goods, ELT signals, etc) shall be reported to the appropriate ATC and OCC without delay. Some hazards might require a post flight Mandatory Occurence Report (MOR) as well (refer to OM A Mandatory occurrence reporting).

Cockpit, Operational Ground Staff

8.3.2.15.2 Voice communication

VHF: Use VHF 1 for ATC, VHF 2 for emergency frequency (121.5 MHz), ATIS and company frequencies. VHF 3 is normally reserved for ACARS.

HF: Use HF 1 for primary and HF 2 (if installed) for secondary frequency.

Position reports using HF: both pilots shall wear headsets and crosscheck report carefully. For regional regulations refer to Lido Route Manual 1.6 Communication. If standard position reports required, enter estimate of respective next waypoint as UTC constraint into MCDU Flight Plan (visual aid to recognise difference between estimate and actual).

Cockpit, Operational Ground Staff

8.3.2.15.3 Datalink communication

CPDLC: Whenever CPDLC is available, a notification to respective ATC unit shall be performed and CPDLC connection established.

- For regional regulations, refer to Lido Route Manual 3 CRAR .
- For detailed instructions how CPDLC is used, refer to FCOM DSC 46-10 Datalink (A320 / A340).
- For troubleshooting with CPDLC problems, refer to FOSI FANS User Info.

Cockpit, Operational Ground Staff

8.3.2.15.4 ATC clearances

Whenever possible ATC clearances should be obtained when both pilots are present on the flight deck and can listen to the issued clearance.

Every ATC clearance, in particular departure and airway clearances, shall be repeated and usually recorded by the PM. The OFP shall be used for recording the ATC clearance or re-clearance.

Before accepting or when there are doubts in-between the crew, an ATC clearance shall be clarified immediately, particularly when terrain clearance is involved.

Any intended deviation from previously received clearances must be requested beforehand from ATC. In the same way, unintended deviations must be reported immediately as soon as they are noticed.

If available, always use DCL (datalink departure clearance) to obtain the ATC clearance.

- The DCL shall first be printed and thereafter acknowledged.
- Both pilots must then read the confirmed/acknowledged clearance.
- Both pilots shall wear their headset when obtaining ATC clearance via voice .
- Check that the correct RWY and SID are inserted in the FMGS and the initial cleared ALT is set.
- Set transponder code as soon as received.

Cockpit, Operational Ground Staff

8.3.2.16 ADS/CPDLC

Refer to:

- OM A Communication
- Lido Route Manual 1.6.6 Data Link
- FCOM PRO-NOR-SUP-SURV (A320 / A340)
- FCOM DSC-46-10 (A320 / A340)

Cockpit, Operational Ground Staff

8.3.2.17 NAT

Refer to Lido Route Manual RSI 2.3.

Cockpit, Operational Ground Staff

8.3.2.17.1 NAT HLA

Refer to Lido Route Manual 2.3.2.3.

A320, A340, Cockpit, Operational Ground Staff

8.3.2.18 Polar

A340, Cockpit, Operational Ground Staff

8.3.2.18.1 Polar (A340)

Refer to Lido Route Manual RSI 2.2.

Refer to FCOM DSC-22 20-60-130 (A340).

For restrictions concerning the area of operation refer to OM A Area of operation.

A320, Cockpit, Operational Ground Staff

8.3.2.18.2 Polar (A320)

The A320 does not have polar navigation capability (beyond 82° North).

For limitations and IRS ground alignment refer to FCOM LIM-NAVIGATION (A320).

For the approved area of operation refer to OM B A320 Types of operation that are approved.

Cockpit, Operational Ground Staff

8.3.2.19 Performance based navigation (PBN)

Refer to Lido Route Manual 1.5.6 and FCOM PRO-SPO-51 (A320 / A340).

For parallel offset operations en route in RNP 4 and A-RNP airspace, transitions to and from the offset track have to be flown with an intercept angle of no more than 45° unless specified otherwise by ATC.

Cockpit, Operational Ground Staff

8.3.2.20 RVSM

Refer to FCOM PRO-SPO-50 (A320 / A340) and Lido Route Manual 1.5.8 Reduced Vertical Separation Minimum (RVSM).

Cockpit, Operational Ground Staff

8.3.3 Altimeter setting

Cockpit, Operational Ground Staff

8.3.3.1 Altimeter setting

Cockpit, Operational Ground Staff

8.3.3.1.1 Altimeter setting policy

EDW aeroplane shall be operated according to the barometric altimeter readings of flight level (QNE) or altitude (QNH), whichever applies.

The use of atmospheric pressure at aerodrome elevation (QFE) in operation is not permitted.

Refer to Lido Route Manual RAR.

For maximum barometric altimeter difference (FCOM PRO-NOR-SOP-06-GLARESHIELD A320 / A340), including RVSM (FCOM PRO-SPO-50-RVSM NORMAL PROCEDURE A320 / A340), refer to OM B and for the respective procedure in case of an exceedance, refer to the MEL.

Exceedings of the maximum barometric altimeter difference shall be reported. Refer to OM A Mandatory occurrence reporting.

Cockpit, Operational Ground Staff

8.3.3.1.2 Altimeter setting procedures

Changing an altimeter setting requires the crew to perform a check.

A clear distinction shall be made between the terms "flight level" and "altitude", especially when reading back clearances and reporting position. The QNH shall be used as the sole reference for take-off, approach and landing phases.

Altimeter setting	Reference datum	Altimeter indication
Standard	1013.2 hPa (29.92 in)	Flight Level
QNH	Local Mean Sea Level Pressure	Altitude

To minimize altimeter setting erros:

- The QNH may be preset according to the latest ATIS of the destination aerodrome during the approach preparation.
- The QNH given by ATC must be cross-checked against written information (ATIS, METAR).

The pressure scale reading of all altimeters shall be set to common values. Refer to Lido Route Manual RAR.

Altimeter setting	
Below transition altitude / transition level	QNH Note: QNH is the only permitted primary barometric altimeter setting for take-off, approach and landing.
Above transition altitude / transition level	Standard (1013 hPa)
Changing of altimeter setting	
During Climb After take-off set standard (1013 hPa) when cleared to a flight level, latest when passing transition altitude. **During Descent** Set QNH when cleared to an altitude or when cleared for approach, latest when passing transition level. **Exception** The altimeter setting change must be delayed if necessary to comply with altitude / flight level constraints	

In regions with metrical navigation and altitudes not specified in 100 ft steps, the altimeter shall be set to the next higher 100th digit.

Cockpit, Operational Ground Staff

8.3.3.2 Region with metrical navigation

Refer to Lido Route Manual RSI (respective area) NAV and CRAR (e.g. China).

Cockpit, Operational Ground Staff

8.3.3.3 Determination of actual altitude/FL

Cockpit, Operational Ground Staff

8.3.3.3.1 Terrain clearance

Safe terrain clearance is based on flying at altitudes equal to or greater than MOCA, MORA or drift-down profiles. As barometric altimeters do not display true altitudes, published MTCA, MGA or drift-down altitudes shall be corrected for non-standard atmosphere. Adequate clearance shall be maintained on the basis of indicated FL/ALT being equal to or greater than MTCA, MGA or drift-down altitude, corrected according to the following factors:

- Actual QNH (1 hPa = 27ft)

- OAT (10° ISA deviation corresponds to 4% height)

Cockpit, Operational Ground Staff

8.3.3.3.2 Cold temperature correction

Temperature deviation from ISA results in erroneous readings on pressure altimeters. When the temperature is lower than standard, the true altitude is less than the indicated altitude. The error is approximately 4% per 10°C temperature deviation from ISA. Thus, significant deviations between indicated and true altitude can occur.

Cold temperature corrections shall be considered below ISA.

For published minimum altitudes (e.g. procedural altitudes, MSAs, MDAs, DAs or missed approach altitudes) a correction shall be performed:

Flight phase	Correction
Final approach purposes	If outside temperature is ISA -20°C or lower, a temperature correction according to Lido Route Manual 1.7.7.6.3 Temperature Correction shall be applied. **Exception**: No corrections for 3D RNAV approaches shall be performed. These approaches shall only be flown if the temperature is above the minimum published OAT or above -15°C OAT if no minimum temperature is published.
Other flight phases (e.g. en route or decompression purposes)	If the outside temperature is ISA -20°C or lower, 10% shall be added to MTCA/MGA/MSA.

If the flight crew applies an altitude correction value, ATC should be advised about the value added. For the cold air temperature altitude correction, refer to Lido Route Manual 1.7.7.6.3 Temperature Correction.

> Under radar vectors cold temperature altitude corrections will be done by ATC (exception North America according to CRAR). In this case, the flight crew are not required to perform cold temperature corrections until the aircraft reaches the point where the flight crew will resume own navigation (e.g. final approach).
> Refer to Lido Route Manual 1.7.7.6.1 Responsibility - Pilot's Responsibility.

Lido mPilot offers the possibility to calculate the cold temperature correction within the app. When using this feature, all corrections must be done independently by the PF and PM. The values have to be cross-checked before use.

Cockpit, Operational Ground Staff

8.3.3.3.3 Altimeter corrections during approach

Refer to Lido Route Manual GEN part LAT 1.7.7.6 Altimeter Corrections.

Cockpit, Operational Ground Staff

8.3.3.3.4 Altimeter discrepancies in flight

If there are only two altimeters left during the descent and approach phases and a different altimeter reading occurs, the lower reading will be used to determine safety heights and critical heights. However, the glide path height check at the FAF or its equivalent point will be used as a further check, bearing in mind that the glide slope itself may be inaccurate.

For altimeter difference limitations refer to FCOM PRO-NOR-SOP-06-GLARESHIELD-EFIS CONTROL PANEL (A320 / A340).
For altimeter difference limitations for RVSM operation refer to FCOM PRO-SOP-50-RVSM NORMAL PROCEDURE (A320 / A340).

Cockpit, Operational Ground Staff

8.3.3.4 Radio altimeter setting procedure

The RA is used to determine height with respect to the decision height (DH) as published on the IAC for precision approaches, CAT-II/III and for terrain proximity warning during climb, cruise, descent and intermediate approach.

The RA is sensitive to terrain and compact structures only, but will not respond to isolated obstacles (e.g. radio masts, single trees etc). RA has been known to respond to nearby aeroplanes.

Cockpit, Operational Ground Staff

8.3.4 Altitude alerting system procedures

The altitude alerting system's operational function is described in the FCOM DSC-31-40 (A320 / A340). The use of FCU-selected altitude is compulsory until starting the final approach.

Vertical profile controlled by FGS VNAV mode	Vertical profile NOT controlled by FGS VNAV mode
The setting of the altitude preselection to a cleared altitude/flight level is mandatory. Further altitude preselection setting instructions, if any, are stipulated in the OM	The altitude preselection shall be set to the next altitude/ flight level constraint (cleared altitude/flight level or published altitude/ flight level constraint).

Vertical profile controlled by FGS VNAV mode	**Vertical profile NOT controlled by FGS VNAV mode**
B.	
For the final approach, the altitude preselection shall be set to the go-around altitude or the next altitude/flight level constraint of the go-around procedure, if any.	

The use of the altitude alerting system does not release the flight crew from the responsibility of ensuring that the aeroplane levels off or will be levelled off at the correct altitude or flight level.

Cockpit, Operational Ground Staff

8.3.5 TAWS procedure

Cockpit, Operational Ground Staff

8.3.5.1 General

Terrain avoidance warning system (TAWS, also referred to as EGPWS) operational functioning is described in FCOM DSC-34-SURV 40 GPWS (A320 / A340).

Associated procedures are given in FCOM PRO-ABN-INTRODUCTION-ABNORMAL AND EMERGENCY CALLOUTS (A320 / A340) and in the QRH.

The TAWS is designed to alert pilots that the aeroplane position in relation to the terrain is abnormal and if not corrected, could result in a controlled flight into terrain (CFIT).

Cockpit, Operational Ground Staff

8.3.5.2 Policy

The TAWS has a forward-looking facility in order to give cautions and warnings if the aeroplane is approaching sharply rising terrain.

The TAWS must be “ON” from take-off until landing.

The TAWS can issue warnings and cautions:

- Warnings: any “Pull-up” warnings.
- Cautions: all other warnings (e.g. “Terrain”).

TAWS warnings and cautions require the following actions:

- TAWS warnings require the crew to perform a pull-up manoeuvre immediately until safe terrain clearance is maintained.
- TAWS cautions during approach in IMC or at night: According eQRH.

Any TAWS activation must be reported via IQSMS. Where such activation indicates a technical malfunction of the system, an appropriate entry should also be made in the Technical Log.

In a holding pattern, pilots shall be aware of the possibility of nuisance warnings generated by an aeroplane flying 1000ft below. In such a case the warning shall be disregarded.

Cockpit, Operational Ground Staff

8.3.5.3 Terrain display usage

It is recommended that at least one pilot selects the terrain display mode during flight phases when altitude and terrain awareness is critical such as:

- During climb and descent below MSA.
- When the flight crew accepts responsibility for terrain/obstacle clearance.
- During uncharted visual arrivals and approaches, especially at night and in mountainous terrain.
- During the conduct of RNAV/RNP approaches, circling approaches and charted visual approaches.
- In the event a landing at the nearest suitable airport is required.
- In the event of an emergency descent.

Cockpit, Operational Ground Staff

8.3.6 Policy and procedure for the use of TCAS/ACAS

Cockpit, Operational Ground Staff

8.3.6.1 General

TCAS (also named ACAS) provides back-up to the ATC by alerting the flight crew in case of a collision hazard.

The use of the TCAS is mandatory within certain areas (e.g. USA, India, Europe).

In other areas, it should always be selected ON in flight.

Two alert levels are provided by TCAS:

- The Traffic Advisory (TA) mode; and
- the Resolution Advisory (RA) mode.

TAWS and wind-shear warnings have precedence over TCAS advisories.

Cockpit, Operational Ground Staff

8.3.6.2 Responsibilities

The use of TCAS does not alter the respective responsibilities of pilots and controllers for the safe operation of the aeroplane.

The primary responsibility to maintain separation rests with ATC.

The infringement of an ATC clearance based on information/advisory (not a RA) conveyed by TCAS lies within the authority of the CMD.

Once departing from an assigned ATC clearance in compliance with RA, the controller ceases to be responsible for providing separation between that aeroplane and other affected traffic as a direct consequence of the manoeuvre induced by RA. However, when circumstances permit, the controller should endeavour to provide traffic information to aeroplane affected by the manoeuvre. The controller's responsibility for providing separation for all affected aeroplane resumes when either:

- The controller acknowledges a report from the pilot that the aeroplane has resumed its assigned clearance; or
- The controller acknowledges a report from the pilot that the aeroplane is resuming its assigned clearance and issues an alternative clearance which is acknowledged by the pilot.

Cockpit, Operational Ground Staff

8.3.6.3 Operational procedures

To avoid nuisance warnings, pilots should limit vertical speeds to about 1500fpm during the last 2000ft of a climb or descent.

Neither information derived from the traffic display nor the issue of a TA are meant for the flight crew as means to interfere with the ATC task to provide continuous positive separation. Avoidance manoeuvres should be restricted to a RA. Vertical deviations from level flight should be kept to a minimum in order to preclude a secondary collision hazard.

Cockpit, Operational Ground Staff

8.3.6.4 Operating mode of TCAS

As a rule, TCAS shall be set on TA/RA according to FCOM PRO-NOR-SOP-BEFORE TAKEOFF (A320 / A340). Exceptions may be justified under certain conditions such as OEI, dispatch with landing gear down, visual contact with known nearby traffic where TA or XPDR settings may be selected to prevent nuisance warnings.

Cockpit, Operational Ground Staff

8.3.6.4.1 Traffic advisories (TA)

Do not perform a manoeuvre based on a TA alone.

- Be prepared to respond to an ensuing RA.

Cockpit, Operational Ground Staff

8.3.6.4.2 Resolution advisories (RA)

The RA shall be followed immediately unless considered unsafe. Do not try to achieve visual contact before reacting to an RA.

Never manoeuvre the aircraft opposite to an RA.

During the avoidance manoeuver (if in VMC), the FCM should scan the airspace into which the aircraft is diverting.

If conflicting instructions are received simultaneously from the ATC and an RA, the RA shall be followed.

Vertical speeds greater than those demanded by the RA should be avoided.

The commencement of an RA manoeuvre shall be reported to ATC as soon as time and circumstances permit.

Upon receiving the TCAS message "clear of traffic (conflict)", the prevailing ATC clearance shall be complied with immediately. This shall be reported to ATC.

The CMD must report every RA to the authority with an IQSMS MOR.

Refer to the Lido Route Manual COM part for further aspects of ATC phraseology in case of an RA.

Cockpit, Operational Ground Staff

8.3.7 Policy and procedures for inflight fuel management

Cockpit, Operational Ground Staff

8.3.7.1 General

Inflight fuel management starts at commencement of flight. Inflight fuel management comprises:

- Continuous validation of the assumptions made during the planning stage (preflight and/or in-flight replanning)
- Reanalysis and adjustment, if necessary
- Protection of final reserve fuel
- Recording of relevant fuel data.

A flight shall be conducted in such a way that the usable fuel expected to remain upon landing at the destination aerodrome is not less than:

- The required alternate fuel plus the final reserve fuel
- The final reserve fuel if no alternate aerodrome is required

The use of fuel for objectives other than the ones originally intended during planning require reanalysis and, if applicable, adjustment of the planned operation, through e.g.:

- Appropriate actions to reduce the fuel consumption
- In-flight replanning
- Diversion

Cockpit, Operational Ground Staff

8.3.7.2 Fuel checks

Cockpit, Operational Ground Staff

8.3.7.2.1 General

In-flight fuel checks shall be carried out by the flight crew at regular intervals. The results of the checks shall be recorded on the operational flight plan (OFP) and evaluated to:

- Compare the actual consumption with planned consumption
- Check that the remaining usable fuel is sufficient to complete the flight considering the required reserves
- Determine the usable fuel that is expected to remain upon landing at the destination aerodrome

Monitoring can detect fuel leaks and provide a more reliable basis of calculation in case of either Fuel Quantity Indicator (FQI) or Fuel Used (FU) failure during flight.

However, without any failure or fuel leak, some discrepancies, which may be considered large, can be evidenced due to:

- APU consumption which are not recorded by FU
- FQI errors on block fuel and on FOB
- FU indication tolerance

Cockpit, Operational Ground Staff

8.3.7.2.2 Fuel check periods

Following fuel quantites or fuel checks shall be noted on the OFP:

- Off-block fuel

- Fuel check at least every 60 minutes
- On-block fuel

Additionally, a fuel check shall be performed at least every 30 minutes in accordance with FCOM PRO-NOR-SOP-CRUISE (A320/A340). It is not required to note this check on the OFP.

Cockpit, Operational Ground Staff

8.3.7.3 Usable fuel prior take-off

In addition to taxi fuel, the following fuel components may be used prior take-off if deemed necessary by the CMD under thorough consideration of prevailing conditions:

- Contingency fuel;
- Extra Fuel;
- Discretionary Fuel.

> Note: The CMD shall ensure that enough fuel is on board for the intended operation, when using fuel for purposes other than planned.

Cockpit, Operational Ground Staff

8.3.7.4 Final reserve fuel protection

Cockpit, Operational Ground Staff

8.3.7.4.1 General

If an in-flight fuel check shows that the usable fuel expected to remain upon landing at the destination aerodrome is less than:

- the required alternate fuel plus the final reserve fuel, the CMD shall request delay information from a reliable source (e.g. ATC) and take into account the prevailing traffic and operational conditions at the destination aerodrome, at the destination alternate aerodrome, and at any other adequate aerodrome, to decide whether to proceed to the destination aerodrome (committed to land) or to divert in order to perform a safe landing with not less than the FRF; or

- the final reserve fuel, if no destination alternate aerodrome is required, the CMD shall take appropriate action and proceed to an aerodrome where a safe landing can be made with not less than the final reserve fuel.

Cockpit, Operational Ground Staff

8.3.7.4.2 Declaring MINIMUM FUEL

The CMD shall advise of a minimum fuel state by declaring MINIMUM FUEL when, having committed to land at a specific aerodrome, any change to the existing clearance to that aerodrome may result in landing with less than planned final reserve fuel.

The declaration of MINIMUM FUEL informs ATC that all planned aerodrome options have been reduced to a specific aerodrome of intended landing and any change to the existing clearance may result in landing with less than planned final reserve fuel. This is not an emergency situation but an indication that an emergency situation is possible should any additional delay occur.

The flight crew should not expect any form of priority handling as a result of a "MINIMUM FUEL" declaration. However, the ATC should advise the flight crew of any additional expected delays, as well as coordinate with other ATC units when transferring the control of the aeroplane, to ensure that the other ATC units are aware of the flight's fuel state.

> Note: Declaring Minimum Fuel requires an IQSMS Report according OM A Handling of Accidents and Occurrences

Cockpit, Operational Ground Staff

8.3.7.4.3 Declaring MAYDAY FUEL

The commander shall declare a situation of fuel emergency by broadcasting "MAYDAY MAYDAY MAYDAY FUEL" when the usable fuel that is calculated to be available upon landing at the nearest aerodrome where a safe landing can be made is expected to be less than the planned final reserve fuel.

When this estimation indicates that the final reserve can no longer be protected, then a fuel emergency should be declared and any landing option explored (e.g. aerodromes not assessed by operators, military aerodromes, closed runways), including deviating from rules, operational procedures, and methods in the interest of safety.

> Note: Declaring MAYDAY Fuel requires an IQSMS Report according OM A Handling of Accidents and Occurrences

Cockpit, Operational Ground Staff

8.3.7.4.4 Minimum fuel advisory inbound ZRH and GVA

Procedure inbound ZRH and GVA only: At any stage of the flight if the remaining fuel available upon landing in ZRH or GVA becomes close to the minima according to OM A Required fuel quantity above the flight crew shall relay this information to OCC stating the ETO of the initial approach fix and the maximum holding time in minutes.

OCC issues a Minimum Fuel Advisory to ATC in order to try to reduce any possible delay during approach. Nevertheless this procedure does not guarantee priority handling by ATC as ICAO priority rules for approach remain valid.

This procedure must never be used for any other reason than fuel requirements.

Cockpit, Operational Ground Staff

8.3.7.5 Additional Conditions for specific Procedures

Cockpit, Operational Ground Staff

8.3.7.5.1 Reduced Contingency Fuel (RCF) Procedure

On a flight using the RCF procedure, in order to proceed to the Destination 1 aerodrome (commercial destination), the CMD shall ensure that the remaining usable fuel at the decision point is at least the total of:

- Trip fuel from the decision point to the Destination 1 aerodrome; and
- Contingency fuel that is equal to 5 % of trip fuel from the decision point to the Destination 1 aerodrome; and
- Destination 1 aerodrome alternate fuel, if a destination 1 alternate aerodrome is required; and
- Additional fuel, if required, and
- Final reserve fuel

Cockpit, Operational Ground Staff

8.3.7.5.2 Isolated Destination aerodrome procedure

EDW does not hold an approval to operate to an isolated aerodrome.

Cockpit, Operational Ground Staff

8.3.7.6 Inflight weather requirements

The CMD shall only continue towards the planned destination aerodrome when the latest information available indicates that, at the expected time of arrival, the weather conditions at the destination, or at least one destination alternate aerodrome (if required), are at or above the applicable aerodrome operating minima.

In addition, the CMD shall only continue beyond the decision point (RCF procedure) when information is available indicating that the expected weather conditions, at the time of arrival, at the destination and/or required alternate aerodrome(s) are at or above the applicable aerodrome operating minima.

RCF procedure: One AD of scenario "A" and one of Scenario "B" must be above applicable minima (Scenario A= commercial Destination + destination alternate; Scenario B= Destination 2 + Destination alternate 2).

Inflight weather minima matrix

Type of aerodrome	Weather minima VIS/RVR after commencement of flight
Take off alternate until lift off	Applicable OEI minima +/-1h
Fuel ERA Terrain enroute aerodrome En-route alternate (ERA)	Nil
Destination or Destination Alternate	Applicable Minima
Applicable minima for Foreign OPS Specs refer to OM C Appendix Foreign OPS Specs	

In-flight, RVR/VIS and aerodrome ceiling shall be considered as follows:

Type of approach	Applicable Minima
Type A or Type B	RVR or VIS[1)]
Circling approach / visual approach charted on a published IAC/VAC	Ceiling and VIS

[1)] The applicable value (RVR or VIS) as required according to the approach chart shall be considered. If a particular ceiling is required by the state authority for a specific approach this is indicated by the prefix "C" to the numeric value.

Cockpit, Operational Ground Staff

8.3.7.7 In-flight Replanning

In-flight replanning is only required when a flight is voluntarily redirected through operations control and the flight proceeds along a route or to a destination other than originally planned, even when the flight could be completed as originally planned. In this case pre-flight fuel planning rules apply according to OM A Determination of the quantities of fuel and oil carried.

Contact with dispatch must be established which will then provide an updated OFP.

In-flight replanning is not required for deviations from planned operation for reasons that could not be anticipated, e.g. changes due to:

- weather or fuel;
- technical reason;

- passenger handling;
- ATC request.

In such cases, the in-flight fuel management policy dictates the CMD’s course of action. Company instruction redirecting the flight do not relieve the CMD of the responsibility of confirming an appropriate clearance from ATC.

The CMD shall only continue beyond the point from which a revised ATS flight plan applies in the event of in-flight replanning when information is available indicating that the expected weather conditions, at the time of arrival, at the destination and/or required alternate aerodrome(s) are at or above the pre-flight planning minima according to OM A.

Cockpit, Operational Ground Staff

8.3.7.8 Diversion

Cockpit, Operational Ground Staff

8.3.7.8.1 General

Diversion means continuation to any alternate aerodrome whenever it becomes impossible or inadvisable to proceed to or to land at the aerodrome of intended landing.

When a diversion is considered, all factors affecting the fuel required to the diversion aerodrome must be reconsidered.

The main points are:

- Weather en-route (wind, temperature, flight hazards);
- estimated flight level;
- approach procedure and runway in use.

For additional considerations and a diversion checklist refer to FOSI Diversion and FOSI Diversion checklist.

Cockpit, Operational Ground Staff

8.3.7.8.2 Policy

If a flight cannot be operated to the regular destination for any reason, a diversion must be made to the most suitable alternate aerodrome providing the best available operational and passenger handling service.

OCC or the handling agent should be contacted (if possible before departure) for desired diversion priorities in the event of expected problems.

The responsibility to divert en-route rests entirely with the CMD. However, at the CMD's discretion OCC may forward recommendations or analyses.

If the diversion is the result of an aeroplane malfunction or an incident, safety factors may limit these considerations.

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8.3.7.8.3 Minimum fuel for diversion

The minimum fuel for a diversion includes fuel burn from the point of diversion to landing at the diversion aerodrome plus final reserve fuel (30 minutes holding at 1'500 ft above diversion aerodrome at standard temperature).

For deviating state regulations, e.g. special destination and alternate requirements refer to the Lido Route Manual and OM C Appendix Foreign Ops Specs.

Cockpit, Operational Ground Staff

8.3.7.8.4 Flight plan and ATC clearance

Before an aeroplane diverts, an ATC clearance must be issued. The following information may be required and should be at hand when requesting this clearance:

- Diversion aerodrome;
- Route of flight;
- Altitude;
- Estimated time en-route;
- Endurance (hours and minutes).

Cockpit, Operational Ground Staff

8.3.8 Adverse and potentially hazardous atmospheric conditions

Cockpit, Operational Ground Staff

8.3.8.1 Thunderstorm

There is no useful correlation between the external visual appearance of thunderstorms and their severity. Knowledge and weather radar have modified attitudes toward thunderstorms, but one rule continues to be true:

- Any thunderstorm should be considered hazardous.

Cockpit, Operational Ground Staff

8.3.8.1.1 Weather information

Meteorological observations / forecasts messages or charts contain thunderstorm and associated hazards information. The meteorological office issues warnings, in the form of SIGMET messages of active thunderstorm area. Pilots are required to send a special air report when conditions are encountered which are likely to affect the safety of an aeroplane. The meteorological office does not issue SIGMET messages to isolated thunderstorms.

Refer to the RM MET General Information for the description of weather messages and for the meaning of the associated codes.

Cockpit, Operational Ground Staff

8.3.8.1.2 Thunderstorm hazards

Thunderstorms concentrate every weather hazard to aviation into one vicious package.

Cockpit, Operational Ground Staff

8.3.8.1.3 Policy to avoid thunderstorms

Flights through areas with known or forecasted thunderstorms, severe turbulence or wind shear should be avoided whenever possible due to the various hazards involved, e.g. hail, lightning strikes, gusts, up/downdrafts with subsequent altitude and/or attitude changes, high g-loads, etc.

- Do not take off during heavy thunderstorm activity over the departure aerodrome;
- Delay the approach or divert to an alternate aerodrome rather than to penetrate a severe thunderstorm in the approach area.

Strong winds may reach a magnitude where ground handling and operation, including taxi, will become unsafe or even impossible. If surface mean wind speeds of 65kts or above are reported, no take-off or landing is authorised and the aerodrome must be considered as closed. For limitations regarding to passenger- or cargo door operation refer to the FCOM LIM-AG (A320 / A340).

Cockpit, Operational Ground Staff

8.3.8.1.4 Operational procedures

Mutual information on development and position of thunderstorms by pilots and ATC as well as careful weather watch is of great importance for the early and adequate avoidance of such severe weather areas.

With thunderstorms in the vicinity of the aerodrome, request radar vectoring through thunderstorm-free areas and arrange the climb-out to provide ample safety distance from active CB-clouds. Use all available information such as airborne weather radar, pilot reports, etc.

It should be noted that ATC cannot always issue detours in congested areas due to other traffic and also technical limitations of the ground radar.

Cockpit, Operational Ground Staff

8.3.8.2 Icing conditions

Definition according to FCOM LIM-Ice and Rain Protection-Definition of Icing Conditions (A320/A340):

- Icing conditions exist when the OAT (on ground or after takeoff) or the TAT (in flight) is at or below 10 °C and visible moisture in any form is present (such as clouds, fog with visibility of 1 SM (1600 m) or less, rain, snow, sleet or ice crystals).
- Icing conditions also exist when the OAT on the ground and for takeoff is at or below 10 °C and 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.

Icing of the aeroplane is one of the most dangerous flight hazards. Refer to OM A De-icing and anti-icing on the ground for further details. Procedures for “Operating in Icing Conditions” are developed in:

- FCOM PRO-NOR-SUP Adverse Weather (A320/A340)
- FCTM PRO-NOR-SUP Cold Weather Operations and Icing Conditions (A320/A340)

No take off shall be performed in freezing rain, heavy fall of wet snow (~0 °C), accumulated snow, ice or frost on aircraft.

Ice crystals:

Clouds are made of particles of water that can be either liquid or solid. Ice crystals are very small solid water particles. In some areas, there may be a very high concentration of ice crystals that may have an adverse effect on the aircraft. Areas of ice crystals are usually next to, or above the core of convective clouds that have high-intensity precipitation. However, areas of ice crystals may sometimes even be several nautical miles away from the core of the associated convective cloud. When ice crystals come in contact with a hot surface, they melt. Depending on the type of surface, a water film may appear. On the windshield, this water film creates a not-expected appearance of “rain” at temperatures too low for liquid water to exist. If there is a specific airflow towards a zone of the aircraft where water can build up, accretion may occur and create a block of ice. This is why flight in areas of ice crystals may result in various effects, for example, engine vibrations, engine power loss, engine damage, or icing of air data probes. If possible, the flight crew should avoid flying into areas that have a high concentration of ice crystals.

Ice crystals are difficult to detect with the weather radar because their reflectivity is very low due to both their small size and solid state. In addition, in areas of ice crystals, the flight crew should not expect significant icing of the airframe. This is because ice crystals bounce off cold aircraft surfaces. This is why even the ice detection system does not detect ice crystals because ice crystals do not build up on ice detectors and visual ice indicators.

However, areas of ice crystals are usually associated with visible moisture. Ice crystals can be indicated by one or more of the following:

- Appearance of rain on the windshield at temperatures too low for rain to exist. This “rain” is usually associated with a “Shhhh” noise
- Small accumulation of ice particles on wipers
- Smell of ozone or Saint Elmo’s fire

- Aircraft TAT indication that remains near 0 °C (due to freezing of the TAT probe)
- Light to moderate turbulence in IMC at high altitude
- No significant radar echo at high aircraft altitude, combined with:
    - High-intensity precipitation that appears below the aircraft
    - Aircraft position downwind of a very active convective cloud

The following recommendations apply:

- Use the weather radar:
    - Identify areas that have a strong echo, and perform a detailed analysis of the structure of the convective clouds
    - If necessary, use the weather radar manual modes for a more precise analysis
    - Pay particular attention to strong echoes below the aircraft and to downwind areas.
- To avoid convective clouds, comply with operational recommendations, particularly:
    - Prefer lateral to vertical avoidance
    - Comply with the avoidance margins
    - Deviate upwind instead of downwind

Cockpit, Operational Ground Staff

8.3.8.3 Turbulence

Turbulence is defined as a disturbed, irregular flow of air with embedded irregular whirls or eddies and waves. An aeroplane in turbulent flow is subjected to irregular and random motions while, more or less, maintaining its intended flight path.

Cockpit, Operational Ground Staff

8.3.8.3.1 Classification of turbulence

Cockpit, Operational Ground Staff

8.3.8.3.1.1 Convective turbulence

Refer to RM MET.

Cockpit, Operational Ground Staff

8.3.8.3.1.2 Orographic turbulence

Under certain conditions of atmospheric stability and wind speed, the airflow creates a standing wave pattern to the lee of a mountain ridge and is known as “mountain waves” which may cause severe turbulence. Typical tell-tale signs are lenticular, rotor clouds and clouds with “waterfall” appearance. The strongest turbulence may be found in the rotor clouds.

Cockpit, Operational Ground Staff

8.3.8.3.1.3 Clear air turbulence (CAT)

Refer to RM MET

Cockpit, Operational Ground Staff

8.3.8.3.1.4 Mountain waves/rotor

This type of windshear is associated with mountain wave systems which produce strong vertical and horizontal wind shears. Frequently, a second rotor will form up to 100nm from the lee side of the mountain, producing original wave action. Depending on moisture of the air, lenticular (lens-shaped) clouds may be present.

Special procedures or recommendations are indicated in the RM on aerodrome charts when appropriate. They must be taken into account by the crew for the choice of the landing or take-off runway.

Cockpit, Operational Ground Staff

8.3.8.3.1.5 Intensity of turbulence

Refer to RM MET

Refer to FCTM PR-NP-SP-10 and QRH.

Cockpit, Operational Ground Staff

8.3.8.4 Windshear

When encountering windshear conditions, pilots are urgently requested to report such conditions to ATC as soon as practicable in stating the loss or gain of speed and the altitude at which it was encountered.

The influencing factors onto an aeroplane regarding an existing wind system are:

- The kind of the wind system, its development and the aeroplane's flight path penetrating the system.
- Wind shear, with or without turbulence, alters the lift force acting on an aeroplane, resulting in a significant sinking or rising motion.

Therefore wind shear may be categorised as:

- Increased performance shear caused by increasing headwind/decreasing tailwind component or vertical updrafts.
- Decreasing performance windshear caused by decreasing head-wind / increasing tailwind component or vertical downdrafts.

Windshear and turbulence present a potential hazard during take-off / climb-out and approach / landing. With strong shears, the aeroplane can experience a large fluctuation of airspeed and lift in a very short time.

Pilots should be most cautious about possible wind shears. Immediate corrective actions to avoid high sink rates close to the ground are of vital importance.

Pilots are encouraged to improve their own standards of judgement based on visual clues. They should also be aware of the extreme limitations of weather radar in producing a reliable picture regarding existence, location and intensity of windshear. The Radar can only paint weather, whereas windshear may occur some considerable distance from visible weather.

At different aerodromes, low-level wind shear alert systems attempt to warn in case of horizontal changes in wind direction and velocity (which exceed certain values within a certain time) and rapid surface pressure changes, which help to detect cold front passages and thunderstorm gust fronts. For wind shear existing along the glide path in approach, pilot's reports still represent the main source of information.

Refer to RM MET 1.3.5.8.

Procedures for “Operation in Windshear / Downburst Conditions” are to be found in the respective QRH.

Cockpit, Operational Ground Staff

8.3.8.4.1 Classification of windshear

Cockpit, Operational Ground Staff

8.3.8.4.1.1 Connective clouds / thunderstorms

The flow of air beneath thunderstorm cells is rather complex. Strong downdrafts in the centre of the cell transport cooled air downward which then spreads outward over the surface of the terrain. Around there is flowing warm air up and into the cell at a direction opposite to that of the cold air. The distance from cell to the “leading edge” of the shear may be up to 15nm and there the greatest shears can be found. Shears may exist as well at all other sides of a thunderstorm cell.

Cockpit, Operational Ground Staff

8.3.8.4.1.2 Downburst

The term downburst describes a severe downward rush of air and its outburst of damaging winds on or near the ground. It has been classified into macroburst and microburst.

Cockpit, Operational Ground Staff

8.3.8.4.1.3 Macroburst

Macrobursts are downbursts of different sizes with a radial outflow at the earth's surface lasting between 3 to 20 minutes. Meteorological parameters of macroburst are relatively complicated and prediction based on upper air and surface observations has been not very promising yet.

Cockpit, Operational Ground Staff

8.3.8.4.1.4 Microburst

This are downbursts of less than 4 km in diameter originate and descend from the base of “parent” clouds (AC, CU, CB). They sometimes occur under “virga” conditions, which mean down flow precipitation evaporating before reaching the ground. The air rushes down towards the earth's surface with high speed. High total pressure at the centre then accelerates the air outwards, in the course of which the velocity reaches values up to 35-40kts confined often to within 100ft above the ground. At the outer boundary, air moves up again in a rotational movement and forms a vortex ring. The time period over which wind speeds exceed half the peak value may last from 1 to 8 minutes. Depending on the movement and the height of the base of parent cloud, microburst may occur as stationary or moving, surface or mid-air, wet or dry ones.

Cockpit, Operational Ground Staff

8.3.8.4.1.5 Frontal shear

Frontal wind shear is present in both cold and warm fronts, but exists in a different relative location in each type of front. Because the cold front boundary slopes back behind the frontal surface, the wind shear line also slopes back. However, with the warm front, the frontal boundary slopes upward ahead of the surface front, so the wind shear does likewise. Significant wind shears can be expected if a big surface temperature difference (>6°C) exists across the front and if the front is moving rapidly (>30 kts).

- Ground effects

Terrain irregularities or buildings which interrupt the wind flow can produce significant wind shears close to the ground.

- Take-off and climb-out

Pilots should be alert to the possibility of windshear during departure when studying weather information:

Thunderstorm cells in the vicinity of the aerodrome at a distance of 15nm or less, frontal speeds exceeding 30kts, presence of high base convective clouds with high surface temperatures and large dew point spread, strong temperature inversions; all these are indicators for the existence of wind shear. If based on this information or, actual reports, wind shear must be expected after take-off, the following precautions shall be considered:

- Selection of a more favourable runway considering length, obstacles and climb-out direction;
- Use of TOGA for take-off;
- Use of higher climb-out speed;
- Delay the take-off.

If encountering wind shear/downburst after take-off, follow wind shear guidance system commands if available or FCTM/QRH procedures.

Cockpit, Operational Ground Staff

8.3.8.5 Cruise / avoidance

Cockpit, Operational Ground Staff

8.3.8.5.1 Thunderstorms

During cruise, thunderstorms shall be avoided:

- Visually, by staying well clear of CB clouds.
- By using the airborne weather radar to find the most suitable corridor.
- By requesting vectors from ATC radar.

Whenever possible avoid:

- Flight in cirrus clouds if thunderstorm activity is reported along the route as they may be hiding anvil tops and reduce the effectiveness of the airborne weather radar.
- Flight at or near the freezing level where heaviest icing and hail must be expected.
- Altitudes between 10'000 ft and 25'000 ft as they will provide the roughest ride even outside active storm centres.
- Flying below the overhang of CB clouds. This is the area where heavy hail fall must be expected.
- Strong echoes shall be avoided by 20 NM or more. This is most important at FL200 and above and for circumnavigation of echoes which have prominent protrusions.

Cockpit, Operational Ground Staff

8.3.8.5.2 Inability to avoid thunderstorms

If flying in thunderstorm or turbulence area is anticipated or unavoidable, the following preparations should be made:

- Monitor airborne weather radar closely;
- Instruct cabin crew about presence of adverse weather condition to secure passengers and galleys and switch on the cabin sign(s). Service of food and drinks shall be minimised or even omitted, considering the expected degree of turbulence. To preclude injuries to passengers, no hot liquids shall be served in moderate to severe turbulence. When severe turbulence is expected, cabin crews shall be advised to sit down and fasten their seat belts, too;
- Secure all loose items in the flight deck;
- Fasten shoulder harness;
- Switch on flight deck lighting to high intensity to avoid dazzling by lightning in thunderstorm;
- Fly the recommended turbulence speed.

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8.3.8.5.3 Cruise altitude vs. buffet speed

At maximum cruise altitude, the margin between low speed and high speed buffet is rather small and any increase of g-loads, whether caused by manoeuvring or by turbulence, may lead to serious difficulties. This shall be considered when trying to top a turbulence region. Therefore do not select maximum cruise altitude.

Allow altitude to vary. Large altitude variations are possible in severe turbulence. Sacrifice altitude in order to maintain the desired attitude and airspeed.

- Do not chase altitude

Large and persistent altitude variations may smoothly be corrected by only small elevator inputs and appropriate thrust corrections.

Cockpit, Operational Ground Staff

8.3.8.5.4 Airspeed / thrust setting

Large speed fluctuations and difficulties in instrument reading are to be expected due to yawing and head-on gusts, therefore

- Do not chase airspeed

Maintain the recommended turbulence speed as target speed. Set thrust as required and then do not change it unless required by large and/or persistent airspeed or altitude variations. The aeroplane's real airspeed will remain within reasonable limits as long as thrust is set properly, while avoiding large and rapid thrust lever movements, and a reasonable constant attitude maintained.

If caught unaware by turbulence, do not slow down the aeroplane hurriedly.

Cockpit, Operational Ground Staff

8.3.8.5.5 Attitude

Control pitch attitude with smooth control inputs to the elevator. Closely monitor the Attitude Indicator as it is the only correct indication while all other instruments may be seriously erratic.

- Maintain constant attitude

Cockpit, Operational Ground Staff

8.3.8.5.6 Use of autopilot / autothrust

Since the autopilot will not be subject to false attitude interpretations or erratic behaviour of instruments, its use in the appropriate mode is strongly recommended.

The flight director can effectively reduce workload and is therefore recommended for use in turbulence. It will give a good reference for control about all axes and will further call for proper control inputs.

In cruise during severe turbulence consider to disconnect autothrust.

Cockpit, Operational Ground Staff

8.3.8.5.7 Recovery techniques

If severe turbulence is unavoidable during the flight, refer to the QRH Severe turbulence.

For operations in windshear or downburst conditions after take-off or before landing refer to QRH Windshear.

Cockpit, Operational Ground Staff

8.3.8.5.8 Assessment after thunderstorm / turbulence area

After crossing of a thunderstorm or turbulence area, the various aeroplane systems should be checked functionally as far as possible, i.e.

- Flight and engine instruments;
- Pitot and static heating;
- Radio and navigation equipment;

- Readings of compasses;
- Electrical system including circuit breakers.

Cockpit, Operational Ground Staff

8.3.8.6 Approach and landing in turbulence

Cockpit, Operational Ground Staff

8.3.8.6.1 General

During approach, good monitoring of thrust, attitude, vertical speed and IAS as well as prompt action are the best insurance against the effects of wind shear/downburst. Always be alert for differences of INS/FMS readouts, where available, compared to reported surface winds. For approach the use of autothrust in managed mode is recommended.

When autothrust is off, be prepared to make a second power and attitude change to maintain the proper approach path as soon as the initial correction has taken effect.

A critical case is an approach encountering an initially increasing headwind while approaching a shower or “virga”. This could indicate an approach to the downburst centre of a microburst which will be reached while correcting down to the glide slope. Here a down flow and tailwind can hit the aeroplane.

Therefore, whenever such a condition is reported or anticipated, proper action must be taken immediately.

If sudden speed loss and/or downburst is encountered or, if there is any doubt about the ability to re-establish a correct approach path, execute a go-around.

If sink rate does not stop, set thrust lever to TOGA, increase pitch and follow SRS to avoid ground contact.

Cockpit, Operational Ground Staff

8.3.8.6.2 Report to ATC

Whenever any significant turbulence, particularly below 500ft/AGL is encountered, ATC shall be informed immediately, giving position, altitude, wind velocity and direction above and below the shear level, if available, or observed airspeed changes, etc. The same applies if an issued warning is no more encountered.

Cockpit, Operational Ground Staff

8.3.8.6.3 Report to company

In order to assure that the technical inspection for damage is carried out when the aeroplane structure has been exposed to abnormal stresses, e.g. severe turbulence, lightning strikes, static discharges, etc., the flight recorder “EVENT” button shall be pressed and an entry shall be made in the Technical Log, also stating gear and flaps position in case of a lightning strike or turbulence.

Cockpit, Operational Ground Staff

8.3.8.7 Jet-stream

Jet-streams are narrow bands with extreme high wind speeds up to 300kts. They can extend up to several thousand miles.

Avoid flying along the edge of jet-streams due to possible associated turbulence. Pilots should also be aware of the effect on increased fuel consumption due to unexpected significant head wind components that can be encountered.

Cockpit, Operational Ground Staff

8.3.8.8 Volcanic ash clouds

Cockpit, Operational Ground Staff

8.3.8.8.1 General

Volcanic ash may extend for several hundred miles, and eruptions may send ash plumes beyond maximum operating flight levels. However neither ash cloud nor volcanic dust can be detected by the WX-radar.

Flying through a visible ash cloud is extremely hazardous and may lead to critical emergency situations with an accumulation of serious abnormal conditions.

If the aeroplane enters an ash cloud, expect smoke, dust or acrid odours similar to electric sparks in the flight deck and at dark heavy static discharges around the windshield. Beside a multiple engine failure, engine surge or overheat, airspeed may become unreliable due to blocked pitot tubes. Furthermore, pressurisation and electrical systems may be affected.

Volcanic ash can cause extreme abrasion to all forward facing parts of the aeroplane, to the extend that visibility through the windshields may be totally impaired, airfoil and control surface leading edges may be severely damaged.

Cockpit, Operational Ground Staff

8.3.8.8.2 Policy

Planning into areas with forecasted volcanic ash is not permitted, regardless of the contamination concentration level.

Flying into visible volcanic ash clouds is not permitted and shall be avoided by all means.

In case of unwanted flight through an volcanic ash cloud and once the aeroplane has successfully escaped the ash cloud:

- Land at nearest suitable airport

- Consider a runway with autoland capability, if visibility through the windshields is impaired.

Cockpit, Operational Ground Staff

8.3.8.8.3 Information on volcanic activities

Information on volcanic activities, including pre-eruption activity, volcanic eruption and volcanic ash clouds are part of the briefing documentation. This information is also found in form of NOTAM, SIGMET, volcanic ash graphics and/or modelled ash concentration charts.

Cockpit, Operational Ground Staff

8.3.8.8.4 Operation in volcanic ash

For ground- and flight-operation in volcanic ash refer to the FCOM PRO-NOR-SUP-ADVWXR (A320 / A340).

Cockpit, Operational Ground Staff

8.3.8.8.5 Reporting of volcanic observations by the flight crew

When volcanic eruption is observed or when a volcanic ash cloud is observed or encountered, an initial report shall be transmitted in flight to the ATS unit with which the aircraft is in contact at that time. This initial report shall include the following information:

- Call sign
- Position
- Time
- Flight level
- Position/bearing/distance of volcanic activity
- Air temperature
- Spot wind
- Additional information such as vertical/lateral extent of ash cloud, rate of growth etc.

Cockpit, Operational Ground Staff

8.3.8.8.6 Volcanic ash reports

ACARS report: Any observation of significant volcanic activity or volcanic ash clouds shall also be reported via ACARS to NOTAM services (ZRHORLX). The message should contain the information according to the initial radio report as indicatedabove.

Report via IQSMS (Refer to OM A Mandatory occurrence reporting).

On Arrival a report of volcanic activity shall be delivered to the aerodrome meteorological office (Refer to Lido Route Manual MET Reporting Volcanic Ash).

Cockpit, Operational Ground Staff

8.3.8.9 Heavy precipitation

Cockpit, Operational Ground Staff

8.3.8.9.1 General

Heavy precipitation may occur as rain showers, snow showers or hail. The greatest impairment to flight is the reduced visibility and the risk of icing in combination with low temperature. Heavy precipitation can be associated with significant downdrafts and windshears.

Cockpit, Operational Ground Staff

8.3.8.9.2 Effect from water ingested by engines

Under given weather conditions, the water/air ratio absorbed by jet engines is directly related to its performance and aeroplane speed. This ratio is considerably increased at high aeroplane speed and engines at flight idle (typical descent conditions).

This means that during descent under heavy rainfall conditions or hail, significant ingestion of water may cause surging or flame out to jet engines.

Heavy precipitation can quickly lead to high levels of runway contamination, so runway clearance/drainage rate must be closely monitored in order to assess if a diversion is necessary.

Cockpit, Operational Ground Staff

8.3.8.10 Sandstorms

Avoid flying in active sandstorms whenever possible. When on ground, the aeroplane should ideally be kept under cover if dust storms are forecast or in progress. Alternatively, all engine blanks and flight deck covers should be fitted, as well as the blanks for the various system and instrument intakes and probes. They should be carefully removed before flight to ensure that the accumulations of dust are not deposited in the orifices which the covers are designed to protect. Refer to FOSI Operation in Sandstorm.

Cockpit, Operational Ground Staff

8.3.8.11 Mountain waves

Mountain waves are periodic changes of atmospheric pressure, temperature and orthometric height in a current of air caused by vertical displacement, for example orographic lift when the wind blows over a mountain or mountain range. They can also be caused by the surface wind blowing over an escarpment or plateau, or even by upper winds deflected over a thermal updraft or cloud street.

The vertical motion forces periodic changes in speed and direction of the air within this air current. They always occur in groups on the lee side of the terrain that triggers them. Usually a turbulent vortex, with its axis of rotation parallel to the mountain range, is generated around the first trough; this is called a rotor. The strongest lee waves are produced when the lapse rate shows a stable layer above the obstruction, with an unstable layer above and below.

Refer to FCTM PR-NP-SP-10 and QRH "Flight in severe Turbulence".

Cockpit, Operational Ground Staff

8.3.8.12 Significant temperature inversions

Strong inversions may be associated with wind shear near the ground. They occur most markedly during wintertime around sunrise. The main negative performance factor is caused by the decrease in engine power resulting from the temperature rise. The maximum cruising altitude capability can be reduced if a temperature inversion exists in the upper levels.

Cockpit, Operational Ground Staff

8.3.8.13 Hot weather operations

Generally hot weather operations will result in higher v-speeds, high EGT's and a decrease in power available for take-off.

For technical limitations refer to FCOM-LIM-AG-OPS-Environmental Envelope (A320 / A340).

Cockpit, Operational Ground Staff

8.3.8.14 Aquaplaning

Cockpit, Operational Ground Staff

8.3.8.14.1 Nature and forms of aquaplaning

Cockpit, Operational Ground Staff

8.3.8.14.1.1 General

Aquaplaning occurs when direct contact between tyre and runway surface and therefore friction is partially or completely lost due to water pressures equal to or exceeding the tyre inflation pressure. This is the reason why aquaplaning (viscous and dynamic combined) can be expected at high speeds on standing water, slush and wet snow. The factors and conditions which can cause high water pressures in the tyre footprint area are manifold. Three typical forms of aquaplaning can be distinguished:

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8.3.8.14.1.2 Viscous aquaplaning

The viscosity of water or a lubricant mixture of water with a contaminant (dust, fine sand, etc.) is of such magnitude that the penetration of even thin films requires contact pressures well in excess of the tyre inflation pressure. Accordingly, direct contact between tyre-tread and runway surface can only be established through local peak pressures developed at sharp aspirates of the surface texture.

Therefore, runways with smooth surfaces which lack adequate sharpness will generally be prone to viscous aquaplaning under damp or wet conditions.

Viscous aquaplaning once onset can persist to very low speeds. Aeroplane braking ability on runways covered with compact snow or ice may drop as the speed decreases during landing. This phenomenon is attributed to tyre-contact-pressure induced ice melting.

Cockpit, Operational Ground Staff

8.3.8.14.1.3 Dynamic aquaplaning

The inertia of a measurable depth of standing water, slush or wet snow causes increasing resistance to replacement with increasing speed. As a result, water pressure develops progressively and reaches, at a critical rolling speed, a magnitude sufficient to lift the tyre off the surface.

Cockpit, Operational Ground Staff

8.3.8.14.1.4 Reverted rubber aquaplaning

Provided a tyre is sliding for a prolonged period of time (i.e. no wheel spin-up), considerable heat is generated in the tyre footprint area. The outer most layer of the tyre tread melts, thereby sealing the tyre footprint. The entrapped water is converted to high-pressure steam causing complete loss of contact between tyre and surface. Once onset, this kind of aquaplaning can persist down to taxi speeds.

Cockpit, Operational Ground Staff

8.3.8.15 Operation on contaminated surfaces

Cockpit, Operational Ground Staff

8.3.8.15.1 Definition of runway surface conditions

Runway surface condition	Definition
Dry runway	A runway is considered dry if its surface is free of visible moisture and not contaminated within the area intended to be used.
Wet runway	The runway surface is covered by any visible dampness or water up to and including 3 mm deep within the intended area of use.
Slippery wet runway	A wet runway where the surface friction characteristics of a significant portion of the runway have been determined to be degraded.
Contaminated runway	A runway is contaminated when a significant portion of the runway surface area (more than 25% in at least one third / whether in isolated areas or not) within the length and width being used is covered by one or more of the substances listed in the following runway surface condition descriptors: • Compacted snow • Dry snow • Frost • Ice • Slush • Standing water • Wet ice • Wet snow

The definition of a contaminated runway as stated above is applicable for flight planning and the restriction for automatic rollout.

Only for performance calculations and crosswind limitations, the Airbus definition “equivalent to wet” is applicable:

Up to a maximum depth of 3 mm: dry snow / wet snow / standing water / slush is equivalent to wet.

Frost is equivalent to wet.

Cockpit, Operational Ground Staff

8.3.8.15.2 General consideration

The 3 most important variables confronting the pilots when runway coefficient or friction is low and/or conditions for hydroplaning exist are:

- wheel spin-up after landing,
- length of runway,
- crosswind magnitude.

The total friction force of the tires is available for braking and for cornering. If there is a crosswind, some friction force (cornering) is necessary to keep the aeroplane on the centreline. Tyre cornering capability is reduced during breaking or when wheels are not fully spun up. Locked wheels eliminate cornering. Therefore in crosswind conditions, a longer distance will be required to stop the aeroplane.

According to the runway conditions the cross wind values indicated in FCOM LIM-AG-OPS (A320 / A340) should not be exceeded for take-off and landing. Refer as well to eQRH for combined quick reference table A320 / A340.

Cockpit, Operational Ground Staff

8.3.8.15.3 Taxiing

The aeroplane may be taxied at the CMD's discretion on ramps and taxiways not cleared of snow and slush. More power than normal may be required to commence and continue taxi therefore, care should be taken to avoid jet blast damage. Be aware of the height of ridges or ruts of frozen snow that might cause difficulties. Boundaries or edges of manoeuvring areas and taxiways should be clearly discernible. If in doubt, request “Follow me” guidance. When executing sharp turns while taxiing or parking at the ramp, remember that braking and steering capabilities are greatly reduced with icy aerodrome conditions; reduce taxi speed accordingly. On slippery taxiways/runways, taxiing with one or more engine(s) off is not recommended.

Cockpit, Operational Ground Staff

8.3.8.15.4 Take off

Severe retardation may occur in slush or wet snow. In most cases, lack of acceleration will be evident early on the take-off run. Maximum permissible power (TOGA) must be used from the start. Large quantities of snow or slush, usually containing sand or other slippery substances may be thrown into the engines, static ports and onto the airframe. Pod and engine clearance must be watched when the runway is cleared and snow is banked at the sides of runway or taxiway. Refer to FCOM EFB-TOF-30-30 (A320 / A340).

Cockpit, Operational Ground Staff

8.3.8.15.5 Landing

Pilots should be aware that where rain, hail, sleet or snow showers have recently crossed the aerodrome, there is a high probability of the runway being contaminated. The runway state should be checked with ATC before commencing or continuing the approach. Very often a short delay is sufficient to allow the runway to drain or the contamination to melt.

Refer to OM A Flight Preparation Instructions and FCOM PER-LDG (A320 / A340) for required landing distance on dry, wet and contaminated runways.

- Establish and maintain a stabilised approach;
- The shortest stopping distance on wet runways occur when the brakes are fully applied as soon as possible after main wheel spin up with maximum and immediate use of reverse thrust;
- Landing on contaminated runways without antiskid should be avoided;
- It is strongly recommended to use the auto-brake (if available) provided that the contaminant is evenly distributed;
- Do not land where appreciable areas of the runway are flooded or covered with ½ inch (12,7mm) or more of water or slush;
- Consider the many variables involved before landing on slippery runway:
  - Type of contamination;
  - Aeroplane mass and approach speed;
  - Landing distance required;
  - Hydroplaning /aquaplaning speed;
  - Conditions of tires;
  - Brake characteristics (anti-skid, auto-brake mode);
  - Wind effects;
  - Runway length and slope;
  - Glide path angle.
- Do not exceed Vapp at the threshold. An extended flare is more likely to occur if excess approach speed is present;
- Be prepared to go-around;
- Avoid build up of drift in the flare and runway consuming float. A firm landing, by facilitating a prompt wheel spin up, ensures efficient anti-skid braking;
- Get the nose of the aeroplane down quickly. Do not attempt to hold the nose off for aerodynamic braking.

- If maximum braking is required apply and hold full brake pedal deflection. Continue to apply rudder inputs while braking. The brakes are the primary means for stopping the aeroplane but if necessary full reverse thrust may be maintained until the aeroplane is stopped. Excessive braking in crosswinds will lead to the aeroplane drifting away from the centerline. Do not de-crab completely as the aeroplane will yaw on the slippery runway due to its weathercock stability;
- Keep the aeroplane aligned with the runway centerline. Use rudder inputs.
- Do not allow large deviations from the runway heading, recovery can become very difficult. Under slippery conditions, the nose wheels must be closely aligned with the aeroplane track or they will scrub.
- If directional or lateral control difficulties are experienced, disconnect the auto-brake, if necessary, reduce reverse thrust levels symmetrically, regain directional control with rudder, and differential braking. Once under control, reapply manual braking and increase symmetrical reverse levels as required while easing the aeroplane back towards the runway centerline.

Cockpit, Operational Ground Staff

8.3.8.16 Effects of contamination on performance and operations

Inherent risks to aeroplane operation when ice, snow or slush is sticking to or impinging upon the aeroplane, such as:

- Blocking of flight controls and trim devices.
- Disturbance of airflow over wings, stabiliser and fuselage causing loss of lift and increase of drag.
- Damaging engine compressors or fans by ice detaching from the airframe.

Significant degradation of aeroplane take-off and landing performance subject to type and extent of contaminants:

- Slower acceleration on runways covered by standing water, slush or snow as a result of dynamic drag acting on the landing gear wheels and of spray impingement drag on the airframe. Spray patterns can also cause engine ingestion problems.
- Reduced tyre/surface friction which degrades aeroplane braking action and cornering capability for directional control.
- Extreme slipperiness in the form of viscous aquaplaning can occur at the onset of the first rainfall on runways exposed to long periods of dry weather in particular in arid zones due to sand or dust.
- Considerable slipperiness must be anticipated within the rubber-affected portion of a runway (touchdown area), whenever the surface is damp or wet or otherwise covered with a fluid deposit.

- Proper operation of the antiskid braking system may not be provided on slippery runway surfaces due to inadequate wheel spin-up on touchdown. Positive touchdown and immediate deployment of spoilers and reverse may facilitate wheel spin-up.
- The use of reverse thrust requires caution in crosswind conditions or in asymmetric modes, because directional control may be lost.
- Reduced visibility and optical illusions during precipitation, e.g. blowing snow.

Cockpit, Operational Ground Staff

8.3.8.17 Operational criteria in case of runway contamination

Cockpit, Operational Ground Staff

8.3.8.17.1 Limitations

Operational limitations have to be applied over the required runway length according to FCOM EFB-LDG-Runway Conditions (A320 / A340).

Crosswind limitations and maximum demonstrated crosswind values stipulated in the FCOM LIM-AG-OPS (A320 / A340) and eQRH RCAMs must be treated as maximum values.

Contamination is reported only when the coverage exceeds 10%. Runway contamination affects airplane performance only when the coverage exceeds 25% in at least one third. Between 10% and 25% of contamination coverage, a coverage of 25% will be reported, together with the actual contamination type and depth, and RWYCC 6 will beassigned. Application of crosswind limitation is at CMD's discretion. In certain situations, depending on the position of the contamination (e.g. at the part of the runway where the braking will be applied), it may be appropriate to consider a contamination of less than 25%.

Cleared RWY width:

- For performance calculation the most penalizing contaminant within the minimum runway width (45 m) shall be taken into account (e.g. in case of cleared runway width of only 30 m, the contaminant outside this 30 m up to 45 m must be considered). Snow banks beyond the cleared/treated runway width may also be limiting (engine clearance).

- A320 only: On runways with a physical runway width of 45 m or more and a cleared runway width of at least 30 m, the narrow runway OPS may be applied. All limitations of the narrow runway OPS must be adhered to (crosswind and dispatch conditions). In the FS+ Takeoff module the runway width must be adjusted to the cleared runway width to include the necessary performance penalties. No FS+ runway modification is required for landing, as no performance penalties apply. On runways with a physical width of less than 45 m (narrow runway OPS) the cleared runway width must also be at least minimum 30 m and must be adjusted in the FS+ Takeoff module.

Cockpit, Operational Ground Staff

8.3.8.17.2 Runway friction characteristics

The stopping performance of an aeroplane is dependent on the available friction between the aeroplane tires and the runway surface.

To compensate for the reduced stopping and directional control capability for adverse runway conditions (wet or contaminated), performance corrections are applied in the form of:

- Table for actual landing distance under different runway conditions;
- Reduction in allowable take-off mass;
- Reduction of allowable cross-wind component.

Note: EDW does not use a performance credit for takeoff or landing operation on wet runways with friction-improving characteristics.

Cockpit, Operational Ground Staff

8.3.8.17.3 Measuring and expressing friction characteristics

Various systems are used to measure the runway friction conditions, but no correlation has been established between these results and the stopping performance of an aeroplane.

Pilots should treat reported braking actions measurements with caution and interpret them conservatively. Use the relevant tables in the FCOM and RM (PFL and MET) as a guideline.

Cockpit, Operational Ground Staff

8.3.8.17.4 Reporting

Braking action estimation may be reported:

- In plain language by the tower;
- By the routine weather forecast or SNOWTAM (refer to Lido Route Manual 1.3.9 GRF).

The reporting of braking conditions as well as depth of contamination are both of relative accuracy since the conditions can vary considerably along the runway, change within short time and the methods used for determining the braking conditions are not uniform.

Special caution is required with wet snow because it can gradually turn into slush with significant performance deterioration due to:

- OAT rising above 0°C;
- initial pavement temperature above 0°C;
- solar radiation.

Most states and aerodrome authorities do not promulgate braking action under such conditions, but report the actual state in terms of the kind of contamination and measured depth instead.

Pilots report from comparable aeroplane types are to be used as guidance only.

Whenever the runway braking action encountered during the landing roll is not as good as that reported by the aerodrome operator in the runway condition report (RCR), the commander shall notify the air traffic services (ATS) by means of a special air-report (AIREP) as soon as practicable (refer to Lido Route Manual 1.3.9.3, 1.6.5.4).

Cockpit, Operational Ground Staff

8.3.8.18 Aeroplane performance on contaminated runways

Cockpit, Operational Ground Staff

8.3.8.18.1 General

Information about takeoff performance on fluid contaminated runways is given in FCOM PER-TOF (A320 / A340) and eQRH.

The takeoff calculation is primarily based on the contaminant (type, depth, temperature).

Information about landing performance on fluid contaminated runways is given in FCOM PER-LDG (A320 / A340) and eQRH.

The landing calculation is primarily based on the RWYCC, issued by the airport.

Cockpit, Operational Ground Staff

8.3.9 Wake Turbulence

Cockpit, Operational Ground Staff

8.3.9.1 General

Wake turbulence consists of a pair of vortices trailing from the wingtips of an aeroplane. Strong wake turbulence must be expected from “HEAVY” or “SUPER” aeroplane, i.e. aeroplane with maximum mass above 136t.

The basic effects of wake turbulence encounter on a following aeroplane are induced roll, vertical acceleration (can be negative) loss or gain of altitude and possible structural stress. The greatest danger is typically the induced roll that can lead to a loss of control and possible injuries to cabin crew and passengers.

Wake turbulence encounters can occur during any phase of flight. Separation minima aim at preventing such encounters from inducing risk, but it must be noted that these provisions will not completely prevent wake encounters from occurring.

Wake turbulence intensity and exposure depend on a number of factors, such as:

- Aeroplane mass and dimensions;
- Aeroplane performance;
- Amount of thrust applied;
- Identical or different flight tracks (departure);
- Wind etc.

Cockpit, Operational Ground Staff

8.3.9.2 Wake turbulence in terminal areas

If generated near the ground they descend to around 100ft to 200ft above ground and spread out at a speed of approximately 5kts in still air. A slight crosswind may keep the windward vortex on the runway for more than 2 minutes. The intensity of the vortices increases with the mass of the generating aeroplane, the wing loading and the configuration.

The most violent wake turbulence is encountered about 3 miles behind the heavy aeroplane. Turbulence might also be expected where 2 parallel runways less than 2'500ft (760m) apart are being used. The turbulence risk is greatly increased if the following aeroplane is approaching the downwind runway in crosswind conditions.

Should the vortex encounter occur in the final approach area, its impact is heightened because the following aeroplane is in a critical state with regard to speed, thrust, altitude and reaction time.

Cockpit, Operational Ground Staff

8.3.9.3 Aeroplane wake turbulence categories (WTC)

Refer to Lido Route Manual 1.4.2.12.1 Wake Turbulence Separation and Lido Route Manual 2.1.2.12.4 Wake Turbulence Categorisation and Separation Minima (RECAT-EU).

Cockpit, Operational Ground Staff

8.3.9.3.1 Separation by time (departure)

Refer to RM RAR/Appendix

Cockpit, Operational Ground Staff

8.3.9.3.2 Separation by time (arrival)

Refer to RM RAR/Appendix

Cockpit, Operational Ground Staff

8.3.9.4 En-route wake turbulence encounters

En-route, the vortices evolves in altitudes at which the rate of decay leads to a typical persistence of 2-3 minutes, with a typical sink rate of about 400ft/min. Wakes will also be transported by wind.

Considering the high operating air speeds in cruise and the standard 1000 ft vertical separation in RVSM airspace, wake can be encountered up to 25 nautical miles (NM) behind the generating aeroplane. The most significant encounters are reported within a distance of 15 NM. However, no specific horizontal wake turbulence separation minima are detailed within PANS-ATM for en-route flight, with States utilising procedural or surveillance-based separation minima.

The encounters are mostly reported by pilots as sudden and unexpected events. The awareness of hazardous traffic configuration and risk factors is therefore of particular importance to anticipate, avoid and manage possible wake encounters.

In the en-route phase of flight, three major factors contribute to increase the likelihood of wake turbulence:

1. Crossing traffic situation: In the case that crossing traffic is climbing or descending in proximity (either the generating or following aeroplane), the wake generated might cross the follower's trajectory with minimum time for decay, so stronger wake turbulence might be encountered.
2. Thermal tropopause altitude: Wake vortex decays more slowly below the tropopause where there is therefore an increased risk of encountering severe wake turbulence.
3. Weight of the generating aeroplane: Heavier aeroplane types generate stronger wake vortices and are likely to induce more severe wake turbulence encounters, especially for smaller aeroplane types.

Cockpit, Operational Ground Staff

8.3.9.5 Recommendations

When possible, condensation trails should be used to visualise wakes and estimate if their flight path brings them across.

More attention should be given when flying below the tropopause altitude, as the likelihood of wake encounter increases.

Upwind lateral offset should be used if the risk of a wake encounter is suspected, when allowed by airspace regulations or via specific ATC approval. Also, a change of FL to cross “HEAVY” or “SUPER” traffics from above can be used when feasible and authorised by ATC.

In case of a wake encounter, pilots should:

Be aware that experience has demonstrated that if the pilot reacts at the first roll motion, when in the core of the vortex, the roll motion could be potentially amplified by this initial piloting action.

Be aware that some in-flight incidents have demonstrated that pilot inputs may exacerbate the unusual attitude condition with rapid roll control reversals carried out in an “out of phase” manner.

Be aware that if the autopilot is engaged, intentional disconnection can complicate the scenario, and the autopilot will, in most cases, facilitate the recovery.

Avoid rudder deflections that can create important lateral accelerations, which could then generate very large forces on the vertical stabiliser that may exceed the structural resistance. The use of the rudder does not reduce the severity of the encounter nor does it improve the ease of recovery.

Cabin, Cockpit, Operational Ground Staff

8.3.10 Crew members at their stations

Cabin, Cockpit, Operational Ground Staff

8.3.10.1 Sterile flight deck policy

During critical phases of flight, during taxiing, between block-off and FL 150/transition altitude (whichever is higher) and between FL150/transition level (whichever is higher) and block-on, as well as during any other phases of flight as determined by the CMD:

- Distractions and other duties than those required for the safe operation of the aircraft shall be avoided.
- Activities shall be restricted to essential operational matters.
- Any non-essential conversation within the cockpit and between the cabin and cockpit crews shall be avoided.
- PA and paperwork shall be kept to a minimum.

Refer to CSPM Sterile flight deck concept.

Cockpit, Operational Ground Staff

8.3.10.2 Wearing of Headsets

Cross-cockpit communication is VITAL for any two-pilot crew to ensure safe operation. In-flight, wearing of headset is compulsory:

- up to and below FL 150 or transition altitude/level, whichever is higher
- whenever one FCM is not in his seat
- whenever one FCM is not working as PF or PM (e.g. crew rest phase)

CAUTION: Assure to keep the loud speaker volume at an adequate level at all times and no loud speaker volume in the minimum position (this includes sterile flight desk phase, passenger announcement, controlled rest etc.) in order to prevent loss of communication.

Cabin, Cockpit, Operational Ground Staff

8.3.11 Use of seat/safety belts for crew and passengers

Refer to CSPM Use of seat belts for crew and passengers.

Cabin, Cockpit, Operational Ground Staff

8.3.12 Admission to flight crew compartment

Refer to CSPM Flight deck permit / visit to the flight deck.

Cabin, Cockpit, Operational Ground Staff

8.3.13 Use of vacant crew seats

Refer to CSPM Distribution of vacant jump-seats on flight deck and cabin.

Cockpit, Operational Ground Staff

8.3.14 Incapacitation of crew members

Cockpit, Operational Ground Staff

8.3.14.1 General

Medical examination should ensure that crew members are physically and mentally able to do their job. From experience, however, we learn that incapacitation of flight crew members are not an uncommon cause of incidents and can occur in all age groups and all phases of flights. Incapacitation can be divided into two forms:

- Obvious incapacitation means total functional failure and loss of capabilities. In general it will be easily detectable and of prolonged occurrence. Among possible causes are heart disorders, severe brain disorders, internal bleeding, food poisoning, etc.
- Subtle incapacitation is considered a more significant operational hazard, because it is difficult to detect and the effects can range from partial loss of function to complete unconsciousness. Among possible causes might be minor brain seizures, hypoglycemia (low blood sugar), other various medical disorders, extreme fatigue or

preoccupation with personal problems. Because a flight crew member may not be aware of or capable of rationally evaluating his situation, this type of incapacitation is the more dangerous one.

Cockpit, Operational Ground Staff

8.3.14.2 Recognition of incapacitation

The critical operational problem is early recognition of the incapacitation. The keys to early recognition of incapacitation are:

- Routine monitoring and cross-checking of flight instruments, particularly during critical phases of flight, such as take-off, climb out, descent, approach, landing and go-around;
- Flight crew members should have a very high index of suspicion of a subtle incapacitation:
    - If a crew member does not respond appropriately to verbal communications; or
    - If a crew member does not respond to a verbal communication associated with a significant deviation from a standard flight profile.
- If you don't feel well, say so and let the other pilot fly.

Other symptoms of the beginning of an incapacitation are:

- Incoherent speech;
- Strange behaviour;
- Irregular breathing;
- Pale fixed facial expression;
- Jerky motions that are either delayed or too rapid.

Obvious incapacitation, sometimes sudden and complete, may result from food poisoning which can occur at any location, but primarily in areas of poor hygiene.

Food poisoning does not show its effects in a uniform manner or in a given time period after consumption, a fact which has to be considered especially for flights with long duty periods. A critical situation may also arise for the other flight crew members.

As a precaution against operational consequences of food poisoning, pilots shall have different meals not only on board the aircraft but also at hotels before reporting for duty as far as possible.

Cockpit, Operational Ground Staff

8.3.14.3 Action

Whenever an incapacitation must be suspected or is obvious, the following steps shall be taken:

1. Assure a safe condition of the flight:
   - Take over controls immediately;
   - Engage the autopilot;
   - Call cabin crews immediately for assistance.
2. Analyse flight operational aspects:
   - Condition of the incapacitated flight crew member;
   - Remaining flight time of planned flight leg;
   - Suitability and knowledge of aerodromes enroute for emergency landing. Any case of incapacitation of any member of the minimum flight crew must be reported immediately to ATC. In general, the aeroplane must land, by declaring an emergency, as soon as practicable.
3. Care of the incapacitated flight crew member:
   - Arrange for medical assistance in-flight and after landing.
4. Prepare the flight deck for landing:
   - Do not press for a hasty approach;
   - Perform the approach checks earlier than normal;
   - Request radar vectoring whenever possible;
   - Fly the aeroplane from your normal position, do not change seats.
5. Organise your work after landing:
   - Depending on situation and aeroplane type, change seat after the aeroplane has come to a complete stop for taxi-in;
   - Get the incapacitated flight crew member off-loaded and by ambulance to a suitable location, as quickly as possible;
   - Arrange parking of the aeroplane.

Cabin, Cockpit, Operational Ground Staff

8.3.15 Cabin safety requirements

Refer to CSPM Standard Operating Procedures.

Cabin, Cockpit, Operational Ground Staff

8.3.16 Passenger briefing procedures

Refer to CSPM Passenger briefing.

Cockpit, Operational Ground Staff

8.3.17 Solar radiation detection equipment

For flights above FL490 regulations require on-board equipment to measure and indicate the dose rate of total cosmic radiation being received. As EDW flights operated by A320 and A340 are being flown below FL490, no detection equipment is required.

Cockpit, Operational Ground Staff

8.3.18 Use of aircraft automation-related systems

Cockpit, Operational Ground Staff

8.3.18.1 General

FCM shall operate aircraft automation-related systems in such a way that optimum capability benefit is achieved regarding:

- Reduction of workload
- Precision of navigation
- Availability of protection modes
- Passenger comfort
- Economic flight

The flight crew shall monitor automated flight and navigation systems to ensure appropriate aircraft response to inputs by:

- Cross-checking mode status indications.
- Observing the results of any mode changes.
- Supervising the resulting guidance and aircraft response.

Whenever the aircraft response to automated flight and navigation system inputs is not appropriate or adequate, or the flight crew is in doubt about, the PF shall, as deemed appropriate:

- Revert to manual flight as appropriate until the automated flight system has been satisfactorily reprogrammed or situational awareness re-established.
- Revert to conventional navigation using autopilot basic modes (HDG / VS) as appropriate until the FMS has been satisfactorily reprogrammed or situational awareness re-established. Check AP performance and flight director-type commands for coherence with the raw parameters they track or help track.

Automated flight and navigation systems shall be used as described in the OM B.

Training Aspects

Partial use of the equipment or automation available is permitted, especially if it contributes to the preservation of pilot skills without decreasing the level of safety. Nevertheless, safety shall always have priority over training aspects.

If only partial use of the available equipment is planned, depending on the situation, FCM shall at least consider the following aspects:

- Traffic situation at and around the airport
- Runway length and condition (e.g. for the use of flaps 3 or auto brake)
- Weather
- Crew fatigue
- Individual pilot skills
- Technical condition of the aircraft
- General workload

Continuous monitoring of the equipment's performance is essential while it is in use. FCM shall pay special attention to the engagement status of the systems used, as late recognition of mode or configuration changes, such as unwanted disengagement, could lead to a dangerous situation.

Cockpit, Operational Ground Staff

8.3.18.2 Use of AP

With the autopilot engaged, the PF shall monitor the autopilot mode and performance as well as the primary flight instruments.

The use of AP is compulsory:

- When required for the intended type of operation (e.g. RVSM, CATIII etc.)

Flight without autopilot is permitted in VMC and IMC provided that the PF keeps his attention constantly on the primary flight instruments and natural horizon if available. Whenever the PF has to divert his attention to other equipment, the autopilot shall be engaged within its technical limitations.

Cockpit, Operational Ground Staff

8.3.18.3 Use of FD/FPD

When the PF manually flies the aircraft using the flight director, the flight director's orders shall be obeyed. The crossbars must be centred or the flight path vector must be on the flight path director symbol so as to fly according to the selected modes and targets.

For short periods of time, over-steering of flight director crossbars is acceptable when PF is not satisfied with the initiation and/or intensity of flight director orders (e.g. for variable initial pitch after T/O, for late DME-turns if FD dictates an immediate turn after departure, which would result in a violation of OM A Initiation of turns).

If the PF does not wish to fly the flight director orders for longer periods of time, both pilots must deselect the FD.

The use of FD is compulsory:

- For all flight phases in IMC, if technically available.
- Whenever the AP is ON.
- When required for the intended operation (e.g. RNP-1).

Refer to:

- FCOM LIM-AFS (A320/A340)
- QRH / OPS / Required Equipment for CATII and CAT III
- QRH / QL / Required Equipment

Cockpit, Operational Ground Staff

8.3.18.4 Use of FPV

It is recommended to use the FPV whenever the FD is not in use.

Cockpit, Operational Ground Staff

8.3.18.5 Use of A/THR

In general, the use of the A/THR system is recommended. FCM shall be ready to take over manually if the system fails or if the A/THR does not control the airspeed within normal tolerances.

Therefore, flying manual thrust is considered to be a basic pilot's skill and shall be trained regularly. Before using manual thrust for training purposes, FCM shall have undergone adequate training in the simulator.

If FCM decide to use manual thrust for an approach, the A/THR shall be disconnected preferably latest 1000 ft AAE. FCM shall keep their hand on the thrust lever when using manual thrust and in any case below 1000 ft AAE during approach.

Cockpit, Operational Ground Staff

8.3.18.6 Use of Autobrake

ABS shall be armed for take-off if technically available. The use of ABS for landing is at the CMD's discretion.

ABS is beneficial on wet and contaminated runways (except if close to crosswind limits) as well as on short runways.

A320, A340, Cabin, Cockpit, Operational Ground Staff

8.3.19 General flight operations policies and procedures

Cockpit, Operational Ground Staff

8.3.19.1 Avoidance of aeroplane collision

The look-out is urgently required for collision avoidance in spite of modern aeroplane operation technologies and sophisticated ground devices. Thus, whenever weather conditions make it possible, it is the duty of the crew to keep a sharp look-out.

The CMD shall assign flight crew members for look-out as his primary duty, and to ensure that all other duties, such as strict adherence to ATC-clearance and other operational procedures are still properly performed.

In the vicinity of an aerodrome, during descent and climb-out to/from an aerodrome and in areas where traffic is dense, flight crew members shall keep paper work, map reading, navigation-system programming, etc., to a minimum.

An early and intensive use of the autopilot is recommended in order to facilitate the look-out.

Irrespective of the type of clearance received from ATC, it is still the responsibility of the CMD to avoid collision with other aeroplane. Thus, during VMC, a look-out for conflicting traffic is an absolute necessity.

Traffic information given by ATC is of great value and it shall always be requested. It must, however, always be kept in mind that ATC information includes known traffic only and may therefore be incomplete.

It is recommended that during cruise the PM shall monitor TCAS on his ND. If an unidentified traffic is reported which cannot be seen in due time and a collision risk is suspected, request immediate avoiding action.

In order to protect the eyes from the sun, only the use of sunglasses/sun-visors is permitted. Use of objects restricting the look-out is prohibited during flight.

Cockpit, Operational Ground Staff

8.3.19.2 Separation awareness

To ensure a safe vertical separation during cruise and in holding stacks, it is necessary to keep the assigned FL/ALT most accurately (+/- 100ft).

Remember that if all errors of the altimeter are added unfavourably, the vertical separation between aeroplanes can be reduced to a value below the applicable minimum.

Extreme caution is also required when changing from one area or airspace/layer to another where different Altimeter setting(s) (or procedures) are used for vertical separation. If the navigation becomes inaccurate due to defective or unreliable equipment on board, this has to be reported to the ATC immediately.

Cockpit, Operational Ground Staff

8.3.19.3 Company speed restriction

As a basic rule, the speed below FL100 shall not exceed 250 kts or green-dot speed, whichever is higher, to enable prompt traffic-avoiding actions and to smooth the traffic flow. FCM may only exceed this speed limit on ATC requests. Nevertheless, the airspeed shall not exceed 250 kts or green-dot speed, if higher, below 5’000 ft AAE. Speeds above 250 kts or above ATC speed restrictions shall be reported to ATC. Refer to RM/RAR.

Cockpit, Operational Ground Staff

8.3.19.4 Vertical speed policy

Flight phase/segment	Vertical speed policy
Above 10'000 ft AAL	Excessive rates should be avoided in order to elude large deck angles (cabin safety / comfort). Consider the higher probability of TCAS alerts.
When approaching the ground	The rate of descent shall be restricted in order to avoid CFIT situations when the crew, temporarily distracted from altitude monitoring by unexpected events, would not have enough time to identify a high closure to terrain.
Between 10'000 ft AAL and the IAF	The rate of descent shall not be greater than 4000 ft/min.
Between the IAF and the final approach segment	The maximum rate of descent should not exceed the actual height over ground (e.g. at 2500 ft/AGL the rate of descent should not be greater than 2500 ft/min), limited to maximum 4000 ft/min.
On the final approach segment	The descent rate shall not be greater than 2000 ft/min.

Cockpit, Operational Ground Staff

8.3.19.5 Angle of bank

The maximum bank angle is 30° during all phases of flight. Exceptions are regulated in OM A Initiation of turns.

Cockpit, Operational Ground Staff

8.3.19.6 Use of lights

While flying in visual conditions irrespective of daytime, the maximum use of external lights is recommended for take-off and initial climb as well as for approach and landing in order to make the aircraft more visible to other aircraft to ATC and for bird strike prevention.

Cockpit, Operational Ground Staff

8.3.19.6.1 Navigation lights

Navigation lights must be on

- while the aeroplane is parked with active APU or EXT power supply;
- for all aircraft movements.

Cockpit, Operational Ground Staff

8.3.19.6.2 Beacon

Beacon must be on whenever the aircraft is in operation:

- Engines running (from before engine start until after engine shut down)
- Aircraft moving (towed or pushed)

Cockpit, Operational Ground Staff

8.3.19.6.3 Strobe lights

Strobe lights must be on:

- whenever the aircraft is on an active runway;
- during flight, unless perceived disturbing in certain meteorological conditions.

Cockpit, Operational Ground Staff

8.3.19.6.4 Taxi lights

Taxi lights shall be switched on when the aircraft moves under its own power.

Exception: The use of taxi lights may be adapted to surrounding conditions (i.e. to avoid blinding ramp controllers or other aircraft).

> Note: While awaiting the departure clearance on an active runway, taxi lights should be kept ON.

Cockpit, Operational Ground Staff

8.3.19.6.5 Landing lights

Landing lights must be used:

- for take-off and landing;
- below FL 100;
- if deemed necessary to make the aircraft more visible.

When waiting for departure clearance on the active runway, landing lights shall be turned off. They must be switched on when starting the take-off roll. During fog, snowfall, etc., landing lights may reduce visibility and produce visual illusions. In this case, they should be used appropriately.

Cockpit

8.3.19.6.6 Other exterior lights

Other exterior lights, such as wing lights, runway turn-off or logo lights, should be used as appropriate.

Cockpit, Operational Ground Staff

8.3.19.7 Crew relations

A good teamwork consists mainly of mutual initiative, assistance and continuous briefing. Thus, it is necessary that flight crew members duly inform each other about their intentions and other important facts concerning the flight, such as a temporary discontinuation of the lookout, a momentary break of the listening watch on the normal communication frequencies, handing over of controls, use of the autopilot, handling of thrust levers, etc.

Since crew compositions are constantly changing, it is necessary to facilitate the cockpit teamwork by adherence to FCOM PRO-NOR-SOP, and other standard procedures, at all times.

Cockpit, Operational Ground Staff

8.3.19.8 Flight operation briefings

Cockpit, Operational Ground Staff

8.3.19.8.1 Introduction

Operational briefings shall be based on the Threat and Error Management (TEM) Model. The goal of an operational briefing is that the crew members concerned have a shared mental model of the intended flight operation and the identified threats and mitigations.

In case of any new threats or changes to the planned flight operation, the operational briefing shall be amended (re-briefing).

The following briefings have to be conducted:

- General briefing
- Departure briefing
- Arrival briefing

Cockpit, Operational Ground Staff

8.3.19.8.2 General Briefing

At the beginning of each rotation, before off-block, a general flight crew briefing shall be given by the CMD, containing:

- Crew duties in case of an emergency on-ground, including emergency evacuation.
- The main focus of the CMD: Daily specialities, foreseeable difficulties, crew composition, experience or distribution of work on the flight deck in case of failure/ malfunction arising during or after take-off, as deemed necessary.

Cockpit, Operational Ground Staff

8.3.19.8.3 Departure Briefing

For detailed information, refer to FCTM-AOP-TASKSHARING RULES AND COMMUNICATION-HOW TO CONDUCT BRIEFINGS (A320/A340).

Cockpit, Operational Ground Staff

8.3.19.8.4 Arrival Briefing

For detailed information, refer to FCTM-AOP-TASKSHARING RULES AND COMMUNICATION-HOW TO CONDUCT BRIEFINGS (A320/A340).

The following items shall be memorised by both pilots in any case:

- The DA/H or MDA
- The initial part of the missed approach procedure (e.g. track, turn, altitude, speed)

Cockpit, Operational Ground Staff

8.3.19.9 Allocation of flight crew duties

The general allocation of flight crew duties during take-off, climb, cruise, descent, approach and landing is outlined in FCTM-AOP-TASKSHARING RULES AND COMMUNICATION (A320/A340) and in the respective chapters in FCOM PRO-NOR-SOP (A320/A340).

	Pilot Flying (PF)	Pilot Monitoring (PM)
Normal Operation	• Controlling the aeroplane • Navigating the aeroplane • Initiating the briefings	• Monitoring the flight • Communicating with the ATC • Executing the checklists • Tracking the OFP • Conducting a security search, if applicable • Operating the flight deck door[1]
Abnormal Situations	• The task sharing laid down in the SOP shall be adhered to whenever possible. • In case of an emergency (urgency or distress), the CMD may adapt the task sharing as deemed appropriate.	

[1] Mandatory during sterile flight deck phase or manual flying only.

Cockpit

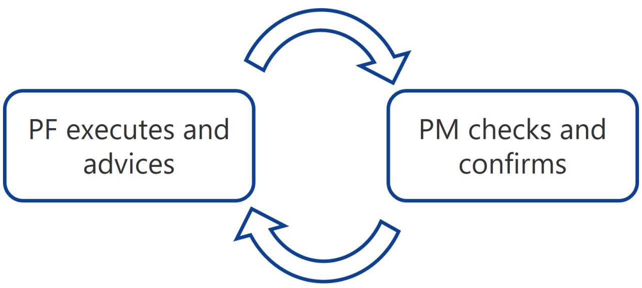
8.3.19.10 Closed Loop Principles

The closed loop principle consists of three different types, each appropriate for a specific situation and/or task.

Cockpit

8.3.19.10.1 Simplified closed loop

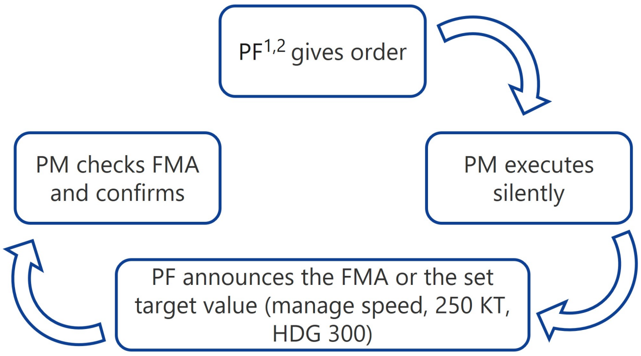
The simplified closed loop is applicable in normal operation with the autopilot engaged.



Cockpit

8.3.19.10.2 Extended closed loop

The extended closed loop shall be applied for flight with autopilot OFF.



Note (EDW):

- [1] When receiving FCU/MCDU orders from the PF, the PM executes silently without reporting, the PF verifies the order by the appropriate FMA callout.
- [2] If an ATC clearance is received (HDG, Speed, Altitude), the order by the PF may be omitted and substituted by the received ATC clearance.

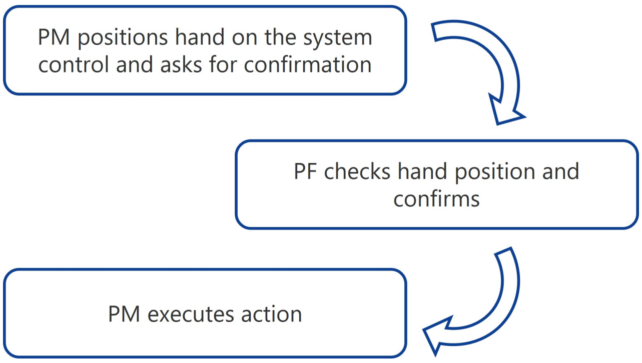
Cockpit

8.3.19.10.3 Vital Items closed loop

The Vital Items closed loop shall be applied whenever modifying in flight the status of critical equipment such as:

- Engine control: Thrust levers[1], fuel shut off etc.
- Fire and smoke protection equipment
- Guarded switches or as specified by the manufacturer

Note: [1] Exceptions as per OM B



Cabin, Cockpit, Operational Ground Staff

8.3.19.11 Cooperation with cabin crew

The CMD is recommended to make a rough check of the cabin appearance on embarking and to supervise, by means of spot-checks, the preparatory work of the other crew members.

In order to provide proper data for the passenger information, the Flight Crew will verbally inform the S/C prior to each flight on the estimated flight time and the chosen routing of the flight. The Flight Attendants shall communicate the languages spoken by the passengers to the flight crew after boarding.

The CMD shall brief the Flight Attendants about special conditions which might influence an efficient service to the passengers. Significant changes in the forecast conditions shall duly be communicated to permit necessary adjustments to the service plan.

A good teamwork is required in order to ensure that the cabin is prepared in time for take-off and landing.

Cockpit, Operational Ground Staff

8.3.19.12 Standard Drills / Terminology

Cockpit, Operational Ground Staff

8.3.19.12.1 General

In order to avoid any misunderstanding in the cockpit or with ground personnel, the following policy applies:

- In all cockpit drill procedures such as use of ECAM/checklist/emergency checklist, orders/call-out's according to flight procedures, the English language shall be used.
- For general briefings, e.g. take-off briefing, approach briefing, etc., a language understood by all active flight crew members shall be used.
- The standard terminology and signals laid down in FCOM PRO-NOR-SOP, QRH, OM and Lido Route Manual 1.2.2.3 shall be applied.
- In case of language difficulties with ground personnel, any suitable language may be used.

Cockpit, Operational Ground Staff

8.3.19.13 In-flight simulation of emergencies

The in-flight simulation of emergencies while passengers and/or cargo are being transported on board the aircraft is prohibited. In-flight simulations of emergencies may be conducted during certain training flights only. Refer to OM D Simulated malfunctions.

Cockpit, Operational Ground Staff

8.3.19.14 Taxi

Cockpit, Operational Ground Staff

8.3.19.14.1 Cockpit / ground communication

To ensure good communication between the cockpit and the ground, the interphone system should be used.

If the interphone system is inoperative, the hand signals defined in Lido Route Manual 1.2.2.3 Marshalling Signals shall be used. In this case, extreme caution must be exercised to avoid confusion.

If an active thunderstorm moves over the departure aerodrome, the CMD may wish to delay engine start and departure. To not expose ground personnel to possible dangers from aeroplane lightning strikes, the CMD should advise ground personnel to disconnect the interphone system during such delay periods. Engine start and push-back/tow-out may also be performed using hand signals after proper coordination with ground personnel.

Cockpit, Operational Ground Staff

8.3.19.14.2 Starting engines

The responsible ground personnel will ensure that the danger areas around the aeroplane are clear before starting engines and will then indicate their readiness to the flight crew.

Engines may be started either at the gate or during push-back/tow-out after coordination with the responsible ground personnel. If conditions are unfavourable (e.g. tarmac conditions) the ground personnel may refuse this procedure.

Engine/tail pipe fires developing during start-up shall be brought under control by respective flight crew action according to the ECAM/QRH. Fire extinguishers used by ground crew are of limited value for such type of fires for reasons of accessibility of engines, type of agent, etc.

In all cases where such action is unsuccessful, the fire brigade must be called as soon as possible.

Cockpit, Operational Ground Staff

8.3.19.14.3 Departure from parking position

The CMD is responsible for the safe ground operation as long as the aeroplane moves under its own power.

During push-back / tow-out / tow-in, this responsibility rests with the ground personnel, (Ground Engineer or Ramp Supervisor).

The responsible ground personnel must ensure that all ground equipment has been removed from the aeroplane and that the area around the aeroplane is clear.

Cockpit, Operational Ground Staff

8.3.19.14.4 Push-back/tow-out

Brakes shall only be released or set upon order from the ground personnel (“release / set brakes” or respective hand signals).

The CMD shall closely monitor the entire manoeuvre in order to be ready to interrupt push-back/tow-out if necessary for any reason.

Before push-back, tow-out or taxiing, the CMD shall check that all doors are closed and the slides armed according to the ECAM. Latest before take-off, all galleys (containers, etc.) must be properly secured.

On flights without flight attendants (e.g. training, ferry, freight, etc.) the F/O shall check that all doors are properly closed and armed, and the galleys are secured.

Cockpit, Operational Ground Staff

8.3.19.14.5 Taxiing

EDW allows only appropriate qualified pilots to taxi the aircraft on the movement area of an aerodrome.

Taxi must not be commenced unless the “all clear” signal from ground personnel has been received.

For all ground manoeuvring, the flight crew shall carefully judge the situation ahead and behind the aeroplane, and handle thrust levers considering blast damage and noise abatement procedures.

The taxi speed shall be adjusted to the prevailing circumstances and weather situation.

Maximum taxi speed is 45 kts on rapid exit taxiways when vacating the runway and during backtrack, 30 kts in a straight line and 10 kts for a sharp turn.

All taxi clearances shall be cross-checked against the aerodrome chart and aerodrome surface markings, signs, and lights.

Stop and hold at all lighted stop bars, and proceed further when an explicit clearance has been issued by the aerodrome control tower and when the stop bar lights are switched off.

In order to avoid distraction or failure to comply with ATC instructions while the aircraft is moving:

- Each FCM shall have the necessary aerodrome layout charts available.

- Any action which may disturb the FCM from the taxi activity shall be avoided or done with the parking brake set.
- No written notes shall be taken, except writing down the ATC clearance.
- No PA shall be conducted, inform PAX at the parking position, during prolonged hold short times or when airborne.
- The PM shall carefully monitor the aircraft position and compare it to the associated ground charts to assist the PF in following the required taxi route.
- Special attention shall be given to runway markings and potential runway incursion hotspots (highlighted on ground charts) to minimise the risk of runway incursions.
- The pilot taxiing the aircraft should announce in advance his intentions to the PM.

If the PF is unsure of his position, he should stop the aircraft and contact air traffic control to regain orientation. However, if the situation permits, taxi off an active runway prior to initiating communications with air traffic control.

When the docking guidance system is designed for the left-hand seat only, the CM2 shall hand over the controls when acting as PF on a straight taxiway prior to entering the parking bay. The CM1 remains PF for the remainder of the flight.

As the engines are close to the ground, avoid positioning them over unconsolidated or unprepared ground (e.g. beyond the edge of the taxiways). Avoid high thrust settings at low ground speeds which increase the risk of ingestion (FOD) and the risk of projection of debris towards the THS and towards the elevators.

Taxi guidelines/markings may vary from aerodrome to aerodrome and do not always, or for all aeroplane types, ensure adequate obstacle clearance, especially in congested areas. Whenever in doubt, assistance from the ground shall be requested.

Care shall be taken when taxiing behind other aeroplanes for the following reasons:

- Concentrations of carbon monoxide may result from ingestion of exhaust gases via the air-conditioning system.
- Foreign-object damage may occur.

If required, the aeroplane shall hold either at the respective holding position markings or, in the absence of markings, at an adequate distance from the active runway.

A320, A340, Cockpit, Operational Ground Staff

8.3.19.15 Take Off

Cockpit, Operational Ground Staff

8.3.19.15.1 Minimum required equipment

The CMD shall satisfy himself that the status of the aeroplane and of the relevant airborne systems is appropriate according eQRH for the specific operation to be conducted.

A320, A340, Cockpit, Operational Ground Staff

8.3.19.15.2 Choice of taxi- and runway

A320, Cockpit, Operational Ground Staff

8.3.19.15.2.1 A320

Preferably, the runway offering the best safety margin under the prevailing weather and runway surface conditions shall be used. Due regard shall be paid to other factors such as ATC requirements, preferential runway system, noise abatement procedures and delays involved.

The nominal required RWY width are as follows:

Type	Minimum RWY width
A320	30m / 100ft

Take-off shall be made from the beginning of runway or an authorised take-off point according to RM or T.O. computation.

The minimum recommended taxiway width is:

A320 15m / 50ft

A340, Cockpit, Operational Ground Staff

8.3.19.15.2.2 A340

Preferably, the runway offering the best safety margin under the prevailing weather and runway surface conditions shall be used. Due regard shall be paid to other factors such as ATC requirements, preferential runway system, noise abatement procedures and delays involved.

The nominal required RWY width for an A340 is 45 m / 150 ft.

Take-off shall be made from the beginning of runway or an authorised take-off point according to Lido Route Manual or T.O. computation.

The minimum recommended taxiway width for an A340 is:

Straight taxi	Turns
15 m / 50 ft	20 m / 60 ft

On the A340 it is recommended to use marshaller guidance on taxiways with a width below 22 m (marked with a brown overlay on AGC/APC).

Cockpit, Operational Ground Staff

8.3.19.15.3 Take-off roll

A rolling take-off is permitted except under the following conditions:

- Visibility/RVR at or close to take-off minimum
- Contaminated runway
- Actual TOM is close to limiting MTOM for runway length or obstacle

If take-off is delayed for any reason after reception of the take-off clearance or if meteorological conditions impair visual control by the tower, it is advisable to announce “rolling” on starting the take-off roll.

The vital take-off speeds shall be called out distinctly by the PM according FCOM PRO-NOR-SOP-TAKEOFF (A320 / A340).

The decision whether to reject a take-off in case of any failure or malfunctions lies always with the CMD.

Continuous monitoring and cross-checking of the flight instruments during take-off and climb-out is of utmost importance. The PM shall restrict other cockpit work to a minimum during initial climb.

Cockpit, Operational Ground Staff

8.3.19.16 Climb

Cockpit, Operational Ground Staff

8.3.19.16.1 Initiation of turns

AEO maximum bank angle	Applicable height	Remarks
No turn	Up to 200 ft	
15°	Between 200 ft and 400 ft	No turn should be initiated below 400 ft except if required on a SID due to obstacle or noise abatement procedures.

AEO maximum bank angle	Applicable height	Remarks
30°	Above 400 ft	The SID procedure is based on bank angles up to 25°

OEI maximum bank angle	Applicable height	Remarks
No turn	Up to the point at which the net take-off flight path has achieved a height equal to one half the wing-span (59 ft for A320 or 99 ft for A340) but not less than 50 ft above the elevation of the end of the TORA	Additionally no turn should be initiated before end of TORA / DER (departure end of runway) due to obstacle corridor
15°	Above 59 ft for A320 or 99 ft for A340 above the elevation of the end of the TORA	The EOSID procedure is based on 15° bank angle
>15°	Above 400 ft	Only if required by the EOSID, and with the bank angle stated in the EOSID
30°	Above acceleration altitude	

Cockpit, Operational Ground Staff

8.3.19.16.2 Clean up

For standard clean-up and noise abatement procedures select thrust reduction and acceleration altitude at 800 ft/AAE. State / airport regulations may stipulate higher thrust reduction or acceleration altitudes (refer to respective Airport Briefing/CCI).

Cockpit, Operational Ground Staff

8.3.19.17 Cruise / Descent / Holding

Cockpit, Operational Ground Staff

8.3.19.17.1 ROD / ROC prior reaching cleared FL / ALT

ROC and ROD shall be reduced whenever approaching a cleared FL / ALT in order to reduce the risk of an over- or undershoot and TCAS nuisance warnings. Refer to OM A Operational procedures.

Cockpit, Operational Ground Staff

8.3.19.17.2 Holding

Official IFR holding patterns/procedures for manoeuvring with the respective speeds, tolerances, timing, etc. are given in the RM/RAR and the FCOM.

Cockpit, Operational Ground Staff

8.3.19.18 Approach

Cockpit, Operational Ground Staff

8.3.19.18.1 General

Descent, approach and landing require utmost concentration and optimum co-operation of all crew members concerned.

Therefore, it is of greatest importance that:

- The applicable approach procedures are strictly followed.
- The flight procedures according to FCOM PRO-NOR-SOP are strictly adhered to.
- These phases of the flight are pre-planned timely and thoroughly.
- Both pilots continuously monitor the approach progress and cross-check the flight instruments.

The navigation aid/equipment providing the best approach guidance shall be used regardless of weather conditions and shall comply with the cleared approach and missed approach procedure.

Cockpit, Operational Ground Staff

8.3.19.18.2 Preparation for approach

The CMD has to judge whether or not an approach shall be commenced based on operational requirements, weather and the probability of a successful landing.

Cockpit, Operational Ground Staff

8.3.19.18.3 Noise abatement

The initial and intermediate approach shall be flown with the lowest possible drag, preferably in a clean configuration and arranged so as to join a 3° glide path not lower than 3000ft AAE whenever possible.

Cockpit, Operational Ground Staff

8.3.19.18.4 Obstacle clearance

Cockpit, Operational Ground Staff

8.3.19.18.4.1 IMC-descent / approach

In order to ensure safe terrain clearance, the published minimum flight levels/altitudes and intermediate approach altitudes must strictly be adhered to until a positive check over or in relation to the navigation aid (e.g. published VOR-Radial/DME-Position, etc.) indicates correct position for further descent or continuation of approach as stipulated on the IAC.

A MOCA/MORA lower than the respective MSA may be flown.

A MSA lower than a MOCA/MORA may only be flown when it can be clearly established that the aeroplane is within the defined sector/distance.

Following an ILS glide path on a direct approach using own navigation is only authorised when:

- Being established on localizer; and
- ILS glide path is intercepted within its coverage sector; and
- ILS glide path is being intercepted from below; or
- ILS glide path vs. height can be checked with ILS/DME or FMS distance calculation.

Cockpit, Operational Ground Staff

8.3.19.18.4.2 Descent under radar control

An ATC clearance for a FL/ALT below minimum cruising FL/ALT or MOCA/MORA respectively, may only be accepted if the aeroplane is positively identified and vectored by an approved radar (e.g. “radar contact” or “identified”). In this case, the radar controller is responsible for ensuring adequate terrain clearance while vectoring the aeroplane. However, without sufficient visual ground contact to the surrounding terrain (and always under IMC and at night) along any intended flight track the flight crew has to assure terrain / obstacle clearance by monitoring the aeroplane position.

Radar guidance on final approach is only authorised if SRE or PAR Minima are published on the IAC.

Where doubts exist about positive identification, no descent below applicable minimum FL/ALT shall be made.

When being radar-vectored to the final approach course, do not report “Established” or “Field in sight” until certain that the approach can safely be terminated without radar assistance.

Cockpit, Operational Ground Staff

8.3.19.18.5 Meteorological information

Latest available meteorological information shall be evaluated before commencing an approach. Due regard must also be given to the runway surface and environmental conditions. Full use shall be made of ATIS.

For landing, latest wind information as given by ATC shall be used in regard to operational limitations/recommendations. Wind values derived from other sources, e.g. INS, FMS, smoke trails on ground, etc. may be taken into account as deemed necessary.

Cockpit, Operational Ground Staff

8.3.19.18.6 Approach authorisation

Cockpit, Operational Ground Staff

8.3.19.18.6.1 General

An IMC approach shall only be commenced when the expected meteorological conditions offers a realistic chance for a successful landing.

Cockpit, Operational Ground Staff

8.3.19.18.6.2 Ceiling / vertical visibility

An IMC approach may be commenced or continued down to DA/H respectively MDA/MDH according to the IAC irrespective of the reported ceiling/vertical visibility.

Cockpit, Operational Ground Staff

8.3.19.18.6.3 Commencement and continuation of approach

The flight crew may commence an instrument approach regardless of the reported RVR/ Visibility.

If the reported visibility (VIS) or controlling RVR for the runway to be used for landing is less than the applicable minimum, then an instrument approach operation shall not be continued:

- past a point at which the aeroplane is 1'000 ft above the aerodrome elevation; or
- into the final approach segment (FAS) if the DH or MDH is higher than 1'000 ft

In the case where no RVR is reported, and the reported VIS is less than the applicable minimum, but the converted meteorological visibility (CMV) is equal or greater than the applicable minimum, then the instrument approach can be continued to the DA/H or MDA/H.

If, after passing 1'000 ft above the aerodrome, the reported RVR/VIS falls below the applicable minimum, the approach may be continued to DA/H or MDA/H.

The approach may be continued below DA/H or MDA/H and the landing may be completed provided that the required visual reference is established at the DA/H or MDA/H and can be maintained.

For circling approaches, the visibility must be at least 3’400m or according IAC, whichever is higher.

The approach shall not be continued below 1'000 ft AAE unless the aircraft landing performance assessment indicates that a safe landing can be made with the runway surface condition information available. Refer to OM A Application of performance calculation.

Cockpit, Operational Ground Staff

8.3.19.18.7 Descent below intermediate approach altitude

Descent below the intermediate approach altitude on an instrument approach shall only be initiated if the aeroplane is established on the final approach track.

On a NPA, the QNH shall be rechecked with ATC shortly before commencing the final approach. An aeroplane is considered being established on the final approach track if its position is within the lateral tracking tolerances according OM A Tracking Tolerances on Final Approach.

Cockpit, Operational Ground Staff

8.3.19.18.8 Tracking Tolerances on Final Approach

<table>
<tr><th>Instrument approach</th><th>Maximum lateral tolerance</th><th colspan="2">Maximum vertical tolerance</th></tr>
<tr><td>ILS
GLS</td><td rowspan="2">half scale deflection</td><td colspan="2">The deviation from the vertical path shall not exceed:
• half scale deflection below at any time
• half scale deflection above when below 1000 ft AAE.</td></tr>
<tr><td>LOC</td><td rowspan="2">Approach operations without advisory VNAV guidance:
Step-down fixes, if any, shall be crossed at or above the pub-</td><td rowspan="2">Approach operations with advisory VNAV guidance:
Calculated by on-board equipment. The vertical path calculated by on-board equipment shall</td></tr>
<tr><td>VOR</td><td>± 5° of the required radial</td></tr>
</table>

Instrument approach	Maximum lateral tolerance	Maximum vertical tolerance	
NDB	± 5° of the required QDM/QDR bearing	lished minimum altitudes.	crossstep-down fixes, if any, at or above the published minimum altitudes. The deviation from the vertical path on final approach shall not exceed: • – 75 ft at any time • + 75 ft when below 1000 ft AAE
RNP (LNAV)	½ RNP value L/R (corresponds to 0.15 NM L/R) **Note**: Brief deviations (e.g.overshoots or under shoots during and immediately after turns) up to a maximum of 1 time the RNP value L/R is allowed.		
RNP (LNAV/VNAV)		On final approach, the deviation from the vertical path shall not exceed: • – 75 ft at any time • + 75 ft when below 1000 ft AAE.	

The desired vertical path shall be followed in a stabilised manner, without significant vertical path changes (CDFA technique). Use of flight director is recommended.

Cockpit, Operational Ground Staff

8.3.19.18.9 Stabilised approach operation

The aeroplane shall be stabilised on the final approach along the approach path. The goal is to establish and maintain a constant angle of the glide path towards a predetermined point on the landing runway at a constant speed and power setting corresponding to the landing configuration.

To be stabilised, all of the following conditions or flight parameters must be achieved latest upon reaching 1000 ft AAE and maintained thereafter:

- All checklists completed
- Correct vertical flight profile
- Rate of descent in line with the correct vertical flight profile
- Approach speed (AEO & OEI: +10 / -5 kts)
- Thrust according to the desired rate of descent, speed and wind conditions
- Configuration (landing flaps and gear down and locked)

- Lateral tracking based on navaid guidance according to OM A Tracking Tolerances on Final Approach or the runway centerline in case of a visual approach

If the aircraft is not stabilised at the stabilisation height of 1000 ft AAE or according to the exceptions below, a go-around shall be initiated.

Exceptions

Speed
If the aircraft speed does not meet the stabilisation criteria at 1000 ft AAE in VMC but can reasonably be expected to be achieved by 500 ft AAE and the thrust setting is appropriate for achieving this, the approach may be continued. Stabilisation in speed shall then be achieved no later than 500 ft AAE. However, it shall always be aimed at being stabilised latest at 1000 ft AAE.

Profile
If required by the approach design, the following types of approaches may be stabilised below 1000 ft AAE:

- Visual Approach Pattern (refer to FCOM PRO-NOR-SOP-APPROACH-AIRCRAFT GUIDANCE MANAGEMENT-VISUAL APPROACH (A320/A340))
- Visual Approach with prescribed track
- Circling Approach

These approaches should be stabilised and the landing checklist completed at the earliest possible moment if 1000 ft AAE is not feasible.

For airports with known special weather conditions, a special briefing shall be performed. A temporary destabilisation of the approach is only acceptable if the stabilisation criteria are again met at a decision point defined during the briefing. Refer to Airport Briefing/CCI for airports with known special weather conditions.

Stabilised Callout

As soon as the aircraft is stabilised, the PF shall confirm this condition by calling out "stabilised".

Cockpit, Operational Ground Staff

8.3.19.19 Downgrading of equipment relevant for the approach

Cockpit, Operational Ground Staff

8.3.19.19.1 Deficiency reporting of ground equipment

ATC should ensure that flight crews are well informed about changes in performance category of the ILS glide path and localizer, as well as status of aerodrome lighting and RVR-assessment equipment before the aeroplane passes the FAF/FAP.

After passing the OM or 1000ft/AAE, information given to flight crews is limited to:

- Total failure of aerodrome lighting facilities, e.g. APL, CLL, etc.; and
- changes in performance Category of ILS glide path and/or localizer.

The CMD must decide whether the approach can be continued or a missed approach has to be initiated according to the minimum requirements for the use of temporarily failed or downgraded ground equipment according OM A Effect of downgraded or failed ground equipment.

Cockpit, Operational Ground Staff

8.3.19.19.2 Downgrading of aircraft equipment

For downgrading of relevant aircraft equipment, refer to the respective approach in FCOM PRO-NOR-SOP-APPROACH-AIRCRAFT GUIDANCE MANAGEMENT (A320 / A340).

Cockpit, Operational Ground Staff

8.3.19.20 Decision altitude/height (DA/H) and minimum descent altitude/height (MDA/H)

Upon reaching the respective minimum, the CMD shall decide if:

- The flight can safely be continued until landing; or
- a missed approach has to be initiated.

All 2D approaches have to be flown with the Continuous Descent Final Approach (CDFA) technique according FCOM PRO-NOR-SOP unless level flight during a specific approach is approved by OC and the respective Authority. If an MDA is published on the approach chart, it shall be used as DA without an increment for height loss.

Level flight is authorised only for circling approaches upon reaching MDA/H.

Descent below DA/H or MDA/H is considered safe only, if:

- Visual reference to the ground backed up by instrument indications permit assessment of aeroplane position and deviation tendency in relation to the ideal approach path; and
- quality of the visual ground cues indicates that they will prevail for the remaining phase of approach and landing; and
- stabilised aeroplane conditions can be maintained avoiding duck-under, excessive sink rates and high bank angles.

Cockpit, Operational Ground Staff

8.3.19.21 Visual part of final approach

A pilot may not continue an approach below MDA/H unless at least one of the visual references according OM A Visual references for all categories of approaches for the intended runway is distinctly visible to the pilot.

Cockpit, Operational Ground Staff

8.3.19.22 Visual approach

This type of approach may be performed, e.g. to shorten an instrument approach. The following conditions must be fulfilled:

- VMC;
- The aerodrome or landing runway can continuously be kept in sight or the aeroplane's position can be identified by known geographical reference points;
- Terrain clearance must be guaranteed by visual reference at all times;
- ATC clearance is obtained.
- Traffic separation can be maintained by the flight crew.

> Experience shows that visual assessment of terrain clearance during night-time can be difficult or impossible, depending on illumination.

Refer to FCOM PRO-NOR-SOP-APPROACH-AIRCRAFT GUIDANCE MANAGEMENT- VISUAL APPROACH (A320 / A340).

Cockpit, Operational Ground Staff

8.3.19.23 Circling approach

A circling approach is the visual phase of an instrument approach to bring the aeroplane into position for landing on a runway which is not suitably located for a straight-in approach. Such approaches require an accurate approach pattern and utmost attention. The circling area may be limited to specific sectors.

After initial visual contact, the basic assumption is that the runway environment (i.e. runway threshold, approach lights etc.) should be kept in sight during the circling.

At the beginning of the level flight phase at or above the MDA/H, the instrument approach track shall be maintained until the pilot:

- estimates that visual contact with the runway of intended landing or the runway environment will be maintained during the entire circling procedure;
- estimates that the aircraft is within the circling area before commencing circling; and

- is able to determine the aircraft's position in relation to the runway of intended landing with the aid of the appropriate visual references; and
- the aircraft is intercepting a glide path of approximately 3° to the runway of intended landing.

The PF is primarily looking out in order to remain within the safe area and to prepare for a proper line-up for final approach. The PM will primarily monitor flight and navigation instruments apart from looking out.

For the description of the protected area during circling approach (incl. Speeds) refer to Lido Route Manual 1.4.5.6.2.5.

Due to the small protected area, circling approaches based on FAA TERPS criteria (US Standard for Terminal Instrument Procedures, refer to Lido Route Manual 1.4.6) may only be flown if all of the following conditions are fulfilled:

- Daylight;
- VMC;
- No clouds below circling minimum.

Cockpit, Operational Ground Staff

8.3.19.24 Landing

Cockpit, Operational Ground Staff

8.3.19.24.1 Runway

Cockpit, Operational Ground Staff

8.3.19.24.1.1 Choice of runway

In principle the runway assigned by ATC has to be used for landing. Nevertheless the CMD shall always check whether this runway presents the required safety margin under the actual weather and runway conditions.

Cockpit, Operational Ground Staff

8.3.19.24.1.2 Application of performance calculation

The approach, landing and missed approach performance data must be assessed by the CMD before commencement of approach based on:

- the runway and approach procedure used;
- the latest available WX information and RWY surface conditions reports (RCR) or equivalent information based on the RCR for the ETA. When different RWYCCs are reported along the required runway length, the most conservative value shall be used for the determination of the LDTA;
- the predicted aircraft landing mass;

- the aircraft approach/landing configuration applied;
- approach speed at threshold;
- eventual adjustments to the landing distance, such as autoland; and
- the deceleration means applied (e.g. autobrake, REV, etc.)

The assessment should be carried out when the weather report and the RCR are obtained, usually around top of descent.

Note: If the planned duration of the flight does not allow the flight crew to carry out the assessment in non-critical phases of flight, the assessment should be carried out before departure.

When meteorological conditions may lead to a degradation of the runway surface condition, the assessment shall include consideration of how much deterioration in runway surface conditions is acceptable, so that a quick decision can be made prior to landing.

The flight crew shall monitor the evolution of the actual conditions during the approach, to ensure that they do not degrade below the condition that was previously determined to be the minimum acceptable.

In case of in-flight failure or emergency, or any other abnormal situation which requires an overweight landing, the certified maximum landing mass may be exceeded.

The one engine out missed approach climb gradient must be equal to or greater than 2.5% (2.7% for A340) or the published gradient, whichever is the greater, except in case of emergency.

The assessment of the landing distance at time of arrival (LDTA) shall ensure that sufficient stop margin is available for a safe landing.

The assessment should address the following elements:

- Verification that FLD ≤ LDA
- Determination of the minimum acceptable runway surface condition in case of expected deterioration

When landing on a dry RWY, the assessment of the LDTA may be carried out by confirming that the assumptions made at the time of dispatch are still valid as they contain adequate margin.

In case of any uncertainty regarding the LDTA (e.g. in case of small stop margin due to slippery runway conditions, runway length etc.), a performance calculation shall be done.

When landing on a wet or contaminated RWY a performance calculation shall be done in any case.

Whenever required, the performance calculation shall be done with FS+ landing module (inflight).

Cockpit, Operational Ground Staff

8.3.19.24.2 Visual ground facilities for landing

Cockpit, Operational Ground Staff

8.3.19.24.2.1 VASI / PAPI

The flight path defined by a standard system shall be closely followed. Due to system tolerances as well as differences in eye to wheel height of various aeroplane types, deviations from the ideal glide-path might occur close to ground.

Standard VASI/PAPI shall only be used down to heights specified in the RM depending on system and aeroplane type. When an ILS glide-path is available, VASI/PAPI should be disregarded, as guidance to both paths may not be compatible. Under certain weather conditions (smog, haze, dust), the red light propagation may be reduced and the white output may dominate. Refer to RM/LAT “General Information”.

Cockpit, Operational Ground Staff

8.3.19.24.2.2 Optical illusions

Illusions especially occur in reduced visibility and at night. Darkness camouflages and the eye looses much of its perception.

Following optical illusions could lead to critical situations:

- Fascination occurs when a pilot does not succeed in perceiving clearly defined stimulus situations, his attention being too much focused to one object or one task. Fatigue, stress or emotional disturbance will increase this tendency.
- Slope of the approach terrain can seriously affect the pilot's perspective. If the terrain slopes upwards, the pilot may perceive that his glide path is steeper than in reality and v.v.
- Runway slope may also produce various illusions, as the pilot normally tries to follow the 3° glide path relative to the runway plane. Thus, for an uphill-slope the tendency will be to approach too flat and v.v.
- Rain and fog can affect distance and approach angle judgements of the pilots.

Utmost caution is necessary in low-fog conditions where the lighting is clearly visible from higher altitudes. In the top of the ground fog, however, the visibility might suddenly be reduced to a very low value giving the impression of a pitch-up tendency. A subsequent nose down correction could lead to a dangerous situation. A yellowish glow created by the lighting must be expected which hampers the pick-up of visual cues for adequate and timely assessment of attitude and displacement.

Avoid the consequences of illusions:

Continuously use and cross-check all available flight and navigation instruments during the whole approach.

Be aware of the intensity by which the approach/runway lights are operating and of the reduced intensity if dimming is requested. The relevant procedures are laid down in the RM/LAT “Approach Lighting Systems”.

Cockpit, Operational Ground Staff

8.3.19.24.3 Height over threshold

The landing threshold (runway threshold or displaced threshold) shall normally be crossed either on the electronic glide-path or at 50ft to 35ft RA.

Depending on aeroplane type, some ILS installations provide only marginal wheel-height clearance over runway threshold. If a small height correction is made on short final to cross the runway threshold at normal wheel-height, due consideration must be paid to the available runway length. To prevent uncontrolled or hard landings, avoid any destabilisation of pitch and ROD before starting the flare, otherwise consider to initiate a missed approach before starting the flare.

CAT III ILS installations are certified for Autoland procedure.

CAT II ILS installations may not be certified for Autoland procedure if the approach angle exceeds FCOM limits (e.g. LTFE).

Autoland on a CAT I ILS is only authorised if the approach chart shows approval for Autoland procedure.

Cockpit, Operational Ground Staff

8.3.19.24.4 Touchdown

The desired touchdown zone is at a distance between 300m to 600m from the landing threshold. Corresponding runway markings, position of VASI-bars and/or lighted touchdown wing bars are of great assistance to determine the correct aiming point of 300 meters.

If touchdown cannot be accomplished within the desired touchdown zone, a missed approach shall normally be initiated with due regard to the remaining runway length. Spin-up of engines, aeroplane speed and aeroplane attitude have to be considered carefully.

Every effort shall be made to land on and along the runway centerline as this provides the best margin for corrections in case of alignment difficulties after touchdown.

Cockpit, Operational Ground Staff

8.3.19.24.5 Landing roll

Immediate brake application for deceleration is normally required. Braking may only be delayed if compatible with:

- remaining runway length and friction conditions;
- wind components, touchdown speed and aeroplane gross mass;
- availability of reverse.

The thrust reverser system should be used on every landing, at least in the idle reverse position. Since reverse thrust is most effective at high aeroplane speed, it should be applied after touchdown as soon as the aeroplane is in a straight landing roll, and it should be set symmetrically. Caution must be executed when only asymmetric reverse is available, e.g. on landing with an inoperative engine.

On WET runways (runway surface condition GOOD), the flight crew may select REV IDLE, if all the following conditions are satisfied:

- A landing distance LD assessment has been made with the following parameters:
  - MEDIUM TO POOR landing performance level for the in-flight landing distance (LD) computation;
  - Manual braking;
  - No reverser credit.

The result of this landing distance (LD) assessment is within the LDA (the FLD may be >LDA).

Cockpit, Operational Ground Staff

8.3.19.25 Missed Approach

Cockpit, Operational Ground Staff

8.3.19.25.1 General

The applicable Missed Approach Procedures (MAP) are published on the IAC.

The decision to initiate a missed approach can be taken either by the PF or the PM and shall be clearly announced with the command: “Go-around”.

Once the decision to perform a missed approach has been made during final approach, no decision to abandon the missed approach shall be taken.

The missed approach shall be flown by the same pilot who has flown the approach. Avoid a handover of controls at this stage of flight.

Cockpit, Operational Ground Staff

8.3.19.25.2 Missed approach initiation

If the required visual reference has not been established upon reaching DA/H respectively MDA/H, the prescribed MAP shall be initiated:

- For 3D approaches and 2D approaches flown with CDFA technique immediately when reaching DA/H;
- For 2D circling approaches latest when passing the MAPt of the approach procedure. For LLZ-approach, the middle marker normally serves as the MAPt.

A time check over the FAP/FAF serves as a back-up in case of non-availability of the respective navigation aid/fix, or when no other means is available to define the MAPt.

A missed approach shall also be initiated:

- if the reported visibility/RVR or RVR/CMV overhead the outer marker or equivalent is below the applicable minimum; or
- if it appears to any one of the pilots that the approach success is doubtful or the flight safety is jeopardised, e.g. approach not stabilised or the localizer and/or glide-path tolerances are exceeded; or
- if at any time after descent below DA/H respectively MDA/H visual references cannot be maintained; or
- upon instructions of the ATC; or
- if any element of the ground navigation system or the required airborne equipment becomes inoperative or is suspected to be malfunctioning. This is no more relevant after passing the alert height during a CAT III approach if a “Fail Operational” flight guidance system is used. (CAT III DUAL).
- if the appropriate malfunction checklists are not completed at 1'000 ft AAE.

All engines operating:

- The thrust reduction may be performed at any reasonable moment during the missed approach.
- The EDW standard acceleration altitude is 1'500 ft AAE unless topography or instruction on the IAC require a higher altitude.

Cockpit, Operational Ground Staff

8.3.19.25.3 Missed approach from precision-approach

Normally proceed to the middle marker or equivalent fix/position before following the published MAP.

Cockpit, Operational Ground Staff

8.3.19.25.4 Missed approach from non-precision approach

Proceed overhead the published MAPt before following the published MAP.

Cockpit, Operational Ground Staff

8.3.19.25.5 Missed approach during visual circling

If visual reference is lost while circling to land from an instrument approach the missed approach specified for that particular procedure must be followed. The transition from the visual (circling) manoeuvre to the missed approach should be initiated by a climbing turn towards the landing runway, to return to the circling altitude or higher, immediately followed by interception and execution of the missed approach procedure. The indicated airspeed during these manoeuvres shall not exceed the maximum indicated airspeed associated with visual manoeuvring.

The circling manoeuvre may be carried out in more than one direction. For this reason, different patterns are required to establish the aircraft on the prescribed missed approach course depending on its position at the time visual reference is lost.

It is of utmost importance to inform ATC without delay about intended missed approach course, especially where ATC Radar Service is provided in order to conform to radar vectors instead of the published MAP.

Cockpit, Operational Ground Staff

8.3.19.25.6 Missed approach 1 engine-out

The MAP published on the IAC is normally based on a climb gradient of 2.5% (2.7% for A340). If obstacles around an aerodrome so require, an even higher climb gradient may be used. Generally, a 2.5% (2.7% for A340) gradient will in almost any case be exceeded during an all-engines missed approach. Nevertheless, it shall be verified that the expected landing mass of the aeroplane allows a missed approach with a climb gradient equal to or greater than the applicable missed approach gradient in the one-engine inoperative missed approach configuration and speed. This applies especially for 2-engine aeroplanes. For such critical aerodromes 1-engine-out minima are additionally published on the IAC based on climb performance 1-engine out, maximum landing mass and standard conditions for temperature and pressure.

Cockpit, Operational Ground Staff

8.3.19.25.7 Second approach

Another approach after missed approach due to meteorological reasons shall only be commenced if the CMD has reason to believe that a second approach will lead to a successful landing. More than two approaches shall only be made if the meteorological conditions have considerably improved, giving greater probability of a successful landing.

Cockpit, Operational Ground Staff

8.3.20 Malfunctions and emergencies

Cockpit, Operational Ground Staff

8.3.20.1 General

In case of system failure or degradation occurring in flight, adequate procedures are given in the FCOM, FCTM and on the ECAM as applicable.

Whenever a procedure calls for “LAND ASAP”, the seriousness of the situation and selection of a operational aerodrome are to be considered. However, if a fire, smoke, dual hydraulic or electrical problem was encountered on the aeroplane, a landing at the nearest suitable aerodrome is recommended.

In any case, the CMD shall not decide to land at a operational aerodrome instead of landing at the nearest suitable aerodrome unless, he is satisfied that the course adopted, is as safe as landing at the nearest suitable aerodrome and he has taken into account factors which may affect the safety of the aeroplane.

Cabin, Cockpit, Operational Ground Staff

8.3.20.2 Structured decision making

Proper analysis and sound decision-making are core tasks for personnel involved in flight operations. Doing so in a structured manner will facilitate the task. It is recommended to apply the following scheme for problems which require in-depth analysis: “SPORDEC”

S	Situation catch	Get a general overview. Is the problem vital? Is it time-consuming? Does it require priority? Who will be involved?
P	Preliminary actions	Actions and measures which might improve the situation but which do not prevent further decisions. Examples Flight Crew: Squawk 7700, Seat Belt Signs ON, ordering of fire brigade, declaring an emergency, ordering the cabin crew to take their seat, stop climb and level-off, inform OCC etc. Examples Cabin Crew: Basic life support, smoke protection, fire fighting
O	Options	Analyse available options. Examples Flight Crew: Continue on the flight plan route, divert to an alternate or return to home base. Example Cabin Crew: Consider other sensible and appropriate procedures and measures.
R	Risks and benefits	For each option, the associated benefits and risks shall be evaluated.
D	Decision	Decision of the responsible leader on actions to be taken.

E	Execution	It is of utmost importance that the decision is announced and tasks are delegated by the responsible leader clearly. All involved personnel must know what they are expected to do.
C	Controlling	Observe the progress of actions. Does the situation develop as foreseen? If not, or if new factors show up, re-initialize the SPOR-DEC scheme.

The NITS scheme will help any crew member to give accurate information to the other crew members, passengers, ATC and/or other parties in case of abnormal operations.

N	Nature	Nature of the emergency Example: Engine fire, fire in the cabin, decompression, technical problem etc.
I	Intention	Intention of the crew member Example Flight Crew: Whether to make an emergency landing or ditching, whether to divert, continue or return to base. Example Cabin Crew: Measures already taken or to be taken in the cabin.
T	Time	Time needed to address the situation, time remaining airborne, time available for actions.
S	Special Instructions	Anything else the person receiving the briefing needs to know about the situation. Example: Any known factors affecting the situation (e.g. electricity, flight conditions etc.) or evacuation and exits to be used.

Cockpit, Operational Ground Staff

8.3.20.3 Malfunctions during take-off

Cockpit, Operational Ground Staff

8.3.20.3.1 General

The occurrence of a malfunction during takeoff calls for utmost co-operation of all flight crew members as well as for sound and quick decisions by the CMD. To be properly prepared for such situation, the take-off briefing is essential.

The decision whether to reject a take-off is influenced by several factors such as:

- Kind of failure/malfunction.
- Actual speed at time of failure / malfunction.
- Actual take-off mass in relation to the MTOM.

- Runway length/surface conditions, obstacles in climb-out path.
- Meteorological conditions, etc.

In order to be able to reach an adequate and quick decision, the CMD should make a mental review of the take-off parameters prior to starting the take-off. Accordingly, the following policy shall basically apply:

- Serious failures/malfunctions such as engine, fire, structural damage, flight-control failure etc., before V1 shall be handled according to the basic policy below.
- Minor malfunctions may justify a continued take-off especially in marginal conditions and speed close to V1.

There shall be no attempt to rectify a fault during the take-off run. To provide best support to the PF, the PM shall call out any detected malfunction occurring during take-off according FCTM-AOP-30-HANDLING OF ECAM/QRH/OEB (A320 / A340).

Cockpit, Operational Ground Staff

8.3.20.3.2 Engine failure before V1 / rejected take-off

In case of an engine failure before V1, the basic V1 concept provides protection to safely reject a take-off within the required runway length provided that:

- The first action is initiated with failure recognition and at the latest at V1.
- Max auto-braking or max manual braking is selected/applied.

> Use of full reverse thrust additionally decelerates the aeroplane which is considered on wet and contaminated runway for T/O. Refer to FCOM PER-EFB-TOF-30 (A320 / A340)

Therefore, the basic policy reads as follows:

- On a marginal wet runway and an engine failure near V1, the associated wet runway performance corrections might not entirely compensate for the increased stopping distance actually required. (Consider rubber, sand deposit, amount of water, etc.).

On the other hand, situations might arise where an aeroplane already above V1 would be exposed to greater risk during a continued take-off than during a rejected take-off, e.g. due to suddenly deteriorated aeroplane performance.

Cockpit, Operational Ground Staff

8.3.20.3.3 Engine failure after V1

The PF shall establish a safe climb-out and make a landing at a suitable or even emergency aerodrome. Track changes shall not be initiated below a point where the net take-off flight path has achieved a height equal to one half the wingspan but not less than

50 ft above the elevation of the end of the take-off run available. Refer to OM A Initiation of turns.

For the climb-out, one of the following solutions should be considered:

- If an EOSID is available, follow this engine failure climb-out procedure as it provides safe terrain clearance for the most critical case of an engine failure immediately after V1 at the maximum permissible take-off mass; or
- follow the normal SID or part of it as contained in the ATC clearance if the terrain clearance is not in doubt; or
- follow any route over known obstacles-free areas at the CMD's discretion.

If an engine fails during climb to cruising altitude, a landing at the aerodrome of departure should be considered. ATC shall be notified and informed about the intentions after experiencing an engine failure.

Cockpit, Operational Ground Staff

8.3.20.3.4 Engine failure in flight

Besides the engine-failure handling according to the appropriate procedures in the OM B, the performance aspects shall be assessed.

In the event of an engine failure/engine shut-down on a 2 engined aircraft prolonged flight is not recommended.

In the event of a single engine failure/engine shut-down on a 3 or 4 engined aircraft, the CMD may decide to proceed to another than the nearest aerodrome which is suitable for landing, if he determines such action to be as safe.

Whenever a second engine fails, on a 3 or 4 engined aircraft, a landing should be made as soon as possible.

Cockpit, Operational Ground Staff

8.3.20.3.5 Engine fire warning

An engine fire warning during take-off has to be handled operationally in the same way as an engine failure during take-off. It is the responsibility of the CMD to decide at what moment the engine has to be shut down.

Whenever in flight the fire warning system of an engine is found inactive, continuation to destination is at the CMD's discretion.

Cockpit, Operational Ground Staff

8.3.20.4 Gear related malfunctions

Cockpit, Operational Ground Staff

8.3.20.4.1 Tire and brake troubles

Experience has shown that blown tyres or structural failures on the landing gear during take-off may cause severe damage to other parts of the aeroplane such as wings, flaps, fuselage, engines, hydraulic and electrical systems. In cases of suspected or reported failures of this type and after getting airborne it is therefore recommended:

- to keep the landing gear extended, performance permitting, in order to avoid further complications such as jammed gear, wheel well fire or explosion;
- to ask via ATC for an inspection of the take-off area in order to obtain hints on possible damage and to avoid hazards caused by debris on the runway;
- to seek further information on possible damage, sign of fire and extent of damage through visual inspection of the aeroplane, and, if possible, from low-pass over the control tower.

Low landing mass is more favourable for a landing with damaged landing gear.

It will depend on the situation whether an emergency evacuation shall be prepared and performed. Additional precautionary measures may be advisable depending on the situation. The critical area around the landing gear should be avoided as far as possible for at least 20 minutes after landing.

Flight crew are encouraged to be rather restrictive with the decision to continue the flight, as damage may not show up immediately but may deteriorate the aeroplane's condition during continued flight.

Cockpit, Operational Ground Staff

8.3.20.4.2 Inability to retract the landing gear

If the gear cannot be retracted after take-off, the flight may land at the nearest suitable aerodrome or continue to planned destination at CMD's discretion. On re-planning the flight, consideration shall be given to:

- The weather enroute;
- the terrain enroute;
- the aeroplane's performance (also in the event of a subsequent engine failure);
- the trip length;
- the increased fuel consumption.

For possible further restrictions refer to FCOM PRO-NOR-SUP-LG-DN (A320 / A340).

Cockpit, Operational Ground Staff

8.3.20.4.3 Inability to extend the landing gear

If possible, a belly landing or landing with partially extended landing gear shall be delayed until rescue, fire fighting and medical personnel are reported to be ready for assistance.

As the value of runway foaming for landing is questionable, runway foaming should not be requested in order to have foam available for potential fire fighting after landing. However, the final decision lies with the CMD.

Cockpit, Operational Ground Staff

8.3.20.5 Miscellaneous

Cockpit, Operational Ground Staff

8.3.20.5.1 Hard landings

Suspected hard landings must be entered in the Tech Log and reported via IQSMS. A printout from the AIDS/ACMS is required for detailed information. Maintenance (MCC/T) shall be informed for further investigations before the continuation of the flight.

Cockpit, Operational Ground Staff

8.3.20.5.2 Overweight landings

In normal operations a landing with more than the maximum certified landing mass (“overweight landing”) is not authorised.

Under abnormal conditions, e.g. in case of technical malfunctions or due to safety reasons and after informing the ATC, the CMD may take any action deemed necessary, e.g. disregard any landing mass limitation.

An overweight landing has to be entered in the Tech Log and via IQSMS. Maintenance (MCC/T) shall be informed for further investigations before the continuation of the flight.

Cockpit, Operational Ground Staff

8.3.20.5.3 Explosive decompression and emergency descent

During flights at high levels, all flight crew members must be prepared for an explosive decompression of the cabin. An emergency descent must be initiated immediately, in order to protect passengers due to the limited availability of emergency oxygen. It has, however, to be considered that an emergency descent as such exposes the aeroplane, its occupants and other aeroplane in the area to further hazards.

When it becomes apparent that an emergency descent must be made, the aim must be to bring the aeroplane down rapidly to an altitude where the passengers can breathe normally. Do not make a steeper descent than the situation warrants. Recommended initial level-off altitude is 10'000 to 14'000ft, if terrain permits.

The OFP has to allow at any point either a descent along the planned track or a diversion via an escape route.

Cockpit, Operational Ground Staff

8.3.20.5.4 Fuel jettisoning

The following principles shall be followed:

- the procedures laid down in the FCOM (QRH) shall be adhered to;
- an ATS clearance shall be obtained;
- fuel should not be dumped below 6000 ft/GND;
- for ecological reasons fuel should preferably be dumped at an altitude as high as possible, clear of cities and towns, away from areas where thunderstorms or precipitation have been reported or are expected; and
- an IQSMS Report must be filed

Cockpit, Operational Ground Staff

8.4 Low Visibility Operations (LVO)

Cockpit, Operational Ground Staff

8.4.1 Concept

Low visibility operations (LVO) means any taxi, take-off (LVTO) and CAT II/III landing operations in conditions where visual reference is limited by weather conditions.

Categories of AWO and the associated minima are defined in OM A Flight Preparation Instructions.

Before commencing LVO, the CMD shall be satisfied that:

- The status of visual and non-visual facilities is as required.
- If LVPs are required for such operations, LVPs are in effect.
- The flight crew members are appropriately qualified.

The aeroplane shall not be operated below the limits indicated in the AFM and FCOM-LIM-Auto Flight System-Automatic Approach, Landing and Rollout (A320/A340).

The operating minima must not be less than those imposed by the country concerned.

For each aerodrome, approved minima are indicated in the Lido Route Manual.

Cockpit, Operational Ground Staff

8.4.2 Low visibility taxi

To minimise risks such as RWY incursion, ground collision, missing the correct taxiway etc. during LVP, the crew shall take the following actions:

- Reduce taxi speed to be able to stop within half the visibility range.
- Maximise awareness and avoid distractions during the entire taxi phase.

In case of a loss of situational awareness, the aeroplane shall be stopped and the situation clarified (e.g. ground radar, follow-me car etc.).

Cockpit, Operational Ground Staff

8.4.3 Low visibility take-off (LVTO)

Cockpit, Operational Ground Staff

8.4.3.1 General

A low visibility take-off (LVTO) is a take-off where the RVR is less than 550 m. LVTO with an RVR of less than 400 m require specific approval.

A LVTO with an RVR of less than 400 m shall be performed by the CMD.

A take-off alternate is required when the meteorological conditions at the aerodrome of departure are below the required OEI landing minima. Refer to OM A Planning requirements for aerodromes.

Cockpit, Operational Ground Staff

8.4.3.2 Minima for take-off

The minimum RVR for take-off is independent of the aeroplane type and equipment, except for very low RVR. The take-off minimum is determined by the aerodrome installation, lighting, RVR measurements etc.

The minima are stated in the Lido Route Manual AOI for each approved runway direction.

A take-off shall only be performed if the report on actual visibility is at or above the take-off minimum and the CMD has adequate visual guidance during take-off.

The CMD may assess the actual runway visibility:

- If no RVR is available.
- An inaccuracy of the transmissometers is reported.
- A corresponding authorisation is noted in the Lido Route Manual.

The actual runway visibility is assessed by counting the number of visible edge or centreline lights after verifying the distance between the lights with the tower or as stated in the Lido Route Manual. The assessed visibility must be reported to the tower before commencing the take-off. For special state regulations, refer to the Lido Route Manual CRAR.

Cockpit, Operational Ground Staff

8.4.3.3 LVTO with RVR below 400m

EDW has obtained operational approval to conduct LVTO with a minimum according to the requirements stated in OM A RVR/visibility for take-off.

A visual segment of 90 m is required before take-off with the minimum RVR.

EDW does not hold an approval for LVTO below 125m RVR.

Cockpit, Operational Ground Staff

8.4.4 CAT II/III approach

For CAT II/III approaches CM1 shall be the PF.

Cockpit, Operational Ground Staff

8.4.4.1 Automatic Landing - Statistic

The quality of CAT II/III equipment is assessed in compliance with FOCA requirements and to ascertain continued satisfactory operations. It is the CMD's responsibility to complete a tech log entry in to the ELB for each satisfactory/unsatisfactory automatic landing-approach. If unsatisfactory and selected "not ok" in the ELB, a complaint is automatically created and stored in the Complaint Review section. The complaint has to be edited and must contain following information:

- Airport/RWY
- Height of occurrence
- Reason for downgrade (if known)

In case of an unsatisfactory low visibility approach an IQSMS report has to be filed containing at least the above required information and additionally specify if pilot intervention was required. Following categorisation are available:

- Go around due to autoland unsatisfactory - aircraft equipment
- Go around due to autoland unsatisfactory - ground equipment
- Go around due to autoland unsatisfactory - ATC instruction
- Go around due to autoland unsatisfactory - other

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8.4.4.2 CAT II

CAT II weather minima have been established to provide sufficient visual references at DH to permit a manual landing (or a go-around) to be executed (this does not mean that the landing must be flown manually).

Refer to OM A CAT II approach minima for operating minima.

Cockpit, Operational Ground Staff

8.4.4.3 CAT III

CAT III is divided in:

- CAT III (No DH, DH 0 - 49 ft)
- CAT III (DH 50 - 99 ft)

An automatic landing system is mandatory to perform CAT III operations. Its reliability must be sufficient to control the aeroplane to touchdown in CAT III (DH 50 - 99 ft) operations and through roll-out to a safe taxi speed in CAT III (No DH, DH 0 - 49 ft). Refer to OM A Flight Preparation Instructions for operating minima

> An automatic landing system is an equipment providing automatic control of the aeroplane during the approach, landing and roll-out and is not related to particular weather conditions. For training, autoland approaches may be flown even with LVP not in force. In this case, the landing runway must be in sight latest when passing the CAT I DA/DH and the PF must be ready to take over controls at all times.

Cockpit, Operational Ground Staff

8.4.5 Approach authorisation

Cockpit, Operational Ground Staff

8.4.5.1 CAT II and III approaches

The touchdown RVR shall be the controlling RVR.

If the touchdown RVR is not reported, then the midpoint RVR shall be the controlling RVR.

Where the RVR is not available, CMV shall be used except for the purpose of continuation of an approach in LVO in accordance with OM A Conversion of visibility to CMV.

Cockpit, Operational Ground Staff

8.4.6 Visual references for all categories of approaches

Cockpit, Operational Ground Staff

8.4.6.1 Non precision and CAT I

A pilot may not continue an approach below MDA/MDH unless at least one of the following visual references for the intended runway is distinctly visible and identifiable by the pilot:

- Elements of the approach light system
- RWY threshold
- RWY threshold markings
- RWY threshold lights
- RWY threshold identification lights
- The visual glide slope indicator
- RWY touch down zone or touch down zone markings
- RWY touch down zone lights
- RWY edge lights

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8.4.6.2 CAT II

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 is attained and can be maintained.

This visual 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.

Cockpit, Operational Ground Staff

8.4.6.3 CAT III

CAT III DH	Requirements
50 - 99 ft	A segment of at least 3 consecutive lights being the centreline of the approach lights, or touchdown zone lights, or runway centre-line lights, or runway edge lights or a combination of these is at-

CAT III DH	Requirements
	tained and can be maintained.
0 - 49 ft	At least one centreline light is attained and can be maintained.
No DH	No requirement for visual contact with the runway prior to touch-down.

Cockpit, Operational Ground Staff

8.4.6.4 Flight control system

Cockpit, Operational Ground Staff

8.4.6.4.1 Fail passive

Refer to FCOM PRO-NOR-SRP-01-70 (A320 / A340).

Cockpit, Operational Ground Staff

8.4.6.4.2 Fail operational

Refer to FCOM PRO-NOR-SRP-01-70 (A320 / A340).

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8.4.6.5 Decision height / altitude

A specified height or altitude in the CAT II/III approach at which a missed approach must be initiated if the required visual references (refer to OM A Visual references for all categories of approaches) to continue the approach have not been established.

The DH is measured by means of RA. When necessary, the published DH takes into account the terrain profile before runway threshold (CAT II: RA setting may be lower than 100ft). Refer to OM A Visual references for all categories of approaches.

Cockpit, Operational Ground Staff

8.4.6.6 Alert height

A specific radio height above touch down in a CAT II/III approach requiring a fail-operational landing system, after which a failure in one of the required redundant operational systems would be ignored and the approach continued.

- Above AH, a go-around must be initiated if a failure affects the fail-operational automatic landing system. Refer to FCOM PRO-NOR-SRP-01-70-Landing Categories (A320 / A340).
- Below AH, the approach may be continued (except if "AUTOLAND" red warning is triggered).

The AH is only linked to the probability of failures of the automatic landing system. Airbus procedures include both, AH and DH concepts for all fail-operational CAT III operations.

Cockpit, Operational Ground Staff

8.4.6.7 Runway visual range

Cockpit, Operational Ground Staff

8.4.6.7.1 RVR concept

CAT II/III operations require updated and reliable reports of the visibility conditions in the touchdown zone and along the RWY.

RVR measurements replace the use of reported visibility values, because the visibility observations are often far away from the touchdown zone of the RWY.

RVR is not the Slant Visual Range (SVR). SVR is the range over which a pilot in the final stages of approach or landing can see the markings or the lights as described in RVR definition.

Cockpit, Operational Ground Staff

8.4.6.7.2 RVR measurements

For CAT II/III operations, the RVR measurements are provided by a system of up to three transmissometers and account for the effects of ambient background lights and the intensity of the runway lights.

Typically, transmissometer systems are located to provide RVR measurements associated with three basic portions of a RWY.

- The touchdown zone (TDZ);
- The mid-runway portion (MID); and
- The roll out portion or stop-end.

Cockpit, Operational Ground Staff

8.4.6.8 ATC procedures

CAT II/III operations require special procedures. They are called low visibility procedures (LVP), containing:

- Procedures for ATC to be informed of all degradations of ILS performance and to inform the crew if necessary;
- Procedure for ATC to be informed of all degradations in visual aids and to inform the crew if necessary;
- Procedures for the protection of the obstacle free zone (OFZ) by the control of ground movements;
- Procedures for the protection of the ILS critical area and the ILS sensitive area by control of the ground movements and adequate separation between 2 aeroplanes on approach, or 1 aeroplane on approach and another taking-off;
- Procedures for maintenance, security and meteorological services.

Cockpit, Operational Ground Staff

8.5 ETOPS

Edelweiss does not operate ETOPS aeroplanes and therefore this chapter is not applicable.

Cockpit, Operational Ground Staff

8.6 Use of the MEL and CDL

Cockpit, Operational Ground Staff

8.6.1 Minimum equipment list (MEL)

The EDW Company MEL specifies systems or components which must be fully operative or which may be completely or partially inoperative without affecting flight safety or seriously reducing passengers comfort.

It provides an aid for flight and maintenance crews in their efforts to dispatch an aircraft on schedule from any station.

The MEL is based on the EASA Master Minimum Equipment List (MMEL), the FOCA and company requirements.

The MEL is the responsibility of the Chief Technical Officer and is established by the Technical Pilot. All items which are related to the airworthiness of the aircraft and not included in the MEL are automatically required to be operative.

Cockpit, Operational Ground Staff

8.6.2 Configuration deviation list (CDL)

The CDL contains additional limitations for operation of the aeroplane with secondary airframe or engine parts missing. CDL items are extracted from the certification authority approved AFM.

A CDL item is handled in the same way as a MEL item.

Cockpit, Operational Ground Staff

8.6.3 MEL Application

The provisions of the MEL are applicable until the point when an aeroplane begins to move under its own power for the purpose of preparing for take-off. Any decision to continue a flight following a failure or unserviceability which becomes apparent after the commencement of a flight must be subject to pilot judgement and good airmanship. Special attention must be given to items affecting e.g. aircraft performance, approach capability, navigation performance etc. Performance and Fuel recalculations may be necessary. The Commander may continue to make reference to and use the MEL as appropriate. Consideration must also be given to dispatch requirements for the return flight, especially if operating towards a station without adequate maintenance coverage. If in doubt, contact MCC/T. Refer to the MEL Preamble and MEL chapter “HOW TO USE” for a more in depth description about the MEL.

Cockpit, Operational Ground Staff

8.6.4 Maintenance Responsibility

Close co-operation is required between cockpit crew and maintenance in order to determine the best course of action to be taken when a system or component failure has occurred.

The responsibilities in such a case are laid down below:

- to make every effort to have the aircraft fully serviceable prior to scheduled departure, including items not required by the MEL.
- to inform the CMD as soon as possible when it becomes evident that inoperative equipment cannot be made serviceable before scheduled time of departure.
- to inform OCC if CAT III and RVSM capability is affected or a major component is inoperative that could affect operations planning (e.g. fuel planning) for further aircraft dispatch.
- to ensure that the actual cause of failure has been definitely localised and isolated according to the appropriate procedures in the maintenance manual so as to be sure that the failure will not in any way affect the operation and serviceability of other associated equipment required for the flight.
- to placard an inoperative system or component in the cockpit in a suitable manner. The associated limitations must be listed on a placard affixed on the pilot's instrument panel in clear view of the pilots.
- to make an entry in the Briefing Card to indicate inoperative equipment and consequences of flight operations. In addition, EDW OCC will be informed.

Cockpit, Operational Ground Staff

8.6.5 Pilot-in-Command Responsibility

Cockpit, Operational Ground Staff

8.6.5.1 General

The CMD has to be aware of all operational and technical consequences of the failure concerned and has to ensure that the faulty system is adequately isolated or deactivated. In case of doubt, advice must be requested from MCC/T.

Cockpit, Operational Ground Staff

8.6.5.2 Acceptance by the Pilot-in-Command

The decision to accept the carried forward item allowed by the MEL/CDL remains the responsibility of the CMD. This acceptance is indicated by accepting the aircraft in the ELB.

An aeroplane must not be dispatched with multiple MEL/CDL items inoperative without the CMD having first determined that any interface or interrelationship between inoperative systems or components will not result in degradation in the level of safety and/or undue increase in crew workload. The exposure to additional system failures during continued operation with inoperative systems or components must also be considered in determining that an acceptable level of safety is maintained.

The CMD may require a repair although dispatch is permitted by MEL and even though departure will be delayed. Such a decision is allowed in coherence with the actual or expected flight conditions. The reason for such a decision must be reported through IQSMS.

The CMD is not authorised to commence a flight with less equipment than required by the MEL. For non revenue flights outside of the scope of the MEL/CDL, refer to OM A Non-revenue Flights.

Cockpit, Operational Ground Staff

8.6.6 Extension of MEL repair time limit

The Chief Technical Officer in agreement with the NPFO is authorised to grant an extension of the MEL repair time limit according procedures laid down in the CAME.

Cockpit, Operational Ground Staff

8.7 Non-revenue Flights

Cockpit, Operational Ground Staff

8.7.1 General

Cockpit, Operational Ground Staff

8.7.1.1 Policy

Training and technical check flights shall be performed in accordance with the OM. Special regulations are laid down in this chapter and are supplemented by instructions of the respective supervising authority.

The CMD has to check that the insurance is valid for the type of flight and for the persons who are carried.

Cockpit, Operational Ground Staff

8.7.1.2 Flight crew qualification requirements

Flight crew qualifications must be at least the same for non revenue flights as for revenue flights.

Refer to OM A Qualification Requirements.

Cockpit, Operational Ground Staff

8.7.1.3 Required cabin crew for non revenue flights

	Persons on board	Required number of C/C
Training flights	Additional flight crew members and inspectors of the FOCA	Not required
Maintenance Check Flights	See MCF Manual	See MCF Manual
Shorthaul delivery and ferry flights	Up to 10 incl. flight crew	0
	Up to 20 excl. flight crew	1 S/C
Longhaul delivery and ferry flights	Up to 20 excl. flight crew	1 S/C
Display- and photo flights	minimum flight crew and one additional safety pilot	No C/C allowed
Positioning flights	Dead heading crews	Not required

The S/C shall have completed the entire senior cabin crew course according to OM D Senior Cabin Crew Course.

Cockpit, Operational Ground Staff

8.7.1.4 Cabin safety procedures

In accordance with the CMD, the demonstration of the safety belt, oxygen mask, life vest, and emergency evacuation may be omitted if all persons on board are familiar with the demonstration of their use.

If no C/C is on board, the CMD is responsible for that the C/C duties are complied with.

The safety equipment check must be carried out:

- After a new flight crew has assumed control of the aircraft cabin.
- After an aircraft has been left unattended for any period of time.

A320: There are 2 safety equipment checklists on board, one in the front and one in the rear.

A340: Each emergency station is provided with its respective safety equipment checklist.

Each Safety Equipment Checklist can also be found in Yonder.

For cabin safety procedures on delivery and ferry flights, refer to CSPM Cargo, delivery and ferry flights with A340.

Cockpit, Operational Ground Staff

8.7.1.4.1 Supernumeraries on board

Cockpit, Operational Ground Staff

8.7.1.4.1.1 Definition of supernumerary

A person in addition to the flight crew that is not a cabin crew member, but is on board of the aircraft during commercial or non-commercial operations, and is not classified as a passenger by EDW or by FOCA. Such person is typically any of the following:

- a person assigned to the flight by EDW as necessary for the safety of operations and has certain (operator-required) knowledge and abilities gained through selection and mandatory training (e.g. loadmaster, animal handler, dangerous goods handler, cargo handler, security guard);
- an inspector, auditor or observer authorised by EDW and by FOCA to be on board the aircraft in the performance of his or her duties (e.g. flight operations inspector, IOSA auditor, LOSA observer);
- a person assigned to a passenger flight by EDW to conduct certain customer service activities (e.g. serving beverages, conducting customer relations, selling tickets) in the cabin; not designated to perform any safety duties;

- any individual that has a relationship with EDW, is not classified as a passenger by FOCA and authorised by EDW and by FOCA to be on board the aircraft (e.g. courier, contract coordinator, individual with operator required knowledge and abilities travelling to/from a duty assignment, company employee).

Note: Non-operating crew members (i.e. deadhead crew), company employees and employee dependent occupying passenger seats on passenger flights are typically considered passengers.

Cockpit, Operational Ground Staff

8.7.1.4.1.2 Requirements

The CMD shall ensure that:

- no unauthorised persons are on board;
- station 1L and 1R are manned (if feasible);
- all doors are properly closed and the door slides armed before flight and disarmed after flight.

The CMD shall ensure that any persons and/or supernumeraries on board have been briefed and are familiar with the location and use of safety equipment prior to departure. The safety briefing shall either be executed by the CMD, or a person nominated by the CMD, familiar with the safety procedures on board and shall include:

- the use of the safety belts;
- the use of the emergency exits;
- the arming and disarming of door slides; the persons sitting at station 1L and 1R (if necessary) in regard to normal and emergency door operation procedures;
- preparation for and an encounter with turbulence;
- medical situations;
- emergency evacuation;
- lifesaving rafts, if required for the area of operation;
- life vests;
- oxygen masks and ready access to supplemental/first aid oxygen;
- emergency equipment for collective use;
- abnormal situations;
- verification that baggage is stowed.

The CMD shall ensure that any persons and/or supernumeraries on board are seated with their seat belts (or, as available, harness or other restraint) fastened:

- during taxi;
- during take-off and landing;
- prior to and/or during turbulence;
- during an emergency situation, if considered necessary.

The CMD shall ensure that persons and/or supernumeraries in the passenger cabin:

- are informed and receive instruction about the no-smoking policy on board;
- comply with the Fasten Seat Belt sign.

Communication procedures to be applied by the flight crew:

Reason requiring communication	Kind of communication
Dissemination of person/supernumerary safety information	Dissemination of person/supernumerary safety information
Cabin compartment readiness prior to first aircraft movement, take-off and landing	Check by pilot or delegate to supernumerary/person before taxi and before starting approach.
Arming or disarming of door slides	Done by flight crew or delegate to qualified supernumerary.
Preparation for and an encounter with turbulence	Information and orders given by the flight crew via PA.
Medical situations	Verbal notification to flight deck
Emergency evacuation	Evacuation order given by the flight crew via PA.
Abnormal situations	Information and/or orders given by the flight crew via PA.
Verification that baggage is stowed	Cabin check performed by the flight crew prior to moving under own power.

Duties of persons and/or supernumeraries

Persons and/or supernumeraries may or must assume certain cabin safety relevant duties during flights operated without cabin crew, as prompted by the CMD.

Duties	Details
Dissemination of person/supernumerary safety information	May be done by a person/supernumerary familiar with the cabin safety procedures of that specific aircraft type, if delegated by the CMD.
Cabin compartment readiness prior to first aircraft movement, take-off and landing	May be verified and given by a person/ supernumerary, if delegated by the CMD.
Arming or disarming of door slides	• Must be executed (as briefed by the CMD) by the persons/ supernumeraries which have been assigned by the

	CMD (persons sitting on the stations 1L and 1R); • Should be preferably persons which are familiar and qualified with the door operation of the specific aircraft type.
Preparation for and an encounter with turbulence	May be executed by a person/supernumerary, if delegated by the CMD.
Medical situations	May be handled by any person/supernumerary, as appropriate to the situation.
Emergency evacuation	• Must be initiated (as briefed by the CMD) by the persons/ supernumeraries which have been assigned by the CMD (persons sitting on the stations 1L and 1R); • Should be preferably persons which are familiar and qualified with the door operation of the specific aircraft type.
Abnormal situations	The handling of abnormal situations in the cabin may be delegated to persons/supernumeraries, as deemed appropriate by the CMD.
Verification that baggage is stowed	May be verified by a persons/supernumerary, if delegated by the CMD.

Cockpit, Operational Ground Staff

8.7.2 Coordination with ATC and authorities

The designated CMD of the flight is responsible that:

- The ATC flight plan is filed;
- The ATC is informed of the intended program prior to take-off;
- The flight program is adapted to the actual flight conditions, if this becomes necessary.

Cockpit, Operational Ground Staff

8.7.3 Training flights

Training flights mean flights under the jurisdiction of flight crew training with the purpose of:

- Qualifying/re-qualifying of flight crew members; and
- Supervising the abilities of flight crew members under normal and abnormal conditions.

After the flight the Head of Training shall be duly informed of the flight and its result.

Cockpit, Operational Ground Staff

8.7.3.1 Responsibility of the commander

The final decision to carry out the actual flight and the responsibility for adherence to general and detailed company instructions remains with the designated TRI/TRE for the training flight.

Cockpit, Operational Ground Staff

8.7.3.2 Flight program

Such programs are issued by the Head of Training.

Cockpit, Operational Ground Staff

8.7.3.3 Restrictions

For training flights, it is the responsibility of the Head of Training to ascertain strict adherence to possible restrictions issued by Edelweiss or the local authorities (e.g. training flights on weekend, public holiday.)

Cockpit, Operational Ground Staff

8.7.3.4 Weather conditions

The company weather minima specified in the Lido Route Manual for the respective type of approach and aerodrome are applicable. If a simulated engine failure is to be performed during take-off, the lowest minima are 200 ft ceiling/800 m MET visibility.

For training purposes, the Head of Training is authorised to fix a ceiling minimum which is below the official one. However, this regulation is only applicable if the instructor has visual contact when reaching the published minima on the Lido Route Manual IAC.

Cockpit, Operational Ground Staff

8.7.3.5 Crew qualification

- The CMD of the flight must be qualified and licensed as TRI/TRE on the aeroplane type concerned;
- The trainee must be released for flight training by the Head of Training;
- A pilot under supervision must be qualified and licensed on the aeroplane type concerned and must fly in the qualified function as CMD or co-pilot.

Cockpit, Operational Ground Staff

8.7.4 Maintenance Check Flights - MCF

Cockpit, Operational Ground Staff

8.7.4.1 General

This chapter contains a brief explanation of the Maintenance Check Flights. A Maintenance Check Flight manual covers all EASA regulations in detail.

Maintenance Check Flights and Taxi Tests take place under the authority of the NPCA in close cooperation with the Engineering and the Senior Technical Pilot. As far as flight procedures are concerned, the paramount jurisdiction rests with the Head of Flight Operations.

MCFs are always non-revenue flights.

Maintenance Check Flight means a flight or taxi test of an aircraft with an airworthiness certificate or with a Permit to Fly which is carried out for troubleshooting purposes or to check the functioning of one or more systems, parts or appliances after maintenance, if the functioning of the systems, parts or appliances cannot be established during ground checks.

MCFs are categorised into two different levels: 'Level A' and 'Level B'.

- A 'Level A' MCF is a flight where the use of abnormal or emergency procedures is expected as defined in the aircraft flight manual or where it is required to prove the functioning of a backup system or other safety devices.
- A 'Level B' MCF is any MCF other than a 'Level A' MCF.

The specifications in this manual are applicable only for 'Level A' MCF’s. Before conducting any MCF, the applicable level must be determined according to the definition stated above.

Cockpit, Operational Ground Staff

8.7.4.2 Conditions requiring a Maintenance Check Flight

An MCF is normally performed:

- If there are several reasons for Maintenance Check Flights affecting aircraft performance that cannot be checked on the ground;
- If requested by aircraft manufacturer after a particularly extensive maintenance check;
- If requested by Operations or Maintenance Department after a serious incident or after corrective maintenance action or modification on important items which may affect the flight characteristic, the performance of the aircraft or flight environments such as airspeed, Mach number, altitude and temperature, operational loads or elastic deformations which cannot be forecasted by ground checks and/or measurements or if during check cockpit has been dismantled (redundant instruments and/or flight control input devices removed) or several redundant flight control loops have been interrupted;
- If more than 50% of the engines have been replaced by new or overhauled engines;
- After Heavy Maintenance Check (IV Check or higher);
- After major modification or repair as defined by the involved Part 21 organisation;
- For any other reason if deemed necessary or contractual obligations (e.g. Phase out, Phase in).

Note: Exceptions are defined on a case by case study from the Head of Engineering and the Technical Pilots in agreement with the NPCA.

Cockpit, Operational Ground Staff

8.7.4.3 MCF - Flight program

For every MCF a written program must exist. This includes short verification flights and taxi tests.The Senior Technical Pilot is responsible for the contents of the MCF Program. He will evaluate the need for the testpoints for every MCF in close cooperation with the Engineering and the NPCA. MCF following heavy maintenance visits are performed according to the official manual from the manufacturer (“In Service Aircraft Technical Flight Manual”). Other MCF requiring only partial test points should make also reference as far as possible to the manufacturer “In Service Aircraft Technical Flight Manual”.

Cockpit, Operational Ground Staff

8.7.4.4 Qualification requirements and training for MCF - Crews

"Level A" MCF

"Level A" MCF shall only be performed by qualified flight crew members. For selection, training and recency requirements refer to MCF Manual Crew Regulations and other Persons on Board

"Level B" MCF

"Level B" MCF should be performed by qualified flight crew members with MCF "Level B" qualification. TO in cooperation with OC may decide to delegate an MCF "Level B” to regular flight crew members if they have received a briefing from a qualified MCF "Level A" pilot.

Cockpit, Operational Ground Staff

8.7.4.5 Acceptance of the aircraft for the purpose of an MCF

“Acceptance of the aircraft by the CMD” according OM A remains applicable to an MCF.

When an MCF is intended to check the proper functioning of a system or equipment, that system or equipment shall be identified as potentially unreliable.

The provisions for cockpit voice recorders (CVR), flight data recorders (FDR) and data link recorders (DLR) continue to apply.

Cockpit, Operational Ground Staff

8.7.4.6 Weather conditions

Maintenance check flights should be performed during daytime whenever possible, during darkness only in exceptional cases. The applicable weather minima are stipulated in the maintenance check flight manual.

The pilot-in-command shall be familiar with all available meteorological information appropriate to the intended flight.

Preparation shall include:

- a study of the available current meteorological reports and forecasts; and
- the planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned, because of meteorological conditions.

Alternate planning minima (ETA +/- 1 hr):

Alternate aerodrome with an available instrument approach operation with DH less than 250 ft:

- A ceiling of at least 200 ft above the DH or MDH ; and
- a visibility of at least the higher of 1 500 m and 800 m above the RVR/VIS minima.

Alternate aerodrome with an instrument approach operation with DH or MDH 250 ft or more:

- A ceiling of at least 400 ft above the DH or MDH; and
- A visibility of at least 3 000 m.

Alternate aerodrome without an instrument approach procedure:

- A ceiling of at least the higher of 2 000 ft and the minimum safe IFR height; and
- A visibility of at least 5 000 m.

Cockpit, Operational Ground Staff

8.7.4.7 Fuel planning

Fuel planning according OM A Determination of the quantities of fuel and oil carried with the the exception below.

The following planning options are not allowed:

- Planning with a fuel ERA 3%
- RCF-planning

Cockpit, Operational Ground Staff

8.7.4.8 Crew and Cabin Safety requirements

For "Level A" MCF no other persons than flight crew, task specialists and cabin specialists required for the mission are allowed on board.

"Level A" MCF - Persons on board:	
Crew requirements	Minimum flight crew: 1 CMD and 1 F/O Task Specialist: 1 FE or a third MCF Pilot Cabin Specialist: At least one cabin crew member or mechanic should be planned. Note 1: Cabin specialist duties can be done by the task specialist. Note 2: For training of new flight crew or task specialists 1 additional person acting as instructor is allowed.

For other than "Level A" MCF the following rules concerning persons on board apply:	
Cockpit crew requirements	Depending on the flight profile • Same crew requirements as for "Level A" MCF, or • At least one crew member with MCF "Level B" qualification.
Cabin crew requirements	For short haul flights on all type: • Up to 10 incl. flight crew and dead heading crews: 0 • Up to 20 incl. flight crew and dead heading crews: 1 For long haul flights (A340) → Company Policy • Up to 20 incl. flight crew and dead heading crews: 1 Note: depending on performed maintenance tasks a Mechanic or a Cabin Crew Member may be necessary to check cabin functions
Passenger / Supernumerary restrictions	• Engineering and maintenance personnel if involved in a duty on board; • Representatives of the lessor and/or next owner if the maintenance check flight is part of the phase-out / phase in activities for the particular aircraft. • Dead Heading Crews • Persons permitted to be carried on board: Limited to a maximum of 20 persons or a maximum of 10 persons (incl. flight crew) if operated without cabin crew.
Cabin safety instructions	If any person additional to the flight crew is transported and no cabin crew is used, the CMD shall nominate a person, preferably familiar with the aircraft, to be responsible for cabin safety. Note: The CMD may allow omitting the safety demonstration if all persons on board are familiar with it.

Cockpit, Operational Ground Staff

8.7.5 Delivery flights

Cockpit, Operational Ground Staff

8.7.5.1 Conditions and limitations

Operational and technical information pertinent to control aeroplane and systems shall be aboard the aeroplane and readily available to the flight crew.

The flight shall be conducted in accordance with current approved AFM, approved manual material, appropriate markings and placard or any combination thereof.

Cockpit, Operational Ground Staff

8.7.5.2 Flight Crew

The flight crew shall hold current licences and appropriate ratings for the aeroplane.

Additionally at least 1 qualified MCF pilot must be part of the crew.

Cockpit, Operational Ground Staff

8.7.5.3 Passenger/Cargo

The carriage of cargo or persons other than those necessary for the purpose of the flight is prohibited. Spares and equipment meant for the servicing of the aeroplane may be carried on board the aeroplane.

Cockpit, Operational Ground Staff

8.7.5.4 Airworthiness

Such flights must be performed under the “Permit to Fly” procedure as laid down in the CAME Permit to Fly Procedure. Prior permission of the FOCA / EASA is required.

Cockpit, Operational Ground Staff

8.7.5.5 Responsibility

It shall be the responsibility of the Edelweiss Air or the owner or operator to secure permission from the appropriate authorities to fly over or land in foreign countries.

Cockpit, Operational Ground Staff

8.7.5.6 Insurance

The aeroplane shall be suitably insured to cover at least third part liability.

Cockpit, Operational Ground Staff

8.7.6 Ferry flights (special procedures)

Cockpit, Operational Ground Staff

8.7.6.1 Introduction

In case of technical malfunction or damage beyond MEL/CDL that cannot be repaired at station, a ferry flight to a repair station may be performed under the “Permit to Fly” procedure as laid down in the CAME (refer to CAME 4B. Permit to Fly Procedure). Such procedure will be carried out under the authority of the NPCA in close coordination with the NPFO and the NPCT if applicable.

Cockpit, Operational Ground Staff

8.7.6.2 Procedure

- The PIC shall inform the Chief Technical Officer and the Head of Flight Operations to identify the location, aircraft, engine, component, system or nature of the damage and the reason for the request.
- When the ferry flight is performed from outside of European Union, the CMD will consult the airport authorities of the departure station for the applicable rules and regulations and eventual over fly permission for such flight.
- The Chief Technical Officer and the Head of Flight Operations will review the request and determine the course of actions taking the operational and maintenance aspects into consideration.
- The Chief Technical Officer will submit the proper forms to the FOCA and EASA as required.
- The FOCA / EASA will issue the “Permit to Fly” when satisfied that the condition of the aircraft has been properly assessed by the applicant and is in a condition to perform a basic or series of flights safely.
- In case that special skill of the flight crew is required, the Head of Training shall be consulted.
- After having received the “Permit to Fly” from FOCA / EASA, a special Flight Release Certificate together with the approved flight condition and limitation will be issued to the CMD. The Flight Release Certificate has to be signed by a properly qualified EASA part 145 maintenance organisation. In addition, a regular Maintenance Release (CRS) has to be issued in a normal matter by means of the Technical Log.

Depending on the nature of the technical malfunction, the “Permit to Fly” may be a lengthy procedure and may take several days, especially if EASA has to be involved.

Cockpit, Operational Ground Staff

8.7.6.3 Passengers

No passengers are allowed on such flights.

Cockpit, Operational Ground Staff

8.7.7 Display- and photoflights

Cockpit, Operational Ground Staff

8.7.7.1 General

Participation of Edelweiss Air aeroplane in air shows or for the purpose of taking photographs, or for similar engagements are only authorised with a special permission issued by Head of Flight Operations and the FOCA.

In general the regulation for route flights according to the OM applies.

Cockpit, Operational Ground Staff

8.7.7.2 Manoeuvre Restrictions

Such flights at low altitude have to be executed at a height not below 330ft/GND, a speed of at least 50% above stalling speed and not in formation.

Cockpit, Operational Ground Staff

8.7.7.3 Manoeuvre Area

Sightseeing flights outside controlled airspace of established Edelweiss Air routes are prohibited.

Cockpit, Operational Ground Staff

8.7.7.4 Passenger

No passengers are allowed on such flights.

Cockpit, Operational Ground Staff

8.7.7.5 Exceptions

Exceptions may be approved only by the Head of Flight Operations.

Cockpit, Operational Ground Staff

8.7.8 Positioning flights

A non-revenue flight carried out to position an aeroplane for a scheduled or non-scheduled flight or service.

Positioning flights shall be performed in accordance with the OM.

The flight- and cabin crew shall hold current licences and appropriate ratings for the aeroplane.

Cabin, Cockpit, Operational Ground Staff

8.8 Oxygen Requirements

Cabin, Cockpit, Operational Ground Staff

8.8.1 Policy

Edelweiss Air will not operate a pressurised aeroplane above 10'000ft unless first-aid and supplemental oxygen equipment, capable of storing and dispensing the oxygen supplies required by this paragraph, is provided.

Cabin, Cockpit, Operational Ground Staff

8.8.2 First-aid oxygen

Cabin, Cockpit, Operational Ground Staff

8.8.2.1 General

First-aid oxygen is intended for those passengers who, having been provided with the supplemental oxygen required under OM A Minimum supplemental oxygen during and following decompression in this chapter; still need to breathe undiluted oxygen when the amount of supplemental oxygen has been exhausted.

Cabin, Cockpit, Operational Ground Staff

8.8.2.2 Requirements for first-aid oxygen

When calculating the amount of first-aid oxygen, Edelweiss Air will take into account the fact that, following a cabin depressurisation, supplemental oxygen as calculated in table 1 should be sufficient to cope with hypoxic problems for:

- All passengers when the cabin altitude is above 15'000ft; and
- A proportion of the passengers carried when the cabin altitude is between 10'000ft and 15'000ft.

For the above reasons, the amount of first-aid oxygen should be calculated for the part of the flight after cabin depressurisation during which the cabin altitude is between 8'000ft and 15'000ft, when supplemental oxygen may no longer be available.

Moreover, following cabin depressurisation an emergency descent should be carried out to the lowest altitude compatible with the safety of the flight. In addition to these circumstances, the amount of fuel on board has to be considered either to proceed to destination or to land at a suitable aerodrome at the earliest opportunity.

The conditions above should reduce the period of time during which the first-aid oxygen may be required and consequently should limit the amount of first-aid oxygen to be carried on board.

Cabin, Cockpit, Operational Ground Staff

8.8.2.2.1 Calculation of amount of first-aid oxygen on board

- The amount of oxygen shall be calculated using an average flow rate of at least 3 litres Standard Temperature Pressure Dry (STPD) / minute / person and shall be sufficient for the remainder of the flight:
    - After cabin depressurisation when the cabin altitude exceeds 8'000ft but does not exceed 15'000ft, for at least 2% of the passengers carried, but in no case for less than 1 person.
    - There shall be a sufficient number of dispensing units, but in no case less than 2, with a means for C/C to use the supply. The dispensing units may be of a portable type.
- The amount of first-aid oxygen required for a particular operation shall be determined on the basis of cabin pressure altitudes and flight duration, consistent with the operating procedures established for each operation and route.
- The oxygen equipment provided shall be capable of generating a mass flow to each user of at least 4 litres per minute, STPD. Means may be provided to decrease the flow to not less than 2 litres per minute, STPD, at any altitude.

Cabin, Cockpit, Operational Ground Staff

8.8.3 Supplemental oxygen

Cabin, Cockpit, Operational Ground Staff

8.8.3.1 General

The amount of supplemental oxygen required shall be determined on the basis of cabin pressure altitude, flight duration and the assumption that a cabin pressurisation failure will occur at the altitude or point of flight that is most critical from the standpoint of oxygen need, and that, after the failure, the aeroplane will descend in accordance with emergency procedures specified in the FCOM to a safe altitude for the route to be flown that will allow continued safe flight and landing.

Following a cabin pressurisation failure, the cabin pressure altitude shall be considered the same as the aeroplanes altitude.

Cockpit, Operational Ground Staff

8.8.3.2 Flight crew requirement

Each member of the flight crew on flight deck duty shall be supplied with supplemental oxygen in accordance with the table below.

- If all occupants of flight deck seats are supplied from the flight crew source of oxygen supply, then they shall be considered as flight crew members on flight deck duty for the purpose of oxygen supply;
- Flight deck seat occupants, not supplied by the flight crew source, are to be considered as passengers for the purpose of oxygen supply;
- Flight crew members, not covered by (a) or (b) above, are to be considered as passengers for the purpose of oxygen supply.

Oxygen masks shall be located so as to be within the immediate reach of flight crew members whilst at their assigned duty station. Oxygen masks for use by flight crew members by Edelweiss Air must be a quick donning type of mask.

Refer to FCOM LIM-OXY (A320 / A340).

Oxygen masks of all flight crew stations which will be occupied during the respective flight shall, be checked prior departure for proper operation according FCOM.

The crew oxygen system must be fully serviceable. All flight crew members on duty shall have their oxygen mask ready for quick-donning. For the use of oxygen in case of emergencies such as smoke, fire or decompression, refer to the respective checklists.

Cabin, Cockpit, Operational Ground Staff

8.8.3.3 Cabin crew/additional crew members and passenger requirements

C/C members and passengers shall be supplied with supplemental oxygen in accordance with table 1. C/C members carried in addition to the minimum number of C/C members required, and additional crew members, shall be considered as passengers for the purpose of oxygen supply.

When operating above 25'000ft there shall be sufficient spare outlets and masks and/or sufficient portable oxygen units with masks provided for use by all required C/C members. The spare outlets and/or portable oxygen units are to be distributed evenly throughout the cabin to ensure immediate availability of oxygen to each required C/C member regardless of his location at the time of cabin pressurisation failure.

When operating above 25'000ft there shall be provided an oxygen dispensing unit connected to oxygen supply terminals immediately available to each passenger, wherever seated. The total number of dispensing units and outlets shall exceed the number of seats by at least 10%. The extra units are to be evenly distributed throughout the cabin.

Cabin, Cockpit, Operational Ground Staff

8.8.4 Protective breathing equipment for flight and cabin crew (PBE)

Edelweiss Air aeroplanes are equipped with PBE units to protect the eyes, nose and mouth of each flight- and C/C member while on duty and to provide oxygen for a period of at least 15 minutes.

The PBE units intended for flight crew use must be conveniently located on the flight deck and be easily accessible for immediate use by each required flight crew member at their assigned duty station.

PBE units intended for C/C use must be installed adjacent to each required C/C member duty station. An additional, easily accessible portable PBE must be provided and located at or adjacent to the hand fire extinguishers.

PBE units while in use must not prevent communication where required. Refer to CSPM Protective breathing equipment (PBE).

Cabin, Cockpit, Operational Ground Staff

8.8.5 Minimum supplemental oxygen during and following decompression

Supply for[1]		Duration & Cabin Pressure Altitude; Table 1
1	All occupants of flight deck seats on flight deck duty	Entire flight time when the cabin pressure altitudes exceeds 13’000ft and entire flight time when the cabin pressure altitude exceeds 10’000ft but does not exceed 13’000ft after the first 30 minutes at those altitudes[3], but in no case less than 2 hours[2].
2	All required C/C members	Entire flight time when the cabin pressure altitudes exceeds 13’000ft but not less than 30 minutes[3], and entire flight time when cabin pressure altitude is greater than 10’000ft but does not exceed 13’000ft after the first 30 minutes at these altitudes.
3	100% of Passengers[4]	Entire flight time when the cabin pressure altitudes exceeds 15’000ft but in no case less than 10 minutes[5].
4	30% of Passengers[4]	Entire flight time when the cabin pressure altitudes exceeds 14’000ft but does not exceed 15’000ft.
5	10% of Passengers[4]	Entire flight time when the cabin pressure altitudes exceeds 10’000ft but does not exceed 14’000ft after the first 30 minutes at these altitudes.

1. The supply provides must take account of the cabin pressure altitude and descent profile for the route concerned.
2. The required minimum supply is that quantity of oxygen necessary for a constant rate of descent from the aeroplanes maximum certificated operating altitude to 10'000ft in 10 minutes and followed by 110 minutes at 10'000ft. The oxygen required for the PBE units may be included in determining the supply required.
3. The required minimum supply is that quantity of oxygen necessary for a constant rate of descent from the aeroplanes maximum certificated operating altitude to 10'000ft in 10 minutes and followed by 20 minutes at 10'000ft.
4. For the purpose of this table “passengers” means passengers actually carried and includes infants.
5. The required minimum supply is that quantity of oxygen necessary for a constant rate of descent from the aeroplanes maximum certificated operating altitude to 15'000ft in 10 minutes.

Cabin, Cockpit, Operational Ground Staff

8.8.6 State recommendations

State regulations require a maximum cabin altitude of 8'000ft during normal operation. Although this altitude is never exceeded on Edelweiss Air aeroplanes while flying at maximum certified flight level during normal operation, medical authorities recommend periodic use of oxygen at this and even lower altitudes. It is therefore left to the pilots discretion to use it accordingly if they so desire.

Cabin, Cockpit, Operational Ground Staff

8.8.7 Oxygen mask demonstration

Refer to CSPM Oxygen masks.

Cabin, Cockpit, Operational Ground Staff

8.9 Electronic Flight Bags and Controlled Portable Electronic Devices

Cockpit, Operational Ground Staff

8.9.1 eOPS System and procedures for Type B EFB applications

The eOps system consists of the following elements:

- The iPad which serves as personal EFB

- The backup EFB
- The aircraft phone
- The aircraft installations & equipment
- The backup Wifi router

Cockpit, Operational Ground Staff

8.9.1.1 eOPS System: Electronic Flight Bag (EFB)

Each pilot receives a personal device from Edelweiss which will be used as EFB (Electronic Flight Bag). This device remains the property of Edelweiss. No private device may be set up or used as Edelweiss EFB.

Cockpit, Operational Ground Staff

8.9.1.2 Applications used for flight operation

The EFB administrator classifies all applications intended for EFB use. These procedures are laid down in the EFB Policy and Procedures Manual.

Type	Description
Type A EFB application	EFB application whose malfunction or misuse has no safety effect
Type B EFB application	EFB application: (a) whose malfunction or misuse is classified as minor failure condition or below; and (b) which neither replaces nor duplicates any system or func tionality required by airworthiness regulations, airspace requirements, or operational rules
Miscellaneous (non-EFB) software applications	Non-EFB applications that support function(s) not directly related to the tasks performed by the flight crew in the aircraft

Cockpit, Operational Ground Staff

8.9.1.3 List of type A applications

Application	**Description**
IQSMS	Reporting System
Flypad	Flight details
Airport Briefing	Aerodrome information

Cockpit, Operational Ground Staff

8.9.1.4 List of type B applications

Application	Description
eQRH	Aircraft Quick reference handbook
FS+ InFlight	Inflight performance calculation
FS+ Landing	Landing performance calculation
FS+ Loadsheet	Loadsheet calculation
FS+ Manager	FS+ Data sync module
FS+ OLB	FS+ Airbus library
FS+ TakeOff	TakeOff calculation
Lido/mPilot	Navigational charts / documentation
CAE eFM	Flight planning (OFP / NOTAM / primary weather information)
Yonder	Documentation system / library

Cockpit, Operational Ground Staff

8.9.1.5 EFB Policy

The crew member is responsible for the update of the EFB operating system, the different applications and the data within the applications. The availability of the flight operations applications according to EFB PPM EFB Info and the validity of the application data shall be checked by the FCM during the crew briefing after check-in.

The guidelines on how to update the EFB and the info about the relevant software versions are to be found:

- In Yonder: EFB PPM EFB Info
- In a NOTAM provided within eFM (relevant software version numbers only)

By signing the OFP, every FCM certifies that all software and data relevant to the flight are up to date.

Any detected erroneous application output, hardware or software failure, outdated revision status or discrepancies against other approved sources have to be reported without delay to the Edelweiss EFB Administrator according to EFB PPM Troubleshooting.

Cockpit, Operational Ground Staff

8.9.1.6 EFB Policy and Procedures Manual

The EDW EFB Policy and Procedures Manual is forwarded to the FOCA and contains relevant policies, procedures and descriptions for the use of the EDW EFB system for the flight crew and the EFB administrator.

Cabin, Cockpit, Operational Ground Staff

8.9.2 C-PEDs other than EFB

Cabin, Cockpit, Operational Ground Staff

8.9.2.1 Cabin crew devices

Instructions on how to use the personal cabin crew device and the applications installed are contained in the relevant guides.

The personal cabin crew device must be used according to the regulations for PED / T-PED. Refer to CSPM Use of PED / T-PED.
The personal cabin crew device must be stowed when not in use and during critical phases of flight. Before reporting for duty, CCMs shall verify that the valid version of the FlyPad application and Yonder reader are installed on the personal cabin crew device, the respective databases are up to date, and the minimum level of charge is 50%.

For general instructions, refer to Cosmos → Work → IT Anleitungen → Tablets und Smartphones.
For troubleshooting, refer to Cosmos → Work → IT Support.

Cabin, Cockpit, Operational Ground Staff

8.9.2.2 In-flight sales device / Card Reader / Printer

The in-flight sales device must be used according to the regulations for PED / T-PED. Refer to CSPM Use of PED / T-PED.

The in-flight sales device must be stowed in the designated stowage location when not in use and during critical phases of flight.

Instructions on how to use the in-flight sales device are contained in the relevant guides.

Catering is responsible for the administration and exchange of faulty in-flight sales devices.

Cabin, Cockpit, Operational Ground Staff

8.9.2.3 Aircraft Log (ELB)

The ELB system, an integrated part of the Aircraft Log, consists of:

- two electronic devices, a cockpit device (master ELB) and a cabin device (client ELB)
- a router device
- a defined number of memory sticks, required for the backup in case of synchronisation problems.

Instructions on how to use the ELB system are contained in the Aircraft Log Procedure Manual (ALPM).

Cabin, Cockpit, Operational Ground Staff

8.9.2.4 Cargo Tracking Devices

All Edelweiss aircraft are T-PED tolerant. For the acceptance process of T-PED devices refer to SWC CHM chapter 6.17.3 Approved Devices.

9 Dangerous Goods and Weapons

Cabin, Cockpit, Operational Ground Staff

9.1 Information, instructions and general guidance on the transport of Dangerous Goods

9.1.1 Policy in relation to the transport of Dangerous Goods

Dangerous Goods are transported by Edelweiss according to the requirements of ICAO Technical Instructions (ICAO TI) including its supplements and any other addenda or corrigenda / FOCA Article 16 of the Federal Decree on Air Transportation (SR 748.411) / IATA Dangerous Goods Regulations (IATA DGR) or under the conditions of an approval (refer to OM A Approvals) or an exemption (refer to OM A Exemptions).

All reasonable measures are to be taken to prevent the transport of Dangerous Goods which are not allowed to be transported by air.

The permanent approval to transport dangerous goods as cargo issued by FOCA is reflected on the Operations Specifications of the AOC.

The transportation of Class-7 substances (radioactive material) is regulated in the Radiological Protection Ordinance of Switzerland (SR 814.501) and requires a prior authorisation by the Federal Office of Public Health, Radiation Protection Division.

The following radioactive substances are exempted from a prior authorisation by Art. 10, c of the Radiological Protection Ordinance and are allowed to be transported within as well as into and out of Switzerland:
UN 2908, 2909, 2910, 2911, 2912, 2913, 2915, 2916, 2978, 3321, 3322, 3332 and 3507.

All other Class-7 substances are not accepted for carriage on Edelweiss flights (refer to Operators Variations / LX-01 forbidden Radioactive Material below).

Delegation of Cargo / Mail Handling

Edelweiss has delegated parts of its duties such as the acceptance check, inspection, storage and loading as well as parts of the provision of information to Swiss World Cargo (SWC) and local handling agents.
No Dangerous Goods may be transported as cargo on Edelweiss flights unless properly accepted. However, the overall responsibility remains with Edelweiss' NPGO and NPFO.

Delegation of Ground Handling

Edelweiss has delegated parts of its duties such as passenger handling, ramp and baggage handling, mass and balance etc. as well as parts of the provision of information to passengers to local ground service provider on every station.

Operational point of contact for Dangerous Goods:

Marco Frei	OGA
Business Phone	+41 43 456 57 86
Mail:	dangerousgoods@flyedelweiss.com

Operators Variations

Edelweiss applies the following operators variations in coordination with Swiss International Airlines / Swiss World Cargo:

LX-01 forbidden Radioactive Material
Following Class 7 articles or substances will not be accepted for carriage (refer to IATA DGR Subsection 10.4):

UN Number	Description
UN 2919	Radioactive material, transported under special arrangement non fissile or fissile excepted
UN 2977	Radioactive material, uranium hexafluoride, fissile
UN 3321	Radioactive material, low specific activity (LSA-II) non fissile or fissile excepted (Company variation to Art. 10, c of the Radiological Protection Ordinance)
UN 3322	Radioactive material, low specific activity (LSA-III) non fissile or fissile excepted (Company variation to Art. 10, c of the Radiological Protection Ordinance)
UN 3324	Radioactive material, low specific activity (LSA-II), fissile
UN 3325	Radioactive material, low specific activity (LSA-III), fissile
UN 3326	Radioactive material, surface contaminated objects (SCO-I or SCO-II), fissile
UN 3327	Radioactive material, Type A package, fissile non-special form
UN 3328	Radioactive material, Type B(U) package, fissile
UN 3329	Radioactive material, Type B(M) package, fissile
UN 3330	Radioactive material, Type C package, fissile
UN 3331	Radioactive material, transported under special arrangement, fissile
UN 3333	Radioactive material, Type A package, special form, fissile

LX-02 Limited quantities
Except for ID 8000 Consumer Commodity, Dangerous Goods in limited quantities (“Y” packing instructions) will not be accepted for carriage.

LX-03 Mercurial barometers or thermometers
Mercurial barometers or thermometers will not be accepted for carriage in baggage, except a small medical or clinical thermometer for personal use when in its protective case.

LX-04 Camping stoves
This LX variation does not apply for WK.

LX-05 Emergency Contact
The shipper must provide a 24-hour emergency telephone number of a person who is knowledgeable of the hazard, characteristics and actions to be taken in case of an accident or incident. The telephone number must include the country and area code and be identifiable as a 24-hour emergency contact number, preferably by adding the words "Emergency Contact" or "24-hour number". It should be shown in the "Additional Handling Information" box of the Shipper's Declaration for Dangerous Goods.
A 24-hour emergency telephone is not required for shipments that do not require a Shipper's Declaration for Dangerous Goods.

LX-06 Lithium Batteries
The following items must not be accepted as cargo:

UN Number	Description
UN 3090	Lithium Metal Batteries – PI 968, Section IA and IB
UN 3091	Lithium Metal Batteries packed with Equipment – PI 969, Section I
UN 3091	Lithium Metal Batteries contained in Equipment – PI 970, Section I
UN 3480	Lithium Ion Batteries – PI 965, Section IA and IB
UN 3481	Lithium Ion Batteries packed with Equipment – PI 966, Section I
UN 3481	Lithium Ion Batteries contained in Equipment – PI 967, Section I

LX-07 Battery-Powered Vehicles
UN 3171 Battery-Powered Vehicles are not accepted as cargo. This prohibition does not apply to UN 3171 Battery-Powered Equipment.

LX-08 Oxygen generator, chemical
UN 3356 Oxygen generator, chemical will not be accepted.

9.1.2 Terminology

9.1.2.1 Dangerous Goods

Dangerous Goods are articles or substances which are capable of posing a hazard to health, safety, property or the environment and which are shown in the list of Dangerous Goods of the ICAO TI / IATA DGR or which are classified according to these instructions/ regulations.

9.1.2.2 List of Dangerous Goods

The List of Dangerous Goods of the ICAO TI / IATA DGR is relevant to the transport of Dangerous Goods as air cargo. It contains approximately 3000 articles and substances most likely to be shipped by air and displays the respective UN/ID number, proper shipping name (chemical name/description), class or division, required hazard label(s), packing group, Excepted Quantity code, packing instructions, maximum net quantity per package, special provisions and emergency response guidance code (drill code).

Dangerous Goods must be assigned to one of the proper shipping names shown in the List of Dangerous Goods.

9.1.2.3 Hazard class

A hazard class represents the type of danger of Dangerous Goods.

9.1.2.4 Packing Group

Within a particular hazard class, the packing group represents a relative degree of danger.

9.1.2.5 Dangerous Goods accident

An occurrence associated with and related to the transport of Dangerous Goods by air which results in fatal or serious injury to a person or major damage to property or the environment.

9.1.2.6 Dangerous Goods incident

An occurrence other than a Dangerous Goods accident associated with and related to the transport of Dangerous Goods by air, not necessarily occurring on board an aircraft, which results in injury to a person, damage to property, damage to the environment, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of Dangerous Goods which seriously jeopardises an aircraft or its occupants is also deemed to be a Dangerous Goods incident.

9.1.2.7 Dangerous Goods safety

The ICAO TI / IATA DGR are intended to facilitate transport while giving a level of safety such that dangerous goods can be carried without placing an aircraft or its occupants at risk, providing all the requirements are fulfilled.

9.1.2.8 Dangerous goods security

Measures or precautions to be taken by operators, shippers and others involved in the transport of Dangerous Goods aboard the aircraft to minimise theft or misuse of Dangerous Goods that may endanger persons or property.

9.1.2.9 Misdeclared Dangerous Goods

Dangerous Goods which are different to the ones actually declared.

9.1.2.10 ICAO Technical Instructions

The ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI) amplify the basic provisions of Annex 18 to the Convention on International Civil Aviation and contain all the detailed instructions necessary for the safe international transport of Dangerous Goods by air.

The ICAO Annex 18 and the ICAO TI are applicable for the transport of Dangerous Goods by air from, to or through the member States of ICAO. Annex 18 to the Chicago Convention and the associated Technical Instructions for the Safe Transport of Dangerous Goods by Air are recognised as the sole authentic legal source material in the transport of dangerous goods.

In Switzerland, this is adopted in Article 16 of the Federal Decree on Air Transportation (SR 748.411).

9.1.2.11 IATA Dangerous Goods Regulations

The IATA DGR contains all of the requirements of the ICAO TI.

IATA has included additional requirements, which are more restrictive than the ICAO TI and reflect industry standard practices or operational considerations.

The IATA DGR prescribes the detailed requirements applicable to the international transport of Dangerous Goods by air under normal circumstances.

9.1.2.12 Quick Reference Guide

SWISS World Cargo publishes a Dangerous Goods leaflet containing details regarding hidden Dangerous Goods, classes, labelling, stowage and segregation.

An electronic version is available in the Yonder library (refer to FOSI DG Quick Reference Guide).

9.1.2.13 Cargo IMP Codes (Interchange Message Procedure)

A standard system of coding used in data exchange for cargo messages in order to minimise transmission time.

9.1.2.14 Transport Index (TI)

The Transport Index (TI) is a number that represents the maximum dose rate at a distance of 1 meter from the external surface of the package. The TI is used to provide control over radiation exposure; to determine categories of radioactive material for the purposes of labelling; declaration whether transport under exclusive use is required and to determine spacing requirements (segregation) during storage and transport.

9.1.2.15 Lithium battery

The term "lithium battery" refers to a family of batteries with different chemistries, comprising many types of cathodes and electrolytes. For the purposes of the Dangerous Goods regulations, they are separated into:

Type	Description
Lithium-metal batteries	Lithium-metal batteries are generally primary (non-rechargeable) batteries that have lithium metal or lithium compounds as an anode. Lithium-metal batteries are generally used to power watches, calculators, etc.
Lithium-ion batteries	Lithium-ion batteries (abbreviated Li-ion batteries) are a type of secondary (rechargeable) battery. Also included within lithium-ion batteries are lithium-polymer batteries. Lithium-ion batteries are generally found in consumer electronics (such as mobile telephones, laptop computers, cameras, etc.).
Defective Lithium Batteries	Lithium-ion cells or batteries and lithium-metal cells or batteries • identified as being defective for safety reasons; • that have the potential of producing a: ◦ dangerous evolution of heat ◦ fire, or ◦ short circuit are forbidden for transport.
Damaged Lithium batteries	Lithium-ion cells or batteries and lithium-metal cells or batteries identified as being damaged such that they do not conform to the type tested according to the applicable provisions of the Manual of Tests and

Type	Description
	Criteria are forbidden for transport. For the purposes of this entry, these may include, but are not limited to: a. cells or batteries that have leaked or vented b. cells or batteries that cannot be diagnosed prior to transport, or c. cells or batteries that have sustained physical or mechanical damage. In assessing a cell or battery as defective or damaged, an assessment or evaluation must be performed based on safety criteria from the cell, battery or product manufacturer or by a technical expert with knowledge of the cell's or battery's safety features. An assessment or evaluation may include, but is not limited to the following criteria: a. Acute hazard, such as gas, fire, or electrolyte leaking b. The use or misuse of the cell or battery c. Signs of physical damage, such as deformation to cell or battery casing, or colours on the casing d. External and internal short circuit protection, such as voltage or isolation measures e. The condition of the cell or battery safety features, or f. Damage to any internal safety components, such as the battery management system

9.1.2.16 Consolidations

A consolidation is a consignment of multi-packages which has been originated by more than one person each of whom has made an agreement for carriage by air with another person other than a scheduled air carrier. Conditions applied to that agreement may or may not be the same as conditions applied by the scheduled air carrier for the same carriage.

9.1.2.17 Overpack

An enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage. Dangerous Goods packages contained in the overpack must be properly packed, marked, labelled and in proper condition as required by the ICAO TI / IATA DGR. For cooling purposes, an overpack may contain solid carbon dioxide (dry ice).

9.1.2.18 Unit Load Device (ULD)

A ULD is any type of freight container, aircraft container, aircraft pallet with a net, or aircraft pallet with a net over an igloo.

9.1.2.19 Approvals

Where specifically provided for in the ICAO TI / IATA DGR (e.g. Special Provision A1), the appropriate authority of the State of origin and State of the operator may grant an approval to permit the transport of dangerous goods that are otherwise forbidden. In such instances, an overall level of safety in transport which is equivalent to the level of safety provided for in the ICAO TI / IATA DGR must be achieved.

Acceptance of Dangerous Goods offered for transport under the provisions of an approval is at the discretion of Edelweiss. Shippers are encouraged to make advance arrangements with Swiss World Cargo as part of the planning process associated with any approval application.

> Note: In Switzerland, approvals for the transport of Dangerous Goods are issued by FOCA.

9.1.2.20 Exemptions

In instances of extreme urgency or when other forms of transport are inappropriate or when full compliance with the prescribed requirements is contrary to the public interest, the States of origin, operator, transit, overflight and destination may grant exemption from the provisions of the Regulations provided that in such instances every effort is made to achieve an overall level of safety in transport which is equivalent to the level of safety provided for in the ICAO TI / IATA DGR.

For the State of overflight, if none of the criteria for granting an exemption are relevant, an exemption may be granted based solely on whether it is believed that an equivalent level of safety in air transport has been achieved.

> Note: For the purposes of exemptions, the “States concerned” are the States of origin, operator, transit, overflight and destination.

The exemption should include, as a minimum, the following:

- The UN/ID number, proper shipping name and classification
- Packaging and quantity applicable
- Any special handling required and any special emergency response information
- Name and address of shipper and consignee
- Airports of departure, transit and destination and the proposed dates of transport
- Duration of validity of the exemption

A copy of the exemption issued by all States concerned must be provided to Edelweiss and must accompany the consignment. If the exemption documents are not in English, an accurate translation in English must accompany the consignment.

Acceptance of Dangerous Goods offered for transport under the provisions of an exemption is at the discretion of Edelweiss. Shippers are encouraged to make advance arrangements with Edelweiss as part of the planning process associated with any exemption application.

Notes: In Switzerland, exemptions for the transport of Dangerous Goods are issued by FOCA.

The application form for exemptions is available on the FOCA web page for experts. Applications must be submitted to **gefahrgut@bazl.admin.ch**.

9.1.2.21 Exception

A provision in the ICAO TI / IATA DGR which excludes a specific item of Dangerous Goods from the requirements normally applicable to that item.

9.1.2.22 Intermediate Bulk Containers (IBC)

An IBC is defined as a container used for transport and storage of fluids and bulk materials. The construction of the IBC container and the materials used are chosen depending on the application.

9.1.2.23 Excess baggage (baggage consigned as cargo)

Baggage which a passenger has presented to check-in as accompanied checked baggage, but which exceeds the passenger's baggage allowance specified by Edelweiss and which is consequently consigned as cargo in order to be sent to the same destination as the passenger.

9.1.3 Duties of all personnel involved

Personnel involved	Key tasks and responsibilities
Person nominated as operational point of contact for DG	• Oversight and control of the processing of DG • Ensuring all necessary permissions, approvals and exemptions are held • Generating or acceptance of relevant procedures • Responding to queries regarding the carriage of DG (passenger and baggage related) • Gathering and assessment of details about DG incidents, accidents, occurrences and the discovery of undeclared DG within the accident prevention and

Personnel involved	Key tasks and responsibilities
	(flight) safety programme (in cooperation with safety manager and risk controller)
Nominated person crew training (NPCT)	Ensuring that: • all personnel (including instructors and assessors) identified during the training needs analysis are competent to perform their duties • the qualification of all personnel is verified prior to the personnel performing any DG related duty • DG training programmes are approved by the authority For details refer to OM D Training for Transportation of DG
Personnel involved in DG training and assessment	Establishing and maintaining the DG training programme
DG instructors	Conducting the DG training and/or training assessment
Operations personnel (FOO)	Transporting cargo/baggage • Manage dangerous goods pre- and during flight: • Interpret NOTOC • Apply procedures in the event of an emergency • Inform emergency services of the dangerous goods on board in the event of an emergency Collecting safety data • Report dangerous goods occurrences (incidents/accidents) • Report undeclared/misdeclared dangerous goods
Flight Crew	Manage dangerous goods pre- and during flight: • Detect presence of dangerous goods not permitted in carry-on baggage • Interpret NOTOC • Apply procedures in the event of an emergency • Inform flight operations officer/flight dispatcher/air traffic control in the event of an emergency • Inform emergency services of the dangerous goods on board in the event of an emergency

Personnel involved	Key tasks and responsibilities
	Collecting safety data • Report dangerous goods occurrences (incidents/ accidents) • Report undeclared/misdeclared dangerous goods
Cabin Crew	Accepting passenger and crew baggage • Accept baggage (carry-on) • Apply operator requirements • Verify passenger baggage requirements • Advise pilot-in-command Transporting cargo/baggage • Manage dangerous goods pre- and during flight • Detect presence of dangerous goods not permitted in carry-on baggage • Apply procedures in the event of an emergency • Inform flight operations officer/flight dispatcher/air traffic control in the event of an emergency • Inform emergency services of the dangerous goods on board in the event of an emergency Collecting safety data • Report dangerous goods occurrences (incidents/ accidents) • Report undeclared/misdeclared dangerous goods
Reservation staff (Passenger booking)	• Ensuring that information is provided to the passenger with the ticket or in another manner, such that the passenger receives the information prior to or during the check-in process; • Considering passenger requests for approval of the operator for items of DG requiring such approval
Passengers-handling staff	All functions delegated to local handling-agents • For provision of information refer to OM A Provision of information to personnel
Personnel of subcontractors (cargo / mail handling)	• Functions related to carriage of cargo and mail are delegated to Swiss Wold Cargo and its local handling agents

Personnel involved	Key tasks and responsibilities
	• For provision of information refer to OM A Provision of information to personnel
Personnel of local shippers	Preparing DG shipments incl. COMAT shipments
Personnel in charge of auditing DG topics/supervising	All auditors (ground operations and cargo auditors), Quality & Risk Manager Ground Operations, CTKI (operational Training Department) are involved in auditing DG topics and hence trained and qualified for their relevant responsibilities concerning DG (e.g. ground operations area, training department).

9.1.4 Exceptions

9.1.4.1 General exceptions

General exceptions from the ICAO TI / IATA DGR exist for Dangerous Goods which are to provide medical aid during flight to a patient or to preserve organs intended for use in transplantation and:

- have been placed on board with the approval of Edelweiss; or
- form part of the permanent equipment of the aircraft when it has been adapted for specialised use; providing that:
- gas cylinders have been manufactured specifically for the purpose of containing and transporting that particular gas;
- equipment containing wet cell batteries is kept and, when necessary, secured in an upright position to prevent spillage of the electrolyte;
- lithium-metal or lithium-ion cells or batteries meet the provisions of IATA DGR 3.9.2.6.1. Spare lithium batteries, when not in use, must be individually protected to prevent short circuits.

Provisions must be made to stow and secure the above-mentioned Dangerous Goods during take-off and landing and at all times when deemed necessary by the CMD. The Dangerous Goods must be under the control of trained personnel during the time when they are in use on the aircraft.

9.1.4.2 Exceptions for Dangerous Goods of the operator

The provisions of the ICAO TI / IATA DGR do not apply to DG which are required to be aboard the aircraft:

Dangerous Good	Description
Aircraft Equipment	In accordance with the pertinent airworthiness requirements and operating regulations.
Hygiene products	Such as alcohol-based hand sanitisers and alcohol-based cleaning products carried aboard an aircraft by the operator for use on the aircraft during the flight or series of flights for the purposes for passenger and crew hygiene.
Consumer goods	Like aerosols, alcoholic beverages, perfumes, colognes, liquefied gas lighters and portable electronic devices containing batteries that meet the respective provisions carried aboard an aircraft by Edelweiss for use or sale on the aircraft during the flight, or series of flights, but excluding non-refillable gas lighters and those lighters liable to leak when exposed to reduced pressure.
Dry Ice	Intended for use in food and beverage service aboard the aircraft.
Electronic devices	Such as electronic flight bags, personal entertainment devices, credit card readers, containing batteries and spare batteries for such devices carried aboard an aircraft by Edelweiss for use on the aircraft during the flight or series of flights, provided that the batteries meet the respective provisions.
Spare lithium	Batteries in case they individually protected to prevent short circuits when not in use.

Note: For information about DG intended as replacements (e.g. aircraft equipment) refer to OM A Shipping / Transporting of spares (COMAT) classified as DG.

9.1.4.3 Exceptions for Dangerous Goods carried in luggage

Dangerous Goods are not allowed to be carried in or as passenger or crew luggage (including excess baggage) except as those provided in the following table.

References in the table below are referring to the IATA DG manual.

Where a passenger's carry-on baggage cannot be accommodated in the cabin, it must be verified with the passenger that the carry-on baggage item does not contain dangerous goods forbidden in checked baggage.

When the approval of Edelweiss is required, contact: dangerousgoods@flyedelweiss.com

9.1.4.3.1 IATA Dangerous Goods Table

	The approval of the operator is required	Permitted in or as checked baggage	Permitted in or as carry-on baggage	The pilot-in-command must be informed of the location
Alcoholic beverages, when in retail packagings, containing more than 24% but not more than 70% alcohol by volume, in receptacles not exceeding 5 L, with a total net quantity per person of 5 L. Note: Alcoholic beverages containing 24% or less alcohol by volume are not subject to any restrictions.	NO	YES	YES	NO
Ammunition, securely packaged (in Div. 1.4S, UN 0012 or UN 0014 only), in quantities not exceeding 5 kg gross weight per person for that person's own use. Allowances for more than one person must not be combined into one or more packages.	YES	YES	NO	NO
Avalanche rescue backpack, one (1) per person, containing cartridges of compressed gas in Div. 2.2. May also be equipped with a pyrotechnic trigger mechanism containing no more than 200 mg net of Div. 1.4S. The backpack must be packed in such a manner that it cannot be accidentally activated. The airbags within the backpacks must be fitted with pressure relief valves.	YES	YES	YES	NO
Baggage with installed lithium batteries non-removable batteries exceeding–0.3 g lithium metal or 2.7 Wh.	FORBIDDEN			
Baggage with installed lithium batteries: • non-removable batteries. Batteries must contain no more than 0.3 g lithium metal or for lithium ion must not exceed 2.7 Wh;	NO	YES	YES	NO

	The approval of the operator is required	Permitted in or as checked baggage	Permitted in or as carry-on baggage	The pilot-in-command must be informed of the location
• removable batteries. Batteries must be removed if baggage is to be checked in. Removed batteries must be carried in the cabin.				
Batteries, spare/loose, including lithium batteries, non-spillable batteries, nickel-metal hydride batteries and dry batteries (see 2.3.5.8)[1] for portable electronic devices must be carried in carry-on baggage only. Articles which have the primary purpose as a power source, e.g. power banks are considered as spare batteries. These batteries must be individually protected to prevent short circuits. Lithium metal batteries: the lithium metal content must not exceed 2 g (see 2.3.5.8.4)[1]. Lithium ion batteries: the Watt-hour rating must not exceed 100 Wh (see 2.3.5.8.4)[1]. Each person is limited to a maximum of 20 spare batteries. *The operator may approve the carriage of more than 20 batteries. Non-spillable batteries: must be 12 V or less and 100 Wh or less. Each person is limited to a maximum of 2 spare batteries (see 2.3.5.8.5)[2].	NO*	NO	YES	NO
Camping stoves and fuel containers that have contained a flammable liquid fuel, with empty fuel tank and/or fuel container (see 2.3.2.5 for details)[3].	YES	YES	NO	NO
Chemical Agent Monitoring Equipment, when carried by staff members of the Organization for the Prohibition of Chemical Weapons on official travel (see 2.3.4.4).	YES	YES	YES	NO

	The approval of the operator is required	Permitted in or as checked baggage	Permitted in or as carry-on baggage	The pilot-in-command must be informed of the location
Disabling devices such as mace, pepper spray, etc. containing an irritant or incapacitating substance are forbidden on the person, in checked and carry-on baggage.	FORBIDDEN			
Dry ice (carbon dioxide, solid), in quantities not exceeding 2.5 kg per person when used to pack perishables not subject to these Regulations in checked or carry-on baggage, provided the baggage (package) permits the release of carbon dioxide gas. Checked baggage must be marked "dry ice" or "carbon dioxide, solid" and with the net weight of dry ice or an indication that there is 2.5 kg or less dry ice.	YES	YES	YES	NO
E-cigarettes (including e-cigars, e-pipes, other personal vaporizers) containing batteries must be individually protected to prevent accidental activation (see 2.3.5.8.2)[4].	NO	NO	YES	NO
Electro shock weapons (e.g. Tasers) containing dangerous goods such as explosives, compressed gases, lithium batteries, etc. are forbidden in carry-on baggage or checked baggage or on the person.	FORBIDDEN			
Fuel cells containing fuel, powering portable electronic devices (e.g. cameras, cellular phones, laptop computers and camcorders), see 2.3.5.9 for details.	NO	NO	YES	NO
Fuel cell cartridges, spare for portable electronic devices, see 2.3.5.9 for details.	NO	YES	YES	NO
Gas cartridges, small, non-flammable containing carbon dioxide or other suitable gas in Division 2.2. Up to two (2) small cartridges fitted into a **self-inflating personal safety device**, intended to be worn by a person, such as a life jacket	YES	YES	YES	NO

	The approval of the operator is required	Permitted in or as checked baggage	Permitted in or as carry-on baggage	The pilot-in-command must be informed of the location
or vest. Not more than two (2) devices per passenger and up to two (2) spare small cartridges per device, not more than four (4) cartridges up to 50 mL water capacity for other devices (see 2.3.4.2)[5].				
Gas cylinders, non-flammable, non-toxic worn for the **operation of mechanical limbs**. Also, spare cylinders of a similar size if required to ensure an adequate supply for the duration of the journey.	NO	YES	YES	NO
Hair styling equipment containing a hydrocarbon gas cartridge, up to one (1) per passenger or crew-member, provided that the safety cover is securely fitted over the heating element. This hair styling equipment must not be used on board the aircraft. Spare gas cartridges for such hair styling equipment are not permitted in checked or carry-on baggage.	NO	YES	YES	NO
Insulated packagings containing refrigerated liquid nitrogen (dry shipper), fully absorbed in a porous material containing only non-dangerous goods.	NO	YES	YES	NO
Internal combustion or fuel cell engines, must meet A70 (see 2.3.5.13 for details)[7].	NO	YES	NO	NO
Lithium Batteries: Portable electronic devices (PED) containing lithium metal or lithium ion cells or batteries[8], including medical devices such as portable oxygen concentrators (POC) and consumer electronics such as cameras, mobile phones, laptops and tablets (see 2.3.5.8). For lithium metal batteries the lithium metal content must not exceed 2 g and for lithium ion batteries the Watt-hour rating must not	NO*	YES	YES	NO

	The approval of the operator is required	Permitted in or as checked baggage	Permitted in or as carry-on baggage	The pilot-in-command must be informed of the location
exceed 100 Wh. Devices in checked baggage must be completely switched off and must be protected from damage. Each person is limited to a maximum of 15 PED. *The operator may approve the carriage of more than 15 PED.				
Lithium batteries, spare/loose, including power banks, see **Batteries, spare/loose**	N/A	N/A	N/A	N/A
Lithium battery-powered electronic devices. Lithium ion batteries for portable (including medical) electronic devices, a Wh rating exceeding 100 Wh but not exceeding 160 Wh. For portable medical electronic devices only, lithium metal batteries with a lithium metal content exceeding 2 g but not exceeding 8 g. Devices in checked baggage must be completely switched off and must be protected from damage.	YES	YES	YES	NO
Lithium batteries, spare/loose with a Watt-hour rating exceeding 100 Wh but not exceeding 160 Wh for consumer electronic devices and PMED or with a lithium metal content exceeding 2 g but not exceeding 8 g for PMED only. Maximum of two spare batteries in carry-on baggage only. These batteries must be individually protected to prevent short circuits.	YES	NO	YES	NO
Matches, safety (one small packet) or a small cigarette lighter that does not contain unabsorbed liquid fuel, other than liquefied gas, intended for use by an individual when carried on the person. Lighter fuel and lighter refills are not permitted on one's person or in checked or carry-on baggage.	NO	ON ONE'S PERSON		NO

	The approval of the operator is required	Permitted in or as checked baggage	Permitted in or as carry-on baggage	The pilot-in-command must be informed of the location
Note: *"Strike anywhere" matches, "Blue flame" or "Cigar" lighters or lighters powered by a lithium battery without a safety cap or means of protection against unintentional activation are forbidden (see 2.3.5.8.4(e))*[9].				
Mobility Aids: Battery-powered wheelchairs or other similar mobility devices with **non-spillable wet batteries, nickel-metal hydride batteries or dry batteries**, (see 2.3.2.2)[10].	YES	YES	NO	YES
Mobility Aids: Battery-powered wheelchairs or other similar mobility devices with **spillable batteries or with lithium ion batteries** (see 2.3.2.3 and 2.3.2.4 for details)[11].	YES	YES	NO	YES
Mobility Aids: Battery-powered wheelchairs or other similar mobility devices with **lithium ion batteries** where the design of the mobility aid does not provide adequate protection for the battery(ies) (see 2.3.2.4.3 for details)[12].	YES	NO	YES	YES
Non-radioactive medicinal or toiletry articles (including aerosols) such as hair sprays, perfumes, colognes and medicines containing alcohol; and Non-flammable, non-toxic (Division 2.2) aerosols, with no subsidiary hazard, for sporting or home use. The total net quantity of non-radioactive medicinal or toiletry articles and non-flammable, non-toxic (Division 2.2) aerosols must not exceed 2 kg or 2 L and the net quantity of each single article must not exceed 0.5 kg or 0.5 L. Release valves on aerosols must be protected by a cap or other suitable means to prevent inadvertent release of the contents.	NO	YES	YES	NO

	The approval of the operator is required	Permitted in or as checked baggage	Permitted in or as carry-on baggage	The pilot-in-command must be informed of the location
Oxygen or air, gaseous, cylinders required for **medical use**. The cylinder must not exceed 5 kg gross weight. ***Note**: Liquid oxygen systems are forbidden for transport.*	YES	YES	YES	YES
Permeation devices, must meet A41 (see 2.3.5.13 for details)[13].	NO	YES	NO	NO
Radioisotopic cardiac pacemakers or other devices, including those powered by lithium batteries, implanted into a person or fitted externally.	NO	ON ONE'S PERSON		NO
Security-type equipment (see 2.3.2.6 for details)[14].	YES	YES	NO	NO
Security-type attaché cases, cash boxes, cash bags, etc. incorporating dangerous goods, such as lithium batteries and/or pyrotechnic material, except as provided in 2.3.2.6 are totally forbidden. See entry in 4.2–List of Dangerous Goods.	FORBIDDEN			
Specimens, non-infectious packed with small quantities of flammable liquid, must meet A180 (see 2.3.5.11 for details)[15].	NO	YES	YES	NO
Thermometer, medical or clinical, which contains mercury, one (1) per person for personal use, when in its protective case.	NO	YES	NO	NO
Thermometer or barometer, mercury filled carried by a representative of a government weather bureau or similar official agency (see 2.3.3.1 for details)[16].	YES	NO	YES	YES

The provisions of 2.3 and Table 2.3.A may be limited by state or operator variations. Passengers should check with their airline for the current provisions.

Remarks to table 2.3a:

[1]Batteries must meet the required testing criteria.

[2]Batteries must meet the required testing criteria.

[3]Camping stoves and fuel containers for camping stoves that have contained a flammable liquid fuel may be carried provided the fuel tank of the camping stove and /or fuel container has been completely drained of all liquid fuel and action has been taken to nullify the danger. To nullify the danger the respective receptacle must be allowed to drain for at least one hour, and then must be left uncapped for a minimum of six hours to allow any residual fuel to evaporate. The receptacle must then be securely closed, wrapped in absorbent material and stowed inside polyethylene or equivalent bag.

LX variation does not apply to WK - for carry-on baggage.

[4]Recharging or use of the devices on board is strictly forbidden. Measures must be taken to prevent accidental activation.

[5]The personal safety device(s) must be packed in such a manner that they cannot be accidentally activated. The cartridges may only be filled with carbon dioxide or other suitable gas in Division 2.2 without a subsidiary hazard.Cartridges must be for inflation purposes only.

[6]Battery-powered equipment capable of generating extreme heat, which would cause a fire if activated, e.g. underwater high-intensity lamps. The heat producing component and the battery are isolated from each other by the removal of the heat producing component, the battery or another component, e.g. fuse. Any battery that has been removed must be protected against short circuit.

EDW accepts these articles only in carry-on baggage. According to the provisions in the ICAO TI and IATA DGR they could be carried in checked and carry on baggage.

[7]New or used: Forbidden to carry on EDW. EDW does not accept any internal combustion or fuel cell engines. According to the provisions in the ICAO TI and IATA DGR some of them would be allowed.

[8]Personal transportation devices (e.g. hoverboards, mini-segways, e-skateboard, e-seabob,…) are forbidden for carriage. Active personal tracking devices (e.g. Apple AirTag) in checked-in baggage equipped with button cell batteries (not exceeding 2.7Wh, 0.3g LC) are permitted (according to ICAO TIs addendum 1).

[9]For electronic cigarette lighters powered by lithium batteries, only lighters with a safety cap or means of protection against unintentional activation are permitted on one's person. Recharging of these devices and/or batteries on board the aircraft is not permitted and measures must be taken to prevent accidental activation.

[10]The mobility aid must be prepared for transport to prevent unintentional activation and non-spillable batteries are not permitted to contain any free or unabsorbed liquid.
The operator must secure, by use of straps, tie-downs or other restraint devices, a battery

powered mobility aid with installed batteries. The mobility aid, the batteries, electrical cabling and controls must be protected from damage including by the movement of baggage, mail or cargo.

The operator must verify that:

- the passenger has confirmed that the battery is a non-spillable wet battery that complies with the required Special Provisions;
- the battery terminals are protected from short circuits, e.g. by being enclosed within a battery container;
- the battery is either
    - securely attached to the wheelchair or mobility aid and the electrical circuits are isolated following the manufacturer's instructions; or
    - removed by the user, if the mobility aid is specifically designed to allow it to be, following the manufacturer's instructions.

The passenger may carry a maximum of either one or two spare batteries, depending on which type the battery belongs to. The operator must ensure that any battery(ies) removed from the wheelchair/mobility aid and any spare batteries are carried in strong, rigid packagings which must be carried in the cargo compartment. It is recommended that passengers make advance arrangements with each operator.

[11]The operator must secure, by use of straps, tie-downs or other restraint devices, a battery powered mobility aid with installed batteries. The mobility aid, the batteries, electrical cabling and controls must be protected from damage including by the movement of baggage, mail or cargo.

For spillable battery types the operator must verify that:

- the battery terminals are protected from short circuits, e.g. by being enclosed within a battery container;
- the battery is fitted, where feasible, with spill-resistant vent caps;
- the battery is either
    - securely attached to the wheelchair or mobility aid and the electrical circuits are isolated following the manufacturer's instructions; or
    - removed from the mobility aid following the manufacturer's instructions when the mobility aid cannot be maintained in an upright position.

The operator must load, stow, secure and unload a mobility aid with a spillable battery in an upright position. If the wheelchair or mobility aid cannot be loaded, stowed, secured and unloaded always in an upright position or if the mobility aid does not adequately protect the battery, the operator must remove the battery. The wheelchair or mobility aid may then be carried as checked baggage without restriction and the removed battery has to be shipped as cargo as declared dangerous goods.

Note: WK accepts removed batteries only as cargo with a DGD. As per ICAO TI / IATA DGR the battery could also be accepted in baggage under certain conditions.

For lithium batteries the batteries must meet the required test criteria. Furthermore the operator must verify that:

- the battery terminals are protected from short circuits, e.g. by being enclosed within a battery container;
- the battery is either:
    - securely attached to the wheelchair or mobility aid and the electrical circuits are isolated following the manufacturer's instructions; or
    - removed by the user, if the mobility aid is specifically designed to allow it to be, following the manufacturer's instructions. The battery removed from the mobility aid must not exceed 300Wh, or for mobility aids fitted with two batteries, each battery must not exceed 160Wh.

A passenger may carry a maximum of one spare lithium ion battery not exceeding 300Wh or two spare batteries each not exceeding 160Wh. Furthermore the operator must ensure that any battery removed from the mobility aid and any spare batteries are carried in the passenger cabin. The removed or spare batteries must be protected from damage (e.g. by placing each battery in a protective pouch).

[12]The battery is removed by the user, if the mobility aid is specifically designed to allow it to be, following the manufacturer's instructions. The battery removed from the mobility aid must not exceed 300Wh, or for mobility aids fitted with two batteries, each battery must not exceed 160Wh.

[13]In checked baggage only permeation devices for calibrating air quality monitoring equipment. These devices must comply with the requirements of Special Provision A41 stipulated in the IATA DGR § 2.3.5.13.

[14]Security type equipment such as attaché cases, cash boxes, cash bags, etc. incorporating dangerous goods as part of this equipment, for example lithium batteries or pyrotechnic material, are totally forbidden on WK.

Note: This requirement is more restrictive than ICAO TI / IATA DGR, as the regulations would allow security-type equipment under certain conditions with the approval of the operator.

[15]In checked or carry-on baggage non-infectious specimens, such as specimens of mammals, birds, amphibians, reptiles, fish, insects and other invertebrates containing small quantities of flammable liquids provided that the following requirements of Special Provision A180 are complied with:

- specimens are:

    - wrapped in paper towel and/or cheesecloth moistened with alcohol or an alcohol solution and then placed in a plastic bag that is heat- sealed. Any free liquid in the bag must not exceed 30 ml; or
    - placed in vials or other rigid containers with no more than 30 ml of alcohol or an alcohol solution;
- the prepared specimens are then placed in a plastic bag that is then heat-sealed;
- the bagged specimens are then placed inside a another plastic bag with absorbent material then heat sealed;
- the finished bag is then placed in a strong outer packaging with suitable cushioning material;
- the total quantity of flammable liquid per outer packaging must not exceed 1l; and
- the completed package is marked “scientific research specimens, not restricted”.

[16]According to Operator's variation LX-03: Mercurial barometers or thermometers will not be accepted for carriage in baggage, except a small medical or clinical thermometer for personal use when in its protective case.

9.1.5 Shipping / Transporting of spares (COMAT) classified as Dangerous Goods

All spares and replacement items shall be evaluated and identified by their hazardous or non-hazardous classification before being introduced into the transportation system. Spares that are classified as DG must be transported in full compliance with the ICAO TI / IATA DGR.

The offering of DG COMAT for transport is a shipper function according to ICAO TIs Part 5 and includes classifying, documenting, marking, labelling, and packaging of the DG shipment. Such DG items must go through the normal DG Acceptance process.

9.1.6 Forbidden dangerous goods

Dangerous Goods	Description
Forbidden DG for transport by air under any circumstances.	Any article or substance which is identified as too dangerous to ever be carried on any aircraft (i.e. liable to explode, dangerously react, produce a flame or dangerous evolution of heat or dangerous emission of toxic, corrosive or flammable gases or vapours under conditions normally encountered in transport) **must not** be carried on an aircraft under any circumstance.
Forbidden DG authorised for air transport by approval.	Certain DG, which are normally forbidden, may be specifically authorised for air transport through approval by the national authority of the state of origin where the DG are first loaded on an aircraft and of FOCA.

Dangerous Goods	Description
Forbidden DG authorised for air transport under exemption from all states concerned.	Refer to OM A Exemptions.

9.1.7 Approvals and exemptions

9.1.7.1 Approvals

The State of Origin of the transport and FOCA may grant Edelweiss an approval:

- to transport DG forbidden on passenger and/or cargo aircraft where the ICAO TI / IATA DGR state that such goods may be carried under an approval
- for other purposes as specified in the ICAO TI / IATA DGR

provided that in such instances an overall level of safety in transport which is at least equivalent to the level of safety provided for in the ICAO TI / IATA DGR is achieved.

> Note: In Switzerland, requests for approvals must be sent to gefahrgut@bazl.admin.ch.

9.1.7.2 Exemptions

In instances of extreme urgency or when other forms of transport are inappropriate or full compliance with the prescribed requirements is contrary to public interest, transports which are not fully compliant with the regulations may be carried out provided that all states concerned (states of origin of the transport, operator, transit, overflight and destination) have granted an exemption and that the conditions of the exemption are complied with.

> Note: In Switzerland, requests for exemptions must be sent to gefahrgut@bazl.admin.ch.

9.1.8 Recognition of undeclared Dangerous Goods

Cabin, Cockpit, Operational Ground Staff

9.1.8.1 General

Diamond-shaped GHS pictograms on packages may indicate the presence of dangerous goods. While some pictograms identify substances that only pose a hazard for supply and use, other GHS pictograms contain symbols that are largely equivalent to the symbols contained in the hazard labels used in transport, and which may therefore be classified as dangerous goods.

Cargo and baggage might contain undeclared and/or forbidden DG.

Indicators for DG may be:

- Information provided on air waybills;
- General information marked on packages;
- DG markings and labels (e.g.: UN numbers, proper shipping names or hazard labels);
- Consumer warning labels on packages e.g.:

In case of suspicion of a DG content in general cargo and baggage:

- Cargo acceptance and passenger handling staff must be alert,
- Consideration must be given to verify that no undeclared/forbidden DG are present, e.g. in seeking confirmation from passengers and shippers.
- Undeclared DG must not be loaded before they are declared properly;
- Forbidden DG must not be loaded at all.

Cabin, Cockpit, Operational Ground Staff

9.1.8.2 Hidden shipment indicators

Commodity	Description
Aircraft spare parts/ Aircraft equipment	May contain explosives (flares or other pyrotechnics), chemical oxygen generators, unserviceable tyre assemblies, cylinders of compressed gas (oxygen, carbon dioxide or fire extinguishers), paint, adhesives, aerosols, live saving appliances, first aid kits, fuel in equipment, wet or lithium batteries, matches, etc.
Automobiles, automobile parts/ supplies	(Car, motor, motorcycle) may contain ferro-magnetic material which may not meet the definiton for magnetized material but which may be subject to special stowage requirements due to the possibility of affecting aircraft instruments. May also contain engines, including fuel cell engines, carburettors or fuel tanks which contain or have contained fuel, wet or lithium batteries, compressed gases in tyre inflation devices, fire extinguishers, shocks/struts with nitrogen, air inflators/bag modules, flammable adhesives, paints, sealants and solvents.
Battery-powered devices/equipment	May contain wet or lithium batteries.
Breathing apparatus	May indicate cylinders of compressed air or oxygen, chemical oxygen generators or refrigerated liquefied oxygen.
Camping equipment	May contain flammable gases (butane, propane, etc.), flammable liquids (kerosene, gasoline, etc.) or flammable solids (hexamine, matches, etc.) or other dangerous goods.
Cars, car parts	See automobiles, etc.
Chemicals	May contain items meeting any of the criteria for dangerous goods, particularly flammable liquids, flammable solids, oxidizers, organic peroxides, toxic or corrosive substances.
COMAT (company materials)	Such as aircraft parts, may contain dangerous goods as an integral part, e.g. chemical oxygen generators in a passenger service unit (PSU), various compressed gases such as oxygen, carbon dioxide and nitrogen, gas lighters, aerosols, fire extinguishers, flammable liquids such as fuels, paints. and adhesives, and corrosive material such as batteries. Other items such as flares, first aid kits, life-saving appliances, matches, magnetized material, etc.

Commodity	Description
Consolidated consignments (groupages)	May contain any of the defined classes of dangerous goods.
Cryogenic (liquid)	Indicates refrigerated liquefied gases such as argon, helium, neon and nitrogen.
Cylinders	May contain compressed or liquefied gas.
Dental apparatus	May contain flammable resins or solvents, compressed or liquefied gas, mercury and radioactive material.
Diagnostic specimens	May contain infectious substances.
Diving equipment	May contain cylinders (such as scuba tanks, vest bottles, etc.) of compressed gas (air, oxygen, etc.),high intensity diving lamps which can generate extremely high heat when operated in air. In order to be carried safely, the bulb or battery must be disconnected.
Drilling and mining equipment	May contain explosive(s) and/or other dangerous goods.
Dry shipper (vapour shipper)	May contain free liquid nitrogen. Dry shippers are subject to these IATA DGR when they permit the release of any free liquid nitrogen irrespective of the orientation of the packaging.
Electrical equipment/electronic equipment	May contain magnetised materials or mercury in switch gear and electron tubes, wet batteries, lithium batteries or fuel cells or fuel cell cartridges that contain or have contained fuel.
Electrically powered apparatus	(Wheel chairs, lawn mowers, golf carts, etc.) may contain wet batteries, lithium batteries or fuel cells or fuel cell cartridges that contain or have contained fuel.
Expeditionary equipment	May contain explosives (flares), flammable liquids (gasoline), flammable gas (propane, camping gas) or other dangerous goods.
Film crew or media equipment	May contain explosive pyrotechnic devices, generators incorporating internal combustion engines, wet batteries, lithium batteries, fuel, heat producing items, etc.
Frozen embryos	May contain refrigerated liquefied gas or Carbon dioxide, sold (dry ice).
Frozen fruit, vegetables, etc.	May be packed in Carbon dioxide, sold (dry ice).
Fuel	May contain flammable liquids, flammable solids or flammable gasses.

Commodity	Description
Fuel control units	May contain flammable liquids.
Hot air balloon	May contain cylinders with flammable gas, fire extinguishers, engines internal combustion, batteries, etc.
Household goods	May contain items meeting any of the criteria for dangerous goods including flammable liquids such as solvent based paint, adhesives, polishes, aerosols (for passengers, those not permitted under ICAO Technical Instructions 8;1.1.2), bleach, corrosive oven or drain cleaners, ammunition, matches, etc.
Instruments	May conceal barometers, manometers, mercury switches, rectifier tubes, thermometers, etc. containing mercury.
Laboratory/testing equipment	May contain items meeting any of the criteria for dangerous goods, particularly flammable liquids, flammable solids, oxidizers, organic peroxides, toxic or corrosive substances, lithium batteries, cylinders of compressed gas, etc.
Machinery parts	May contain flammable adhesives, paints, sealants, solvents, wet and lithium batteries, mercury, cylinders of compressed or liquefied gas, etc.
Magnets and other items of similar material	May individually or cumulatively meet the definition of magnetised material.
Medical supplies	May contain items meeting any of the criteria for dangerous goods, particularly flammable liquids, flammable solids, oxidizers, organic peroxides, toxic, corrosive substances or lithium batteries.
Metal construction material, metal fencing, metal piping	May contain ferro-magnetic material, which may be subject to special stowage requirements due to the possibility of affecting aircraft instruments.
Parts of automobile (car, motor, motorcycle)	May contain wet batteries, etc.
Passengers baggage	May contain items meeting any of the criteria for dangerous goods. Examples include fireworks, flammable household liquids, corrosive oven or drain cleaners, flammable gas or liquid lighter refills or camping stove cylinders, matches, ammunition, bleach, aerosols (those with no subsidiary risk, for sporting or home use, are permitted in checked baggage only).

Commodity	Description
Pharmaceuticals	May contain items meeting any of the criteria for dangerous goods, particularly radioactive material, flammable liquids, flammable solids, oxidizers, organic peroxides, toxic or corrosive substances.
Photographic supplies	May contain items meeting any of the criteria for dangerous goods, particularly heat producing devices, flammable liquids, flammable solids, oxidizers, organic peroxides, toxic or corrosive substances or lithium batteries.
Promotional material	See passenger baggage.
Racing car or motorcycle team equipment	May contain engines, including fuel cell engines, carburettors or fuel tanks which contain fuel or residual fuel, flammable aerosols, cylinders of compressed gases, nitromethane, other fuel additives, wet batteries, etc.
Refrigerators	May contain liquefied gases or an ammonia solution.
Repair kits	May contain organic peroxides and flammable adhesives, solvent based paints, resins, etc.
Samples for testing	May contain items meeting any of the criteria for dangerous goods, particularly infectious substances, flammable liquids, flammable solids, oxidizers, organic peroxides, toxic or corrosive substances.
Semen	May be packed with Carbon dioxide, solid (dry ice) or refrigerated liquefied gas (see also dry shipper).
Ships' spares	May contain explosives (flares), cylinders of compressed gas (life rafts), paint, lithium batteries (emergency locator transmitters), etc.
Show, motion picture, stage and special effects equipment	May contain flammable substances, explosives or other dangerous goods.
Sporting goods/ sports team equipment	May contain cylinders of compressed or liquefied gas (air, carbon dioxide, etc.), lithium batteries, propane torches, first aid kits, flammable adhesives, aerosols, etc.
Swimming pool chemicals	May contain oxidising or corrosive substances.
Switches in electrical equipment or instruments	May contain mercury.

Commodity	Description
Tool boxes	May contain explosives (power rivets), compressed gases or aerosols, flammable gases (butane cylinders or torches), flammable adhesives or paints, corrosive liquids, lithium batteries, etc.
Torches	Micro torches and utility lighters may contain flammable gas and be equipped with an electronic starter. Larger torches may consist of a torch head (often with a self-igniting switch) attached to a container or cylinder of flammable gas.
Unaccompanied passengers baggage/personal effects	May contain items meeting any of the criteria for dangerous goods, such as fireworks, flammable household liquids, corrosive oven or drain cleaners, flammable gas or liquid lighter refills or camping stove cylinders, matches, bleach, aerosols, etc.
Vaccines	May be packed in Carbon dioxide, solid (dry ice).

9.1.8.3 Reporting of undeclared Dangerous Goods

Any occasion must be reported:

- When undeclared or misdeclared DG are discovered in cargo or mail.
  Such a report must be made to Swiss FOCA (State of the operator) as well as to the appropriate authority of the State, in which the DG has been detected;
- When DG not permitted under OM A Dangerous goods that may be carried by passengers and crew are discovered in crew baggage or in passengers' baggage after check-in.
  Such a report must be made to the appropriate authority of the State in which the DG has been detected.

For more details about reporting refer to OM A Reporting.

9.1.9 Marking, labelling and transport documentation

Cabin, Cockpit, Operational Ground Staff

9.1.9.1 Package markings and labelling

It is the responsibility of Edelweiss (delegated to Swiss World Cargo) that DG shipments are properly marked and labelled.

There are two types of labels:

Hazard labels:

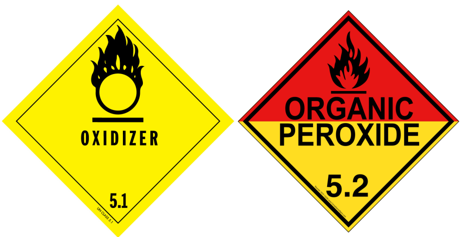
They correspond to the code as shown in the table of OM A Classes of dangerous goods.

Class 1 Explosives


Class 2 Gas

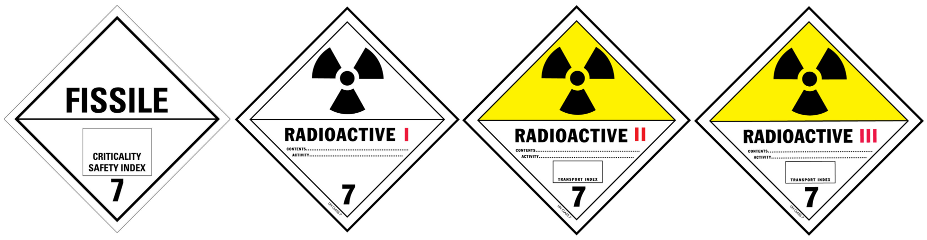

Class 3 Flammable Liquids


Class 4 Flammable Solids


Class 5 Oxidizing Substances


Class 6 Toxic and Infectious Substances

Class 7 Radioactive Material

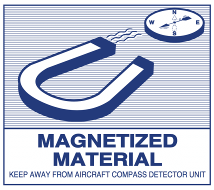
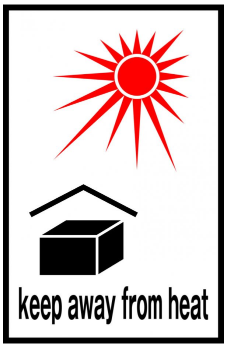
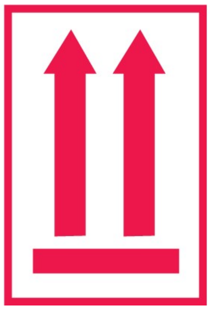
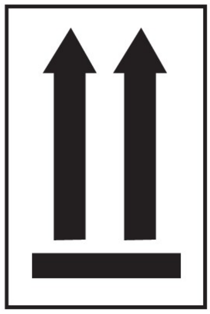


Class 8 Corrosives

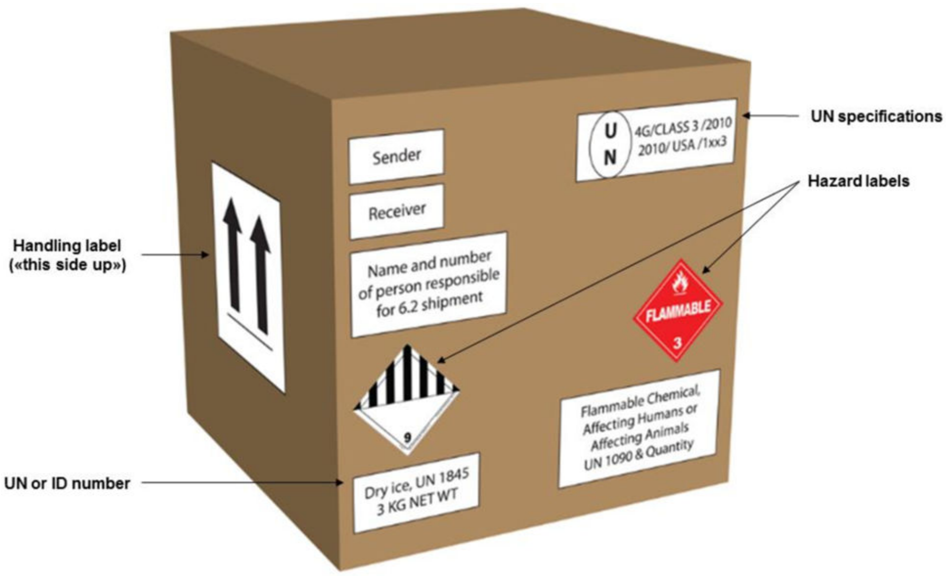
Class 9 Miscellaneous Dangerous Goods

Handling labels:

They are used to provide information on the proper handling and stowage of a package.

Examples of handling labels			
			
			

Example of a marked and labelled package



Cabin, Cockpit, Operational Ground Staff

9.1.9.2 Classes of dangerous goods

Class Divi-sion	Code IMP-Code	Name
1.1	REX/RCX/RGX	Explosives with mass explosion hazard
1.2	REX/RCX/RGX	Explosives with projection hazard
1.3	REX/RCX/RGX	Explosives with fire hazard, minor blast/projection hazard
1.4	RXB/RXC/RXD RXE/RXG/RXS	Explosives without significant hazard
1.5	REX	Very intensive explosives with mass explosion hazard
1.6	REX	Extremely intensive explosives with mass explosion hazard
2.1	RFG	Flammable gas
2.2	RNG/RCL	Non-flammable, non-toxic/Cryogenic liquid
2.3	RPG	Toxic gas
3	RFL	Flammable liquid
4.1	RFS	Flammable solid
4.2	RSC	Spontaneously combustible
4.3	RFW	Dangerous when wet
5.1	ROX	Oxidiser
5.2	ROP	Organic peroxide
6.1	RPB	Toxic
6.2	RIS/RDS	Infectious substance/Biological substances, Category B
7	RRW RRY RRE	Radioactive - white Radioactive - yellow Radioactive material - excepted package
8	RCM	Corrosive
9	RSB MAG ICE RMD RBI	Polymeric beads Magnetised material Dry Ice Miscellaneous dangerous goods Lithium ion batteries (UN3480, Section 1A/1B)

Class Division	Code IMP-Code	Name
	RLI RBM RLM	Lithium ion batteries (UN3481, Section 1) Lithium metal batteries(UN3090,Section1A/1B) Lithium metal batteries (UN3091, Section 1)

9.1.9.3 Transport documentation

The shipper must present a Shippers Declaration to the Cargo Handling Agent (e.g. Cargologic at ZRH)

- on a paper document or
- by EDP techniques

If a paper document is used, two copies, completed and signed, must be provided (see an example below):


SHIPPER'S DECLARATION FOR DANGEROUS GOODS

Shipper

Air Waybill No.

Page of Pages

Consignee

WARNING
Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties.

TRANSPORT DETAILS

Airport of Departure:

PASSENGER AND CARGO AIRCRAFT | CARGO AIRCRAFT ONLY

Airport of Destination:

NON-RADIOACTIVE | RADIOACTIVE

NATURE AND QUANTITY OF DANGEROUS GOODS

Dangerous Goods Identification

UN or ID No.	Proper Shipping Name	Class or Division (Subsidiary Risk)	Packing Group	Quantity and type of packing	Packing Inst.	Authorization

Additional Handling Information

Emergency contact 24-hr number:

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. I declare that all of the applicable air transport requirements have been met.

Name/Title of Signatory

Place and Date

Signature (See warning above)

Where the DG transport information is provided by EDP techniques, the data must be able to be produced as a paper document without delay, with the data in the sequence required.

9.1.10 Acceptance and handling procedures

9.1.10.1 Acceptance procedures

Dangerous Goods are only accepted by the assigned Cargo Handling Agent of Swiss World Cargo, on behalf of EDW, when they are packed and labelled as provided in the ICAO TI / IATA DGR and when they are accompanied by the required documentation. An inspection and acceptance check according to the DG acceptance checklist is always carried out to determine that all appropriate requirements are fulfilled and that no package is damaged or leaking. Otherwise, the package is not accepted for transportation.

For confirmation and/or test requirements regarding DG allowed, the following department has to be contacted: dangerousgoods@swiss.com

The acceptance and inspection as well as the handling, loading, stowage and segregation of the DG are only performed by personnel who have received the appropriate training.

9.1.10.2 Inspection for damage, leakage or contamination

A package, overpack or unit load device containing DG shall not be loaded onto an aircraft or into a unit load device unless it has been inspected immediately prior to loading and found free from evidence of leakage or damage.

Packages or overpacks containing DG must be inspected by the ground service provider for signs of damage or leakage upon unloading from the aircraft or unit load device.

9.1.10.3 Removal of contamination

If evidence of damage or leakage is found, the position where the DG or unit load device was stowed on the aircraft must be inspected for damage or contamination and any hazardous contamination removed.

Any contamination resulting from the leakage of or the damage to articles or packages containing DG must be removed by a qualified organisation without delay and steps must be taken to nullify any hazard.

An aircraft which has been contaminated by radioactive materials must immediately be taken out of service and not returned until the radiation level at any accessible surface and the nonfixed contamination are not more than the values specified in the ICAO TI / IATA DGR.

9.1.10.4 Stowage and segregation

Storage and loading can be found in GOM (Edelweiss) and CHM (Swiss World Cargo).

Unless excepted according to OM A Exceptions, DG must not be carried in an aircraft cabin occupied by passengers or on the flight deck of an aircraft.

DG bearing the «Cargo aircraft only» label must not be carried on a passenger aircraft.

Cabin, Cockpit

9.1.11 Emergency response

If time and situation permit, the following considerations may be taken into account in assessing an appropriate course of action in the event of an incident involving Dangerous Goods:

- Consideration should always be given to land as soon as possible. If the situation permits, the relevant air traffic services should be informed of the Dangerous Goods on board.
- The appropriate fire or smoke removal emergency procedure approved for the aircraft type should always be carried out. Using the appropriate smoke removal emergency procedures should reduce the concentration of any contamination and help to avoid recirculation of contaminated air. Air conditioning systems should be operated at maximum capacity and all cabin air vented overboard (no recirculation of air) in order to reduce the concentration of any contamination in the air and to avoid recirculation of contaminated air.
- Reducing altitude will reduce the rate of vaporisation of liquid and may reduce the rate of leakage, but it may increase the rate of burning. Conversely, increasing altitude may reduce the rate of burning but may increase the rate of vaporisation or leaking. If there is structural damage or the risk of an explosion, consideration should be given to keeping the differential pressure as low as possible.
- The rate of ventilation should not be reduced in an attempt to extinguish a fire, as this will have an incapacitating effect on the passengers without significantly affecting the fire. Passengers are likely to suffocate through lack of oxygen before a fire is extinguished. Passenger survival chances are greatly enhanced by ensuring maximum cabin ventilation.

Cockpit

9.1.11.1 Emergency response information to flight and cabin crew

Check-list during flight

- Follow the appropriate aircraft emergency procedures for fire or smoke removal
- No smoking sign on
- Consider landing as soon as possible
- Consider turning off non-essential electrical power
- Determine source of smoke / fumes / fire - identify the item
- For dangerous goods incidents in the passenger cabin, see OM A Cabin crew checklist and coordinate cockpit/cabin crew actions
- Determine emergency response drill code and use guidance from aircraft emergency response drills chart to help deal with incident. The emergency response drill chart can be found in the FOSI DG Quick Reference Guide.

Note: The appropriate drill code is given on the NOTOC. If the situation permits, notify ATC of the dangerous goods being carried.

Note: Whenever possible this information should include:

- the proper shipping name and/or UN number, the class/division and, for Class 1, the compatibility group
- any identified subsidiary hazard(s), the quantity and the location on board the aircraft, or
- when it is not considered possible to include all the information, those parts thought most relevant in the circumstances or a summary of the quantities and class or division of DG in each cargo compartment should be given, or
- the telephone number of the Network Operations Centre (OCC) +41 43 456 55 55 where a copy of the NOTOC of all Edelweiss flights can be obtained.

Check-list after landing

- Disembark passengers and crew before opening any cargo compartment doors
- Inform ground personnel / emergency services of nature of item and where stowed
- Make appropriate entry in maintenance log

Cabin

9.1.11.2 Cabin crew

Doors closed/during flight:

- Notify the commander.
- Identify the item.
- In case of fire/smoke:
    - Use standard procedures/check the use of water.
- In case of fire/smoke involving a portable electronic device:
    - Use standard procedures/obtain and use a fire extinguisher.

    - Remove external electrical power from the device (if applicable) and/or turn off the device if possible.
    - Douse the device with water (or other non-flammable liquid) to cool cells and prevent ignition of adjacent cells.
    - Remove power to remaining electrical outlets until aircraft systems can be determined to be free of faults if the device was previously plugged in.
    - When the device has cooled and there is no evidence of smoke or heat (after approximately 10-15 minutes), it can be moved with caution to a suitable empty container and completely submerged in water (or other non-flammable liquid). Wear PBE and fire-fighting gloves when moving the device. The container used must be stowed and if possible secured to prevent spillage.
    - Monitor the device and the surrounding area for the remainder of the flight.
- In case of spillage or leakage:
    - Collect the onboard dangerous goods kit (stowed under jumpseat 1L) and/or other useful items.
    - Wear rubber gloves and PBE.
    - Move passengers away from the area and distribute wet towels or cloths to protect them from fumes.
    - Place dangerous goods items in polyethylene bags.
    - Stow the polyethylene bags.
    - Treat affected seat cushions/covers in the same manner as dangerous goods items.
    - Cover spillage on carpet/floor.
    - Regularly inspect items stowed away/contaminated furnishings.

After landing:

- Indicate the dangerous goods items to the ground personnel and where they are stowed.
- Remove any contamination which occurred.

The aeroplane emergency drills, as shown in the "emergency response guidance for aeroplane incidents involving Dangerous Goods" (pink pages), are for the guidance of crew members when an incident occurs in flight which is or might be related to a particular package, containing Dangerous Goods.

The appropriate drill code is given on the NOTOC.

9.1.11.3 Information to be provided by the operator in the event of an aeroplane incident or accident

In the event of an aircraft accident or a serious incident where DG carried as cargo may be involved, information about the DG on board, as shown on the copy of the NOTOC, must be provided

- without delay, to emergency services responding to the accident or serious incident;
- as soon as possible, to FOCA and to the appropriate authority of the State in which the accident or serious incident occurred;

If requested, the same requirement applies in the event of a non-serious incident.

9.1.11.4 Information in the event of an aeroplane incident or accident

In the event of an in-flight emergency, the pilot-in-command must, as soon as the situation permits, inform the appropriate air traffic services unit, for the information of aerodrome authorities, of any DG carried as cargo on board an aircraft.
Wherever possible, this information should include the proper shipping name and/or

- the UN number,
- the class/division,
- for Class 1, the compatibility group,
- any identified subsidiary risk(s),
- the quantity and
- he location on board the aircraft or a telephone number where a copy of the information provided to the pilot-in-command can be obtained.

When it is not considered possible to include all the information,

- the most relevant information in the circumstances or
- a summary of the quantities and class (or division) of DG in each cargo compartment should be given.

9.1.12 Provision of information

9.1.12.1 Provision of information to personnel

Information to the operator's personnel and to the persons in charge for the operator is provided in the following manuals for training and recurrent training:

- IATA Dangerous Goods Regulation
- OM A Dangerous Goods and Weapons
- OM B A320 Dangerous Goods and OM B A340 Dangerous Goods
- GOM Dangerous Goods
- OM D Training for Transportation of DG
- FOSI DG Quick Reference Guide

All manuals are available on Yonder either via the webclient or the offline application (refer to OMM Manual Library).

9.1.12.2 Information to passengers

Edelweiss ensures that information on the types of dangerous goods which a passenger is forbidden to transport aboard an aircraft is presented at the point of ticket purchase or, if this is not practical, made available in another manner to passengers before the check-in process.

Edelweiss or its handling agent and the airport operator must ensure that notices warning passengers of the types of dangerous goods which they are forbidden to transport aboard an aircraft are available and prominently displayed, in sufficient number, at each of the places at an airport where tickets are issued, passengers are checked in and aircraft boarding areas are maintained, and at any other location where passengers are checked in. These notices must include visual examples of dangerous goods forbidden from transport aboard an aircraft.

When provision is made for the check-in process to be completed remotely (e.g. via the Internet), Edelweiss must ensure that information on the types of dangerous goods which a passenger is forbidden to transport aboard an aircraft is presented to passengers.

When provision is made for the check-in process to be completed at an airport by a passenger without the involvement of any other person (e.g. automated check-in facility), Edelweiss or the airport operator must ensure that information on the types of dangerous goods which a passenger is forbidden to transport aboard an aircraft is presented to passengers.

All information (via the Internet or by other means) may be in text or pictorial form but must be such that the check-in process cannot be completed until the passenger, or a person acting on their behalf, has been presented with this information, and indicated that they have understood the restrictions on dangerous goods in baggage.

Any organisation or enterprise other than Edelweiss (such as a travel agent) involved in the air transport of passengers, should provide passengers with information about the types of dangerous goods which they are forbidden from transporting aboard an aircraft. This information must consist of, as a minimum, notices at those locations where there is an interface with the passengers.

9.1.12.3 Provision of information at acceptance points for cargo

Swiss World Cargo or the designated handling agent must ensure that sufficient notices, prominently displayed, are provided at visible location(s) at cargo acceptance points, giving information about the transport of Dangerous Goods to alert shippers/agents about any Dangerous Goods that may be contained in their cargo consignment(s). These notices must include visual examples of Dangerous Goods, including batteries.

9.1.12.4 Provision of information to the commander (NOTOC)

Edelweiss shall inform the CMD about Dangerous Goods that will be carried on board the aircraft. This must be done before departure and in written form. An ACARS NOTOC only is not sufficient to cover requirements.

This information is presented on the special load notification to the CMD, the NOTOC. The NOTOC must include at least the information as specified in the IATA DGR and ICAO TI.

The NOTOC must at least contain the following information:

- If applicable, the airway bill number
- Proper shipping name and/or UN/ID number, and where required, technical name(s)
- Class or division and subsidiary hazard(s) corresponding to the label(s) applied and for Class 1 the compatibility group
- Packing group
- Drill code (emergency response code for aeroplane incidents involving Dangerous Goods)
- Identified subsidiary hazard(s)
- For non-radioactive material, number of packages, exact loading location and as required net quantity or gross weight of each packet except:
    - For UN1845: Carbon dioxide, solid (dry ice), UN number, proper shipping name, classification, total quantity in each aircraft hold and offload airport
    - For UN 3480 (lithium ion batteries) and UN 3090 (lithium metal batteries), only the UN number, proper shipping name, class, total quantity at each loading location and whether the pack must be carried on a cargo only aircraft need to be provided.
      UN 3480 (lithium ion batteries) and UN 3090 (lithium metal batteries) carried under a state exemption must meet all of the requirements of packing group and radioactive material group mentioned above
- For radioactive material, number and category of packages, overpacks or freight containers, exact location and as applicable, transport index for each package
- Any restriction for transport on Cargo Aircraft Only (CAO)
- Offload airport
- If applicable, Dangerous Goods transported under state exemptions
- If applicable, ULD identification number(s)
- An indication that aircraft loading personnel observed no evidence of damage to or leakage from packages, or leakage from ULDs, loaded onto the aircraft.

A legible copy of the information provided to the pilot-in-command must be retained on the ground (in the EDW OCC) and must be readily accessible to the flight operations officer, flight dispatcher, or designated ground personnel responsible for the flight operations until after the arrival of the flight.

9.1.13 Reporting

9.1.13.1 Reportable occurrences

The following DG events must be reported:

- Any type of DG incident or accident, irrespective of whether the DG are contained in cargo, mail, passengers' baggage or crew baggage.
  This includes incidents involving DG that are not subject to all or part of the ICAO TIs through the application of an exception or of a special provision;.
- The finding of undeclared or misdeclared DG discovered in cargo or mail (incl. lithium ion cells or batteries of Section II);
- The finding in passengers' or crew baggage of DG not permitted under ICAO TIs Part 8; Chapter 1.1 (refer to OM A Dangerous goods that may be carried by passengers and crew);
- Dangerous goods occurrences:
  - when loading, segregation or securing are not according to ICAO TIs Part 7; 2 or
  - when the information provided to the pilot-in-command is not in accordance with ICAO TIs Part 7;4.1.

9.1.13.2 Reporting Procedure

For reporting via IQSMS refer to OM A Handling of Accidents and Occurrences.

The approver/validator of the IQSMS Report will send the report to the authority according to this scheme:

	The DG report must be sent to the following authority:	
	FOCA	**The State where the event occurred**
DG incidents and accidents	✓	✓
Undeclared or misdeclared DG discovered in cargo or mail	✓	✓
The finding of DG not permitted under ICAO TIs Part 8; Chapter 1.1 discovered in passengers' baggage after check-in		✓
DG occurrences	✓	

9.1.13.3 Content of the reports

The first report and any subsequent report shall be as precise as possible and contain the following data if relevant and available:

- Date of the incident or accident or the finding of undeclared or misdeclared DG;
- Location, the flight number and flight date;
- Description of the goods and the reference number of the air waybill, pouch, baggage tag, ticket,etc;

- Proper shipping name (including the technical name, if appropriate) and UN/ID number, when known;
- Class or division and any subsidiary risk;
- Type of packaging, and the packaging specification marking on it;
- Quantity;
- Name and address of the shipper, passenger, etc.;
- Any other relevant details;
- Suspected cause of the incident or accident;
- Action taken;
- Any other reporting action taken; and
- Name, title, address and telephone number of the person making the report.

Copies of relevant documents and any photographs taken should be attached to a report.

For reporting via IQSMS refer to OM A Handling of Accidents and Occurrences.

9.1.14 Dangerous Goods training

9.1.14.1 Basic training

All personnel involved in transport of Dangerous Goods must be instructed according to the respective training syllabus included in the OM D and approved by the FOCA before performing any duty according to OM D Training for Transportation of DG.

9.1.14.2 Recurrent training

All personnel who require dangerous goods training have to receive recurrent training within 24 months of previous training.

However, if recurrent training is completed within the final three months of validity of previous training, the period of validity extends from the month in which the recurrent training was completed until 24 months from the expiry month of that previous training.

For details and the scope of DG recurrent training refer to OM D Training for Transportation of DG.

9.2 Weapons, munitions of war and sporting weapons

9.2.1 Weapons and munitions of war

Flying war material (MUW) is not allowed on any EDW flight.

9.2.2 Sporting weapons and ammunition

Edelweiss is taking all reasonable measures to ensure that any sporting weapons intended to be carried by air are reported in advance.

Sporting rifles/shotguns, hunting rifles, sporting pistols/revolvers may only be transported in the checked baggage, provided that firearms are unloaded and suitably packed in containers made of wood, metal, fibre, polystyrene etc. They must be checked for strength before accepted for transportation.

Edelweiss is allowed to transport, as checked baggage only, securely packaged cartridges (UN 0012 or UN 0014 only), in Division 1.4S, in quantities not exceeding 5 kg gross weight per person and for that person‘s own use, excluding ammunition with explosive or incendiary projectiles. The cartridges must be packed (as laid down in the ICAO TI) in a strong outer container and inside be protected against shock and secured against movement, that it cannot function accidentally.

9.2.3 Armed bodyguards and law enforcement officers

For the acceptance of weapons of body guards refer to OM A Armed bodyguards and law enforcement officers.

9.2.4 Flight personnel

The flight personnel are not allowed to carry private weapons while on duty.

10 Security

Cabin, Cockpit, Operational Ground Staff

Cabin, Cockpit, Operational Ground Staff

10.1 Security policies

Cabin, Cockpit, Operational Ground Staff

10.1.1 Purpose

The aim of aviation security shall be to safeguard international civil aviation operations against acts of unlawful interference. In this context the contents of this chapter are intended to give useful information to the CMD and the other crew members concerning security measures, or if a crime has been committed on board an Edelweiss Air aeroplane. It shall also stress that constant vigilance in respect to security is necessary on the part of all flight crew (FCM) and cabin crew (CCM) members.

Cabin, Cockpit, Operational Ground Staff

10.1.2 Policy

If a crime or an act of unlawful interference is committed on board between “Doors closed” and “Doors opened”, the CMD, as final authority, is responsible that actions are taken to protect lives, aeroplane as well as load and to safe-guard the necessary evidence. In urgent cases, the CMD arranges preliminary inquiry until the competent authority takes over. The CMD may even start a search of clothes and belongings and safeguard pieces of evidence. If there is any special risk, the CMD has the authority to arrest suspects.

Cabin, Cockpit, Operational Ground Staff

10.2 Definitions

Cabin, Cockpit, Operational Ground Staff

10.2.1 Definitions

Cabin, Cockpit, Operational Ground Staff

10.2.1.1 Acts of unlawful interference

- Violence against a person on board an aeroplane in flight if that act is likely to endanger the safety of that aeroplane;
- Destroying an aeroplane in service or causing damage to such an aeroplane which renders it incapable of flight or which is likely to endanger its safety in flight;

- Placing or causing to be placed on an aeroplane in service, by any means whatsoever, a device or substance which is likely to destroy that aeroplane, or causing damage to it which renders it incapable of flight, or causing damage to it which is likely to endanger its safety in flight;
- Destroying or damaging air navigation facilities or interfering with their operation, if any such act is likely to endanger the safety of aeroplane in flight;
- Communicating information which is known to be false, thereby endangering the safety of an aeroplane in flight;
- Unlawfully and intentionally using any device, substance or weapon;
- Performing an act of violence against a person at an aerodrome serving international civil aviation which causes or is likely to cause serious injury or death;
- Destroying or seriously damaging the facilities of an aerodrome serving international civil aviation or aeroplane not in service located there on or disrupting the services of the aerodrome; if any such act or is likely to endanger safety of that aerodrome.

Cabin, Cockpit, Operational Ground Staff

10.2.1.2 Air side

The movement area of an aerodrome, adjacent terrain and building or portion thereof, to which the access is controlled.

Cabin, Cockpit, Operational Ground Staff

10.2.1.3 Appropriate authority

The authority designated by a State within its administration to be responsible for the development, implementation and maintenance of the National Aviation Security Program. FOCA is designated as the appropriate authority for security.

Cabin, Cockpit, Operational Ground Staff

10.2.1.4 Bomb alert

A status of alert, put in place by competent authorities to activate an intervention plan intended to counter the possible consequences arising from a communicated threat, anonymous or otherwise, or arising from the discovery of a suspect item on an aeroplane, at an aerodrome or in any civil aviation facilities.

Cabin, Cockpit, Operational Ground Staff

10.2.1.5 Bomb threat

A communicated threat, anonymous or otherwise, which suggests, or infers, whether true or false, that the safety of an aeroplane in flight, on the ground, or any person may be in danger from an explosive or other item or device.

Cabin, Cockpit, Operational Ground Staff

10.2.1.6 Crime on board

Crimes committed on ground or in flight are both treated as crimes committed on board an aircraft.

Cabin, Cockpit, Operational Ground Staff

10.2.1.7 Hijacking

Is an act of aggression in which the hijacker(s) force(s) the CMD to relinquish part of his authority in assuming command over the aeroplane.

Cabin, Cockpit, Operational Ground Staff

10.2.1.8 Sabotage

Is an act or omission, intended to cause malicious or wanton destruction of property, endangering or resulting in unlawful interference with international civil aviation and its facilities.

Cabin, Cockpit, Operational Ground Staff

10.2.1.9 Screening

Is the application of technical or other means which are intended to detect weapons, explosives or other dangerous devices which may be used to commit an act of unlawful interference.

Cabin, Cockpit, Operational Ground Staff

10.2.1.10 Security control

Security controls are the application of technical or other means to prevent the introduction of weapons, explosives, dangerous devices or articles likely to be utilised to commit an act of unlawful interference.

Cabin, Cockpit, Operational Ground Staff

10.2.1.11 Security program

Measures adopted to safeguard international civil aviation against acts of unlawful interference.

Cabin, Cockpit, Operational Ground Staff

10.2.1.12 Security restricted area

Those areas of an aerodrome, buildings or facilities into which access is restricted or controlled for security and safety purposes.

Cabin, Cockpit, Operational Ground Staff

10.2.1.13 Security Test

A Security Test is defined as a simulated act of unlawful interference to determine the implementation and effectiveness of security measures contained in the NASP. Security Tests are performed on a regular basis.

Cabin, Cockpit, Operational Ground Staff

10.2.1.14 Rush-baggage

Mishandled baggage sent unaccompanied.

Cabin, Cockpit, Operational Ground Staff

10.3 Security measures

Cabin, Cockpit, Operational Ground Staff

10.3.1 General

There are never any non- important information related to security. Any information may, at a certain time, be the most wanted most important information. Therefore, do not hesitate to talk to, or inform your colleagues about anything which you think they need to know.

In order to prevent sabotage and hijacking of Edelweiss Air aeroplanes, a set of precautionary measures exist. They may change according to the actual threat situation by decision of the Security Manager in cooperation with the competent Swiss authorities.

Confidential information pertaining to security measures in force at stations can be obtained from the Security Manager.

The CMD may require stronger precautionary measures than generally prescribed for a station if the actual situation so requires, however, it should always be discussed with the responsible station personnel prior to enforcing them. The CMD shall offer his advice and cooperation to the best possible extent.

Prior to a flight, the crew shall check valid general security measures and local procedures in the FOSI, memos, flypad app and NOTAM. If the situation so requires, the crews of individual flights will receive supplementary information by Security Manager.

At transit stations without published procedures - especially concerning disembarking of transit passengers - instructions shall be requested from station personnel immediately.

Cabin, Cockpit, Operational Ground Staff

10.3.2 Flight deck access control equipment

If a camera or monitor is unserviceable, operations have to be conducted according MEL procedure (ATA chapter 23).

Cabin, Cockpit, Operational Ground Staff

10.3.3 Aeroplane doors

In principle, aeroplane doors (hold/cabin) shall not be opened after the aeroplane has left the parking position.

If a request to open any aeroplane door is received via ATC outside the parking area, the aeroplane shall return to a parking position and the doors be opened in the presence of the authorised ground personnel.

If aeroplane doors are being forcibly opened, the ATC shall immediately be informed and the aeroplane must return to the parking position for investigation.

Cabin, Cockpit, Operational Ground Staff

10.3.4 Flight deck door

Cabin, Cockpit, Operational Ground Staff

10.3.4.1 General

As a measurement of improving in flight safety and security a reinforced cockpit door providing ballistic protection is installed on all aeroplanes of Edelweiss Air. The system does need electrical power either from the aeroplane electrical system or a ground power unit. In this case, the door is locked whenever it is closed.

A video camera system is installed which offers the flight deck crew an opportunity to assess the situation outside the cockpit door, the galley, part of the cabin area and identify crew or passengers before allowing anyone access to the flight deck in accordance with OM A Flight deck access/visits. This provides a basis for decision making in critical and life threatening situations.

If requested by tigers, they may be briefed about cockpit door locking system procedures according to CSPM Cockpit door locking system (CDLS), including the emergency code.

Cabin, Cockpit, Operational Ground Staff

10.3.4.2 Closing / locking

- The cockpit door shall remain closed and locked from the time all external aircraft doors are closed following embarkation until any external aircraft door is subsequently opened for disembarkation;
- primary means for identification is the camera. Interphone or spy hole should only be used in phases with low workload;
- possible special requirements by foreign authorities will be communicated via NOTAM;
- opening and closing of the flight deck door shall be hidden from view whenever possible by a drawn galley curtain;
- the frequency and duration of flight deck door openings shall be kept to a minimum.

Cabin, Cockpit, Operational Ground Staff

10.3.4.3 Communication

In case of suspicious activity or security breaches recognised by C/C members, the interphone system should be used with utmost care and discretion.

Cabin, Cockpit, Operational Ground Staff

10.3.5 Admission/visits to the flight deck

No person other than a crew member assigned to the flight is admitted to be carried on the flight deck. For exemptions refer to CSPM Flight deck permit / visit to the flight deck.

Cabin, Cockpit, Operational Ground Staff

10.3.6 Access control to the aeroplane

The final responsibility of access control to the aeroplane rests with the crew. Any person seeking to board the aeroplane shall be required to present an airport badge or hold a valid boarding card. The verification of the presence of an airport badge shall be performed by the crew. This applies to all destinations worldwide, also for Zurich and Geneva. If ground personnel in groups (such as cleaning staff) are already on board at time of crew boarding, there is no need to check all badges. However the badge of any single or doubtful person must be checked. Proactive surveillance of ground handling at all times by CMD or F/O shall be organised if feasible (presence on the tarmac).

All unauthorised personnel must be challenged and immediately reported to the local security authority.

The verification of the boarding card of passengers can be considered as done at the boarding gate before the passengers will be released from the boarding gate towards the aeroplane. To prevent unauthorised access to the aeroplane the passenger boarding process shall be coordinated between the ground staff and the flight crew.

Cabin, Cockpit, Operational Ground Staff

10.3.7 Safeguarding the aeroplane

During transit stops on dedicated airports abroad (refer to flypad app SSI module “mandatory crew handover”) at least a part of the crew must stay on board until the embarking crew is present at the aeroplane, in order that the cabin, galleys and the cockpit can be watched during the ground handling process. All suspicious activities must be challenged and the situation immediately reported to the Senior Crewmember or Commander on board, who should take necessary steps to address the situation with the involved persons and the supervisor.

An IQSMS report must be filled out.

Cabin, Cockpit, Operational Ground Staff

10.3.8 Protection of aeroplane

Cabin, Cockpit, Operational Ground Staff

10.3.8.1 Protection of the aeroplane - general

Cabin, Cockpit, Operational Ground Staff

10.3.8.1.1 General provision

Regardless of where an aeroplane is parked at an airport, it shall be protected against unauthorized access by:

- Ensuring that persons seeking to gain unauthorized access are challenged promptly;
- having all its external doors closed.

At airports within EU and EFTA (CH/NO/IS) access aids need not to be removed if doors are closed.

Cabin, Cockpit, Operational Ground Staff

10.3.8.1.2 Door - closing responsibility

The last party on board (Handling Agent, Station Engineer, Crew etc.) leaving the aircraft is required to close the doors. Cargo hold doors are closed by the respective handling agent. ZRH: The doors always have to be closed by the crew, except if ISS personnel or SWISS Technics mechanic are on board.

Cabin, Cockpit, Operational Ground Staff

10.3.8.1.3 Additional protection of aeroplane with closed external doors outside EU/EFTA

Where external doors are closed and the aeroplane is outside EU/EFTA, each external door shall be sealed.

Cabin, Cockpit, Operational Ground Staff

10.3.8.2 Sealing procedure

Cabin, Cockpit, Operational Ground Staff

10.3.8.2.1 General

Sealing is compulsory if the aeroplane is parked outside EU/EFTA or if a NOTAM entry dictates sealing on an EU-station. If ground time without at least one crew member for A/C supervision is less than 4 hours, sealing is not mandatory.

Cabin, Cockpit, Operational Ground Staff

10.3.8.2.2 Sealing responsibility

For the sealing of the aeroplane following responsibilities apply:

- destination with station engineer: station engineer if the sealing task is part of the maintenance contract.
- destination without any station engineer or no “sealing contract”: crew.

Cabin, Cockpit, Operational Ground Staff

10.3.8.2.3 Door sealing

If groundtime exceeds 4 hours and aircraft is left unattended, sealing is required if parked outside EU/EFTA/UK, US and CA.

- Requirements:

  When required, door sealing shall be performed according to the aeroplane specific sealing checklist.
- Sealing checklist

  The sealing checklist shall be filled in and signed by the party responsible for sealing, as per instructions mentioned therein. The sealing checklist shall be kept ready for reopening the aeroplane.

  In the ships library of each aeroplane a spare sealing checklist and seals can be found. The sealing checklist is also part of the ships library on the EFB.

Cabin, Cockpit, Operational Ground Staff

10.3.8.2.4 Opening of sealed aeroplane

Before opening a sealed aeroplane, the integrity and number of each seal must be verified against the sealing checklist. Detailed instructions can be found on the sealing checklist.

An intact seal is plain red or blue with black printing. The words “OPENED-VOID” do not appear diagonally across the seal hence indicate the integrity of the seal.

Cabin, Cockpit, Operational Ground Staff

10.3.8.2.5 Broken/altered seal found

“OPENED - VOID” is written diagonally all across the seal.

If uninterrupted access control cannot be guaranteed and a broken or missing seal(s) has been noted by the CMD he shall:

- proceed according to the instructions laid down in the sealing checklist;
- advise OCC;
- the flight crew shall file a report after the event.

Cabin, Cockpit, Operational Ground Staff

10.3.8.2.6 Sealing under increased threat conditions

The Security Manager may order additional sealing of doors/panels if the threat condition requires so. This information will be communicated via NOTAM.

Cabin, Cockpit, Operational Ground Staff

10.3.8.2.7 Documentation and record store of the sealing checklist

The complete sealing checklist shall be handed over to the handling agent. The document must be kept on file for at least 24 hours after the departure of the flight.

Cabin, Cockpit, Operational Ground Staff

10.3.9 Aircraft Security Search

Cabin, Cockpit, Operational Ground Staff

10.3.9.1 General

If an Aircraft Security Search shall be applied, this is indicated on the flypad by the shortcut "S".

Before departure, each aeroplane is subject to an Aircraft Security Search in order to ensure that no prohibited articles are present on board. The Aircraft Security Search is applicable (exemptions in OM A Flights exempted from an Aircraft Security Search) on all flights, including triangular flights.

Cabin, Cockpit, Operational Ground Staff

10.3.9.2 Checklists and Aircraft Security Search Form

The individual CCM cabin security checklist per crew member position is printed on the safety equipment checklist. The cockpit security checklist for the flight deck can be found in the eQRH.

The Aircraft Security Search Form is part of the flight documentation. Empty forms can be found in the crew briefing room and are stored in Yonder.

AIRCRAFT SECURITY SEARCH A320

edelweiss

	Registration:	Flight Nr:
Security Search performed by ISS	Search Station: **ZRH** Destination: Date:	Previous Flight: Origin:

As the previous flight originated in a non-EU/EFTA member state, a SECURITY SEARCH was performed according to OM-A 10.3.9. All areas have been checked according to the Edelweiss Air Security Checklists and no prohibited or forbidden items have been found.

Cockpit	Searched by ISS	Searched by Crew
Flight deck and entry to the flight deck		☐
Flight deck storage compartments		☐
Passenger Cabin		
Footrest Row 1		☐
Overhead bins and handrails	☐	
Closets / Wardrobes		☐
Lavatories, toilet bowl and hand paper compartments	☐	
Lavatories waste bins and waste bin compartment	☐	
Jump Seats		☐
Galleys		☐
Rubbish Bins		☐
Storage Bins		☐
Seat backs, seat pockets/nets/safety card holders	☐	
Seat areas between seat and walls	☐	
Areas under seat	☐	
Crew equipment bins and compartments		☐
10% of life jackets and area between life jacket holder and seat	☐	
Waste compartments AFT Galley	☐	
Pillows / Blankets on the Aircraft	☐	
Outside the Aircraft		
Do not use tools, keys, stairs, or other aids. Do not break seals. - GPU Panel - Fuel Panel - Wheel wells if accessible from the ground without the use of stairs or other aids		☐

Cargo Holds

Cargo/baggage holds, and items contained within the hold have been checked by ground staff and confirmed by signature on the loading instruction report by ramp supervisor and filed on flight file (ref. GOM § 5.1)

The search shall be performed before boarding of passengers

Aircraft Security Search terminated @ date ________________ time ________________ UTC

Signature Commander:	ISS Name:
Signature Senior Cabin Crew Member:	ISS Signature:

This record shall be kept outside the aircraft for at least 24 hours after off block of this flight.

Cabin, Cockpit, Operational Ground Staff

10.3.9.3 How to perform an Aircraft Security Search

The Aircraft Security Search has to be finished anytime before departure. Refer to Ops Docs NASP Annex 4-C: List of Prohibited Articles for prohibited articles in the cabin/ cockpit.

The examination of the areas shall be done as a hand search. A visual check may be used as an alternative method for the examination of those areas that are empty.

The Aircraft Security Search may be performed while service personnel is on board, but outside EU/EFTA countries, service personnel has to be under the supervision of the crew. Refer to OM A Supervision.

It might be helpful to search only behind cleaning staff and only already cleaned seat rows and areas. If the supervision (acc. to OM A Supervision) of service personnel in a specific area of the aircraft is not possible, the crew shall wait with the search until the service providers have left the area or aircraft.

Cabin, Cockpit, Operational Ground Staff

10.3.9.4 Flights exempted from an Aircraft Security Search

Arrival at an EU/EFTA airport from an EU/EFTA/UK airport, an Aircraft Security search is not required. In all other cases, an Aircraft Security Search is required. Possible exceptions are communicated by means of flypad app and NOTAM entries.

Arrival at ZRH/GVA from an airport listed in Annex 3-B of the NASP (refer to NASP Annex 3-B: Countries and Territories with Equivalent Security Standards) and the aeroplane continues to a country other than the USA, an Aircraft Security Search is not required.

Arrival at a Canadian Airport from an EU/EFTA airport, an Aircraft Security Search is not required.

Important: An aeroplane shall at all times be subjected to an Aircraft Security Search whenever there is reason to believe that unauthorized persons may have had access to it.

Cabin, Cockpit, Operational Ground Staff

10.3.9.5 Aircraft Transit Security Search & Supervision

General

An aircraft in transit is excluded from an aircraft security search.

Outside EU/EFTA

Supervision of service providers

In case service personnel is on board, they shall be supervised by the crew. If supervision in a specific area of the aircraft is not possible, the crew shall search the respective area after the service providers have left the area / aircraft. If supervision is possible, no Transit Search is necessary.

If for some reason supervision cannot be ensured at all, then a complete Transit Search shall be carried out.

If supervision shall be conducted, this is indicated on the flypad by the shortcut "SV".

Transit search required

If a flight arrives from a State other than EU/EFTA, UK, USA, Canada, Montenegro (refer to ACSP Annex 3-B for complete list) and one or more passengers that embarked in one of these states disembark the aircraft, a transit search shall be undertaken as follows:

a. reconciliation of the remaining passengers and cabin baggage; and
b. verification that no articles were left in overhead bins and seat pockets by the disembarking passengers.

Any ground staff entering the aircraft must be supervised.

The Transit Search may be performed whilst passengers remain on board provided that:

a. the passengers are in possession of their cabin baggage when the examination is performed; and
b. the passengers are under supervision in order to prevent movement through the aircraft when the search is being performed.

Passengers leaving the aircraft for operational reasons and re-embarking are considered as NOT disembarking.

If a Transit Search shall be conducted, this is indicated on the flypad by the shortcut "TS".

Cabin, Cockpit, Operational Ground Staff

10.3.9.6 Supervision

To supervise means to monitor the service personnel whilst they are on board. The supervision is intended to prevent a prohibited article from being brought onto the aircraft. If, however somebody does so, the search procedure shall ensure that the prohibited item is found.

Cabin, Cockpit

10.3.9.7 Responsibilities and duties

Cabin, CMD

10.3.9.7.1 Cabin crew duties

The Aircraft Security Search shall be done at any time before passenger boarding. The S/C is in charge of coordinating the Aircraft Security Search. The Aircraft Security Search Form is part of the flight documentation. For certain flights (US flights, flights operated with an A320 from ZRH), the search will be performed by a 3rd party handling company. The search form will be brought to the aircraft by the respective handling agent. Empty forms can be found in the crew briefing room and are stored in Yonder.

After completion of the search, the S/C signs and hands the Aircraft Security Search Form over to the CMD.

Each cabin crew member is responsible for performing the search as per the instructions on the security checklist at the appropriate position. When no abnormalities are reported, it is assumed that the search has been performed.

Cockpit

10.3.9.7.2 Cockpit crew duties

The cockpit duties include the search of the cockpit and the search of the exterior of the aeroplane.

Exemption for non US flights: A search is only required if the flight deck was left unattended.

Aircraft security searches of the exterior of aircraft shall consist of an examination of all of the following areas:

- aircraft service panels and hatches, if accessible without the use of tools, keys, stairs or other aids, without breaking seals, and where a prohibited article could be reasonably concealed;
- wheel wells, if accessible from the ground without the use of stairs or other aids.

After completion of all Aircraft Security Search duties the commander completes the Aircraft Security Search Form and hands it over to the ground staff for record keeping in the flight file. Refer also to OM A Communication & record keeping.

10.3.9.7.3 Ground Handling duties

Aircraft security search duties include the examination of the following:

- Aircraft hold unless sealed

- Items contained within the hold, if accessible without the use of tools, keys or other aids, without breaking seals, and where a prohibited article could reasonably be concealed

ISS ZRH shall conduct the search according to the search form in OM A Checklists and Aircraft Security Search Form.

Cabin, Cockpit, Operational Ground Staff

10.3.9.8 Communication & record keeping

Cabin, Cockpit, Operational Ground Staff

10.3.9.8.1 Communication of Aircraft Security Search requirement

If an Aircraft Security Search is required, it is indicated in the Flypad app as follows:

Indicator	Instruction
S	Search
TS	Transit Search
A	No search required

The S/C instructs the cabin crew accordingly during the briefing.

Cabin, Cockpit, Operational Ground Staff

10.3.9.8.2 Record keeping

For each flight a record has to be kept, indicating if an Aircraft Security Search has been done or not. If an Aircraft Security Search in not necessary, this is logged electronically in Enzian independently of the crew. If, however, an Aircraft Security Search is required, this is logged by adding the completed Aircraft Security Search Form to the flight file. The Aircraft Security Search Form has to be kept on file outside of the aircraft for at least 24 hours after off block time of the departing flight.

Cabin, Cockpit, Operational Ground Staff

10.3.9.9 USA flights

Cabin, Cockpit, Operational Ground Staff

10.3.9.9.1 General

The US Transportation Security Administration (TSA) requires a detailed cabin search to be performed for all flights departing from Switzerland to the USA.

This check is more extensive than our Aircraft Security Search. In terms of the interpretation of the TSA's instructions, the following applies:

Cabin, Cockpit, Operational Ground Staff

10.3.9.9.2 TSA cabin search at stations in Switzerland

The various tasks in the cabin search are split between the crew and ISS.

ISS responsibilities:

- LDMCR (Lower Deck Mobile Crew Rest);
- overhead bins;
- lavatories toilet bowl & hand paper compartments;
- lavatories waste bins and waste bin compartments;
- catering;
- cupboards and storage compartments incl. crew storage areas;
- passenger seat backs;
- passenger seat pockets incl. safety card holder;
- areas under seats, between seats & between seats & wall (passengers);
- all life jackets;
- seat cushions; and
- cabin crew jump seats.

Cabin crew responsibilities:

- galley areas incl. waste receptacles, storage bins, other accessible compartments in the galley;

Flight crew responsibility:

- standard Aircraft Security Search e.g. flight deck.

Additional points:

- The ISS supervisor will coordinate the hand over of the aeroplane with the S/C.

Cabin, Cockpit, Operational Ground Staff

10.3.9.9.3 TSA cabin search at stations in the USA

Aircraft Search at US airports will be performed by external security companies.

Cabin, Cockpit, Operational Ground Staff

10.3.10 Passenger count/passenger baggage reconciliation

In order to determine the exact number of passengers on board, a headcount shall be made at all stations during or after the boarding is completed. The counted number of passengers must be the same as noted on the load sheet. The following procedure should be applied for a correct headcount:

- The total noted on the load sheet may only be known in advance by the flight deck crew and the S/C.
- For each open door, 1 C/C performs the headcount during boarding. The counting C/C must be free of all other duties so that he can concentrate on counting. For this reason, the counting C/C should stand aside so as not to be distracted.
- The use of hand counters is strongly recommended.
- Each counting C/C gives the total to the S/C.
- The S/C relays the total number of all passengers to the CMD.
- If after several counts, the number still does not correspond to the number on the load sheet, the discrepancy shall be investigated in close cooperation with the handling.

Baggage of passengers who are not on board shall not be carried. However, found/ mishandled baggage which is electronically screened and/or physically searched (so-called RUSH baggage) may be carried.

Cabin, Cockpit, Operational Ground Staff

10.3.11 Cabin baggage during transit stops

During transit stops and when the passengers have to leave the aeroplane (e.g. for cleaning, fuelling) they shall take all their belongings (e.g. hand baggage) with them. The cabin must be empty during the ground stop and after the ground personnel has left the aeroplane.

Cabin, Cockpit, Operational Ground Staff

10.3.12 Passenger list/crew composition list

Any type of list showing names of passengers and crew shall not be displayed to the public. After use, the lists must be disposed of in such a manner as to ensure the data cannot be reconstructed.

Cabin, Cockpit, Operational Ground Staff

10.3.13 Handling of crew baggage

Only hard-shell suitcases without outer pockets are allowed as crew hold baggage. The crew hold baggage shall have an approved TSA lock. The crew shall lock their hold baggage from the moment when the baggage is left unattended.

The continuous supervision of the crew baggage on board or outside the aeroplane is the responsibility of every crew member, where the baggage is carried personally.

If there is any doubt about the integrity of the baggage, an inspection of the contents is required before boarding or handing over the baggage to the ground staff.

Important: For flights to and from the USA, the crew shall not lock crew hold baggage unless the suitcase is equipped with an approved TSA lock.

Cabin, Cockpit, Operational Ground Staff

10.3.14 Unaccompanied Hold Baggage (rush baggage)

Cabin, Cockpit, Operational Ground Staff

10.3.14.1 Factors beyond the passenger's control

It is an Edelweiss policy that baggage normally must not travel unaccompanied on an Edelweiss aircraft. Nevertheless there may be cases where checked-in baggage became unaccompanied.

The reason that the baggage became unaccompanied shall be recorded by the handling agent before it is loaded onto an aircraft. The CMD has to be informed and he takes the final decision after consultation with the handling agent.

For the purpose of transport of unaccompanied hold baggage, the following may be considered as factors beyond the passenger's control:

a. The passenger was denied boarding for overbooking reasons and he did not volunteer to give up his seat (this excludes all offload of intoxicated PAX); or
b. The passenger was re-routed onto another flight and it was not at his request; or
c. The baggage failed to transfer between two flights due to unforeseen reasons, causing it to miss the departing flight; or
d. There was a malfunction of the baggage system, causing the baggage to miss the departure flight; or
e. The baggage was loaded onto an aircraft other than that for which it was checked in.

In the case of c) – e), Edelweiss or the handling agent must confirm that the passenger did travel on the flight on which he was checked in. If the passenger did not travel on the flight on which he was checked in, then the baggage shall be subject to "rush" baggage security procedures and may only be loaded onto an Edelweiss aircraft after being security screened and manifested.

Cabin, Cockpit, Operational Ground Staff

10.3.15 Passenger belongings in flightdeck

It is not allowed to transport any private belongings of passengers in the flightdeck.

Transportation of official documents (e.g. passports of DEPU etc.) are exempted from this rule.

Cabin, Cockpit, Operational Ground Staff

10.4 Security procedures

Cabin, Cockpit, Operational Ground Staff

10.4.1 Policy

Sabotage or hijacking warnings, whether anonymous or otherwise, will be treated as a real threat. Measures to be taken depend on the fashion and classification of the warning or the circumstances of the warning or the circumstances of the hijacking.

The general and local situation and/or circumstances connected with the receipt of sabotage or hijacking warnings must always be considered very conscientiously.

Cabin, Cockpit, Operational Ground Staff

10.4.2 Responsibility

Cabin, Cockpit, Operational Ground Staff

10.4.2.1 In the aeroplane

In the aeroplane the CMD is responsible to take action upon receiving a sabotage or hijacking warning at all times when he is in command, i.e. from “Doors closed” to “Doors opened”.

The CMD is authorised to intensify orders received concerning action in relation to the sabotage warning but not to reduce same.

Cabin, Cockpit, Operational Ground Staff

10.4.2.2 On ground

- OCC and the Security Manager must be contacted for the evaluation of threats. If any action is deemed necessary by the Security Manager, decisions will be made in close cooperation with the respective station, OCC and the CMD.
- If contact with the Security Manager and/or OCC cannot be established within reasonable time, the CMD in conjunction with the handling agent is responsible for judging the threat and for deciding on the necessary action. Such decisions must be transmitted to OCC as soon as possible.
- An Edelweiss air employee receiving any kind of knowledge concerning an attempt of airline sabotage or hijacking must report this immediately to the local handling agent/supervisor or to his superior, so that appropriate steps can be taken together with OCC and the Security Manager without delay.

Cabin, Cockpit, Operational Ground Staff

10.4.3 Information about attempted sabotage or hijacking

Cabin, Cockpit, Operational Ground Staff

10.4.3.1 Threat received over telephone

An Edelweiss Air employee receiving a sabotage or hijacking warning over the telephone should remember the following:

- be very polite and patient with the caller, show no embarrassment;
- do not interrupt or try to switch the call to somebody else, unless specifically so demanded;
- try to get the essential information of where, what and when;
- take notes concerning the information;
- employ all possible tactics to prolong the conversation, notably by asking questions;
- be discreet;
- inform immediately the station concerned, supervisors, OCC, the Security Manager or act according to instructions received.

Experience shows that sabotage or hijacking threats are mostly anonymous (and in most cases a hoax). Nevertheless, they have to be taken seriously. Therefore, vigilance is highly demanded. Operators of the company must be alert to handle sabotage or hijacking warnings. They are normally the first to be in contact with a caller and should therefore be made aware of such critical situations. Every office staff has access to the Bomb threat checklist and the respective guidance material via the Edelweiss Air Intranet.

Cabin, Cockpit, Operational Ground Staff

10.4.3.2 Threat received by personal contact

Airline experience shows that information about intended sabotage or hijacking is revealed sometimes by word of mouth. Edelweiss Air employees receiving any such information or overhearing it shall prudently try to get the essential where, what and when and report it forthwith to the local handling agent/supervisor or to his superiors and inform OCC and the Security Manager.

If circumstances permit, keep the person making such a statement under discreet surveillance, he/ she should be pointed out to the police for interrogation. For obvious reasons, hijackers will not announce their intentions beforehand. Nevertheless, everybody must be alert to receive or overhear any information to this effect.

Cabin, Cockpit, Operational Ground Staff

10.4.3.3 Transmission of message received

Information received about sabotage or hijacking attempt must be transmitted word-for-word as received. It is very important for classification of the threat by the responsible person to know exactly how the message was phrased.

In addition, all circumstances connected with the receipt of any information shall be described exactly as they happened, e.g.:

- who received the message first;
- at what time (local);
- by what means (telephone, telex etc.);
- how was the message transmitted until it reached Edelweiss Air (e.g. tower to aerodrome authorities, from there to Edelweiss Air representative);
- did the caller promise to call back;
- is Edelweiss Air expected to return the call;
- is there any indication as to the origin of the call;
- other circumstances.

Cabin, Cockpit, Operational Ground Staff

10.4.4 Law enforcement agencies

The appropriate law enforcement agency/police is directly concerned in case of suspected sabotage or of a hijacking. In case of sabotage, the Security Manager must be contacted first and immediately. The Security Manager will then decide on action to be taken and order to involve the appropriate law enforcement agency. In case of hijacking, the law enforcement agency must be informed first by the responsible ground personnel. Likewise, the law enforcement agency/police will naturally inform about receipt of a sabotage or hijacking warning aimed at Edelweiss Air.

Cabin, Cockpit, Operational Ground Staff

10.5 Crime on board

Cabin, Cockpit, Operational Ground Staff

10.5.1 The Tokyo Convention

This Convention shall apply in respect of:

- Offences against penal law;
- Acts which, whether or not they are offences, may or do jeopardise the safety of the aeroplane or of persons or property therein or which jeopardize good order and discipline on board.

Cabin, Cockpit, Operational Ground Staff

10.5.2 Policy

The “Tokyo Convention” applies to acts affecting in-flight safety. It authorises the CMD to impose reasonable measures, including restraint, on any person he has reason to believe has committed or is about to commit such an act, when necessary to protect the safety of the aeroplane.

The policy requires the contracting states to take custody of offenders and to return control of the aeroplane to the lawful commander.

Cabin, Cockpit, Operational Ground Staff

10.5.3 Power of the commander

The provisions of this chapter shall not apply to offences and acts committed or about to be committed by a person on board an aeroplane in flight in the airspace of the State of registration or over the high seas or any other area outside the territory of any State unless the last point of take-off or the next point of intended landing is situated in a State other than that of registration, or the aeroplane subsequently flies in the airspace of a State other than that of registration with such person still on board.

An aeroplane shall for the purposes of this chapter, be considered to be in flight at any time from the moment when all its external doors are closed following embarkation until the moment when any such door is opened for disembarkation. In the case of a forced landing, the provisions of this chapter shall continue to apply with respect to offences and acts committed on board until competent authorities of a State take over the responsibility for the aeroplane and for the passengers and property on board.

The CMD may, when he has reasonable grounds to believe that a person has committed, or is about to commit, on board the aeroplane, an offence or act contemplated in this chapter, impose upon such person reasonable measures including restraint which are necessary:

- To protect the safety of the aeroplane, or of persons or property therein; or
- To maintain good order and discipline on board; or
- To enable him to deliver such person to competent authorities or to disembark him in accordance with the provisions of this chapter.

The CMD may require or authorise the assistance of other crew members and may request or authorise, but not require, the assistance of passengers to restrain any person whom he is entitled to restrain. Any crew member or passenger may also take reasonable preventive measures without such authorisation when he has reasonable grounds to believe that such action is immediately necessary to protect the safety of the aeroplane or of persons or property therein.

Measures of restraint imposed upon a person shall not be continued beyond any point at which the aeroplane lands unless:

- Such point is in the territory of a non-contracting State and its authorities refuse to permit disembarkation of that person or those measures have been imposed in accordance with § 10.6.3(c) above in order to enable his delivery to competent authorities;
- The aeroplane makes a forced landing and the CMD is unable to deliver that person to competent authorities; or
- That person agrees to onward carriage under restraint.

The CMD shall as soon as practicable, and if possible before landing in the territory of a State with a person on board who has been placed under restraint notify the authorities of the fact that a person on board is under restraint and of the reasons for such restraint.

The CMD may, in so far as it is necessary disembark in the territory of any State in which the aeroplane lands any person who he has reasonable grounds to believe has committed, or is about to commit, on board the aeroplane an act contemplated in OM A The Tokyo Convention.

The CMD shall report to the authorities of the State in which he disembarks any person pursuant to this article, the fact of, and the reasons for, such disembarkation.

The CMD may deliver to the competent authorities of any contracting State in the territory of which the aeroplane lands any person who he has reasonable grounds to believe has committed on board the aeroplane an act which, in his opinion, is a serious offence according to the penal law of the State of registration of the aeroplane.

The CMD shall as soon as practicable and if possible before landing in the territory of a contracting State with a person on board whom the CMD intends to deliver in accordance with the preceding paragraph, notify the authorities of such State of his intention to deliver such person and the reasons therefore.

For actions taken in accordance with this convention, neither the CMD, any other member of the crew, any passenger, the owner or operator of the aeroplane, nor the person on whose behalf the flight was performed shall be held responsible in any proceeding on account of the treatment undergone by the person against whom the actions were taken.

Cabin, Cockpit, Operational Ground Staff

10.5.4 Reporting acts of unlawful interference

Following an act of unlawful interference on board an aeroplane, the CMD, or in his absence the operator, shall submit without delay a report of such an act to the designated local authority and the FOCA.

The CMD shall notify the next landing place in advance.

After landing, the CMD has to report the case to the local competent police authority via the station personnel.

If landing at station abroad, the competent Swiss diplomatic representative has to be contacted and asked for necessary instructions.

Cabin, Cockpit, Operational Ground Staff

10.5.5 Reporting Procedure

Upon return to Switzerland, the CMD shall forward a written report to the Head of Flight Operation about actions taken. This report will be forwarded to the Accountable Manager for transmission to the FOCA.

Cabin, Cockpit, Operational Ground Staff

10.6 Bomb threat against aeroplane

Cabin, Cockpit, Operational Ground Staff

10.6.1 General

The CMD will be informed of a threat received and subsequent security measures suggested/taken. He should get in contact with OCC and inform ATC accordingly.

Use all available airport facilities to disembark without delay.

Passengers must be kept away from the aeroplane until cleared by competent local authorities or operator Security Officer/operations manager.

Cabin, Cockpit, Operational Ground Staff

10.6.2 Information to passengers

On ground:

- Until passengers are safely disembarked no reason should be given to avoid panic. Further information broadcasted to the passengers is up to the CMD.

In-flight immediate landing possible:

- Inform cabin attendant accordingly and make an announcement that landing for operational or technical reason has to be made.

In-flight immediate landing not possible:

- Make a suitable passenger announcement and request the passengers to remain in their seats and to cooperate with the crew. Refer to FOSI PA to pax by commander.

Cabin, Cockpit, Operational Ground Staff

10.6.3 Aeroplane on ground

Cabin, Cockpit, Operational Ground Staff

10.6.3.1 General

Calculation of cooling off time is based on scheduled flight time plus a safety margin. The safety margin is either one third of the scheduled flight time or a maximum of one hour, whichever is less.

The search of the aeroplane shall normally be executed by the specially trained team and/or the competent local authorities with the cooperation of the crew and/or ground engineers.

When a cooling off time is requested, no Edelweiss employee shall partake in a search action before the cooling off time has elapsed.

On stations where competent local authorities are not available, the CMD will decide about further action in close coordination with OCC and the Security Manager.

If the search is performed by the operator maintenance team, it will be carried out according to security checklist (A or B; found on the EFB, T, maintenance checklist).

It is up to the Security Manager to decide what type of security search checklist shall be used, based on a risk-assessment. The more extensive checklist B shall be used as a basis if no contact with the Security Manager can be established.

Cabin, Cockpit, Operational Ground Staff

10.6.3.2 Initial steps

1. Taxi to a parking position as advised by ATC (cool down area).
2. If possible, disembark passengers and crew.
3. If the situation requires, order RAPID DISEMBARKATION or ON GROUND EMER EVACUATION. Bring all passengers together at a safe distance from the aeroplane (150 m at minimum).
4. Transport passengers and crew to a secure room at aerodrome, in order to avoid mixing with other passengers and/or access to land/airside.

Cabin, Cockpit, Operational Ground Staff

10.6.3.3 Search actions on board

1. The CMD advises the special task force of the respective aerodrome or the local police.
2. An aeroplane to be searched shall be removed to a designated remote location according local regulations and procedures and all possible doors and windows should be opened to minimise the possible extent of damage in case of an explosion.
3. Relieve all respective systems of their pressure.
4. Shut off all electrical power.

Cabin, Cockpit, Operational Ground Staff

10.6.4 Aeroplane inflight

Cabin, Cockpit, Operational Ground Staff

10.6.4.1 General

In case of bomb threat perform the BOMB ON BOARD eQRH checklist if feasible with regard to other safety requirements.

If it is not possible to land and DISEMBARK/EVACUATE the aeroplane immediately, apply the following procedures.

The CMD should require a search of the aeroplane, if this is required and possible in flight The cabin must be searched in a methodical and organized manner by following the Bomb search checklist. The checklist is available as hard-copy on the flight deck. Digital copies are available in Yonder. Refer to Checklists A320 Bomb Search or Checklists A340 Bomb Search.

Cabin, Cockpit, Operational Ground Staff

10.6.4.2 Suspect device located on board

Inform the CMD immediately. Do not:

- open any closed container;
- cut any wire or tape etc.;
- tamper with any electrical circuit;
- take a suspicious device to the flight deck;
- move the suspicious device (unless in hazard zones).

Hazard zones:

- the flight deck;
- fuel tanks and critical control components;
- areas between main wing span;
- ares between horizontal stabilizer spars.

Perform the ABNORMAL AND EMERGENCY; BOMB ON BOARD (eQRH/FCOM) checklist, if feasible with regard to other safety requirements. For cabin crew, a digital copy of the cabin procedures is available in Yonder.

Cabin, Cockpit, Operational Ground Staff

10.6.4.3 Actions before next flight

Unload hold baggage, cargo, mail, catering supplies, etc. additional security measures shall be implemented;

- check for possible damage caused during the search and make a list of it;
- require maintenance, if panels and doors have been opened;
- require passengers to identify their baggage after they have been screened/searched before reloading. If this is not possible, baggage will be separated and treated according to local procedures (opening of baggage in the absence of it's owner should only take place in the presence of or by the police);
- request release from maintenance, Flight Operations and authorities.

Cabin, Cockpit, Operational Ground Staff

10.6.5 Reporting procedure

Upon return to Switzerland, the CMD shall forward a written report to the Head of Flight Operation about actions taken. This report will be forwarded to the Security Manager for transmission to the FOCA.

Cabin, Cockpit, Operational Ground Staff

10.7 Hijacking

Cabin, Cockpit, Operational Ground Staff

10.7.1 Policy

Security measures in force on the ground are intended to reduce the possibility of potential hijackers to gain access to an aeroplane. In the event of a hijacking, safety of passengers and crew is the first and primary consideration.

It is our general policy that the flight deck door must be kept closed and locked, inaccessible for a possible hijacker and the flight deck crew will keep control of the flight deck at all costs.

Depending on the type of hijacking the flight crew may decide to cooperate and/or negotiate with the hijacker's demands, or land the aeroplane as soon as possible at a time and place chosen by the CMD. Once on the ground, it shall be the aim to keep the aeroplane at the given aerodrome. The CMD shall as far as possible retain his authority over crew, passenger, aeroplane and load.

Cabin, Cockpit, Operational Ground Staff

10.7.2 Types of hijacking

Based on history in civil aviation there are two different types of hijacking:

- Classical (or traditional) hijacking: This type will primarily be politically motivated, in pursuit of a crime, by one or more mentally disturbed persons or for private reasons. In such situation the aeroplane, the crew and the passengers will be used to apply pressure to reach a specific target.
- Hijacking at new dimensions: This second type must be expected as performed by ideologically motivated radicals planning to use the aeroplane as a weapon of mass destruction.

Cabin, Cockpit, Operational Ground Staff

10.7.3 General philosophy, guidelines and procedures

Cabin, Cockpit, Operational Ground Staff

10.7.3.1 Communication

Flight deck to cabin and vice versa

- Any communication between the flight deck and the cabin shall be established by use of the interphone.
- Communication when the cockpit crew is unaware of an ongoing hijack:
    - If a crew member is forced to request an opening of the door via interphone (primary), the pre-defined wording shall be used or any other indication that communicate an ongoing hijack to the cockpit.
    - If the crewmember is forced to use the keypad, the emergency code shall be used in order to warn the cockpit crew of the abnormal situation. Whenever the emergency code has been used, the cockpit crew shall lock the door.

Aeroplane on ground

- Return to ramp and coordinate actions with the ground personnel;
- Do not inform passengers of the reasons for returning as this may aggravate a potential hijacker to take action;
- Try to establish contact with the ATC and the company.

Aeroplane in-flight

- Set transponder to A7500. When a pilot has selected A7500 and is subsequently requested to confirm his code by ATC he shall, according to circumstances, either confirm this or not reply at all. The absence of reply from the pilot will be taken by ATC as an indication that the use of A7500 is not due to an inadvertent false code selection.
- When not under radar control, transmit a message including aeroplane call sign followed by the phrase “transponder A7500”.
- The flight crew may squawk A7700 to indicate that the situation is desperate and that it requires immediate assistance.
- Advise OCC about the situation.
- Try to maintain normal communication with ATC and company giving as much information as possible or communicate in hidden form (e.g. asking for special re clearance and requesting ATC to advise the fuel company of additional fuel requirements.).
- Keep cockpit loud speaker turned off to avoid confusion.
- Switch the “fasten seat belt” sign on.

- If feasible, make a public announcement to calm the passengers and instruct them to remain seated and avoid undue interference.

Cabin, Cockpit, Operational Ground Staff

10.7.3.2 Classical (or traditional) hijacking

Tactics

- aeroplane should be parked in a remote area (if possible);
- ask ATC for “much additional fuel” which indicates that a hijacking is in progress;
- advise hijacker(s) to accept fixed landline communications with the aeroplane;
- try to have hijacker(s) allow the release of as many passengers as possible especially the sick, the elderly and the children;
- inform hijacker(s) of aeroplane unserviceability as a means of encouraging acceptance of another aeroplane / replacement crew;
- if feasible, request maintenance activities to delay and slow down the pace of events as much as possible;
- try to keep up communication with local security authorities;
- every effort should be made to prevent getting airborne again;
- be patient - delays may as well be caused by genuine difficulties in satisfying the hijacker's demands by the security authorities.
- Situation desperate and intervention from the authorities is required:
  - Leave flaps full down after landing or lower full flaps while on ground.
- Leave aeroplane alone, do not interfere:
  - Retract flaps after landing.

Relations with the hijacker(s)

- Do not:
  - antagonise or argue with the hijacker(s);
  - engage in any conversation with political overtones;
  - “talk down” to them or appear “over clever”;
  - refer to insanity or mental disorders;
  - offer any technical advice;
  - become mentally aligned with the hijacker(s);
  - take any physical action unless hijacker(s) understand(s) why;
  - attempt to overpower the hijacker(s) (being aware there may be some who have not made their presence known).
- Do:
  - maintain normality as situation allows;
  - comply with the instructions of the hijacker(s) insofar as these are compatible with the safety of the aeroplane;
  - try to maintain personal contact to increase inhibition against potential aggression;

    - ask the hijacker(s) to take decisions. You then will be able to determine his/their power of decision and possibly correct another crew member's perception of that power;
    - attempt to reassure and calm the hijacker(s) by exerting utmost patience;
    - explain actions and operational procedures in advance;
    - attempt to persuade hijacker(s) to land and release passengers.

Cabin crew actions during the hijacking:

- No alcoholic drinks should be served.
- Cabin and toilets should be kept clean.
- At least one toilet should be reserved for the crew only.
- Passengers sitting alone should be reseated next to others.

Flight deck escapes

- Although it is against the basic principles there might be situations where the CMD decides that the escape of the flight crew (or part of it) will improve the success of the mission and save lives and goods.

Post-hijacking procedures

- report to security authorities;
- try to contact head office directly (via Satcom, ACARS, telephone) via company station or via national diplomatic channels;
- before facing the media, seek advice from the company representative and ground authorities. Remember: It is imperative to not give information or statements which may assist any future hijacking attempts;
- if continuation of the flight is not possible, the CMD and his crew must stay with the passengers until their onward transportation has taken place.

Cabin, Cockpit, Operational Ground Staff

10.7.3.3 Hijacking in new dimensions

- Tactics
    - There is no simple recipe for dealing with terrorism. Every situation is special. Crews must be alert. Best judgment must be applied even for small indications in order to deal with the situation at hand.
    - Crew members must presume the worst. Crew's good judgment may influence the dealing with the development of a disturbance. Flight crew must not leave the flight deck to help in the cabin. Clear and timely communication amongst cabin crew members and the flight deck is vital. Frequent updates are necessary.

  - Pre-departure briefing is important. There might be security agents (Tigers) on board. Know where they are seated. When security agents are on board, discipline of all crew members is a must. It is important that every single crew member knows the security agent. Free movement must be coordinated; chats with agents must not take place when they are seated. Other company employees on board or any able-bodied passenger may be able to assist during a threat situation.
  - Locations can help police forces for positive identification of a passenger committing a hostile act. Note down seat numbers of passengers that look strange to you or behave abnormally. Be especially vigilant during the first 45 min of a flight and during the last 45 min., when a suspicious passenger is most likely to act.
  - A disturbance may begin at any threat level. The threat may change - disappearing completely, persisting or escalating to another threat level.
  - There is a difference:
    - Is anyone likely to get hurt or killed?
    - Is an assault on the flight deck possible or likely?
    - Can the C/Cs control the disturbance?
  - A verbal or written threat of a weapon, the display of a weapon or parts of it or the actual use of a weapon is a major escalation. Life is being threatened. A hijacking may be imminent or already in progress.
  - In no case will the flight crew permit entry to the flight deck to an unauthorized person;
  - Control of the aeroplane always remains in the hands of the flight crew, regardless of the threat or violence in the passenger cabin;
  - Any hijack is a criminal act and a very dangerous situation especially as long as the aeroplane remains in the air. The flight crew should land as soon as possible at a suitable aerodrome;
  - The CMD makes the decision when hijack procedures go into effect. That decision is declared to the right people on the ground by switching to transponder code 7500. Code 7700 signals to the ground that a rescue should be attempted as soon as possible on ground;

A rapid or emergency descent can reduce flying time. We do not recommend depressurization and aggressive aeroplane manoeuvres.

- On ground proceed as indicated under OM A Communication.
- Once the aeroplane is on ground, it can no more be used as a weapon of mass destruction. Still, the situation may be extremely dangerous for the aeroplane's occupants;

- Be calm and deliberate.
- Through delay tactics a hijacker, defeated in the hijack attempt, might be worn down to the point of a peaceful surrender;
- Remember that the so-called Stockholm syndrome may come into effect. When a hijacker repeatedly threatens another person, then removes the threat, the person threatened tends to become friendly towards the hijacker. This reflex is to be expected and avoided (refer to "Psychology of terrorists to cope with hijacker behaviour and passenger responses" in this chapter);
- Consider escape from the aeroplane. As long as the flight crew remains on board, another take-off is theoretically possible. This has to be kept in mind by the flight crew when evaluating possible options.
- Every person who can escape is one hostage less whom hijacker might use as a pawn in negotiations;
- Jurisdiction on the ground is the duty of the Authorities. Jurisdiction varies, crews are asked to cooperate fully with foreign officials;
- Crew members should not attempt to engage in negotiations with the hijackers, if a trained negotiator is available.
- Any passenger may be an accomplice. There might be a group of hijackers, some of who may have remained anonymous in their seats as “sleepers” to intervene if an attempted hijack were interrupted in some unexpected manner. If a peaceful ending is reached, crew members and law enforcement officials should treat every passenger as a suspected sleeper until each one is properly identified by the police.
- Determination of the seriousness of any disturbance

The determination of the seriousness of any disturbance is extremely difficult, even for security experts. Crew members have different options to prepare for a determination.

One way is the preflight briefing. Security will inform, if necessary, of any current intelligence relating to a threat of a specific flight. Observe the passenger boarding process as well as other persons boarding the aeroplane, such as handling agent staff. Engage possible suspicious passengers in conversation, you might get some valuable indications.

A scheme of threat levels has been developed by the industry and governments.

Level 1 - Disruptive behaviour

This can be irrational behaviour, abusive language, acts of body language or non-compliance to crew instructions. We know this as the traditional unruly passenger. Cabin Attendants have been trained in company policy and procedures to handle such occurrences of disruptive behaviour and regularly resolve such threats, usually without the knowledge of the flight crew.

Level 2 - Physically abusive behaviour

Physically abusive behaviour are physical attacks against another person or deliberately damaging another person's property, including the interior of the aeroplane. Already today, we encounter such behaviour in limited cases. Usually they can be resolved in-flight, last by overpowering and handcuffing such aggressors by the crew, security agents and fellow passengers. Such aggressors are handed over to the police on arrival. Only seldom, an intermediate landing becomes necessary.

Level 3 - Life-threatening behaviour

The most serious indicator in determining the seriousness of a passenger disturbance is a weapon. The use of a weapon to cause harm, the display of a weapon or even the threat of a concealed weapon is life-threatening behaviour. The catalogue of such weapons is extensive, from knives to guns, from explosives to flammable liquids etc.

Level 4 - Attempted breach of the flight deck

Any attempt to breach the flight deck is the most serious indicator. With increased security measures now in effect, a hijacker may prefer violence in the cabin, or the threat of violence, in favour of physical force to gain access to the flight deck. A threat to enter the flight deck, is a threat to gain control of the aeroplane.

- Crew coordination and communication

Good coordination and communication is essential for good crew performance. CRM training has been designed to address these persistent challenges in performance. The September 11 attacks present new challenges in crew coordination and communication.

The challenges are caused by a fundamental shift in the common strategy of dealing with hijack situations: Whenever there is a disturbance in the cabin the crew needs to set priorities to protect passengers, themselves and people on the ground from any chance of a terrorist takeover of the flight deck. The best formula for crew coordination and communication under the new strategy of hijack begins with prevention. The importance of the preflight briefing conducted by the CMD can't be overstated. An effective briefing involves all crew members, including security agents if any are on board. Security will add special topics if intelligence requires so. It must be made perfectly clear, that the CMD is the in-flight security coordinator and must be kept informed as fast and good as possible, especially if a passenger disturbance above Level 1 occurs.

The security agents communicate with the CMD. Experience has shown that acronyms, slang, code words and signals can cause more trouble than they are worth. Plain English is the most reliable form of communication during any passenger disturbance, especially if a hijack is suspected. As to the closed and locked cockpit door policy, the cabin interphone is the only mode of communication required to be working between passenger cabin and the flight deck. The flight crew knows the transponder code procedures. The CMD will convey details by means of air traffic control and company radio. Exact details such as the number of hijackers, their seat location, the nature and number of their weapons and their exact demands may be important to those attempting to make effective responses on the ground. A successful outcome may depend on the correctness of those details and the speed with which they are delivered to the right people.

- Appropriate responses to defend oneself

The best defensive measures are not reactive, but proactive preparation and prevention. Be aware and pay special attention to the pre-departure briefing. If a cabin attendant should be grabbed and held by an assailant it is crucial to break free. Any intervention by a security agent, single crew member or able-bodied passenger is far more difficult before separation from an assailant. Separation improves the chances of subduing an assailant promptly before a threat escalates. In all respects of security, our eyes, ears and judgment are usually the best tools for self-defence we have.

- Use of protective devices assigned to crew members

We do not support the use of protective devices (weapons) by crewmembers. We also do not recommend training in martial arts or any hand-to-hand combat methods for crew members self-defence. Experts emphasize that proficiency in such skills is difficult to gain in the first place and even more difficult to maintain at an adequate level over time because of the amount of commitment necessary. Poorly maintained, these skills cause more trouble than they are worth.

- Psychology of terrorists to cope with hijacker behaviour and passenger responses

A useable psychological profile of a terrorist does not exist. Some common sense indicators do. A passenger who is nervous or the opposite, numb and distant, should arouse the crew's suspicion. Similarly, any passenger with an unusual interest in the flight deck and the crew should arouse suspicion. Such a passenger should be observed most carefully during the first and the last 45 min. of the flight, when a hijack attempt is most likely.

Passenger responses to a terrorist action on an aeroplane are probably well known to would-be hijackers. Intimidation is the first tool of the terrorist in causing submissive and compliant behaviour of crew and passengers. By alternately intimidating and reassuring a victim, a terrorist can cause the so-called Stockholm syndrome to occur, in which the victim actually sympathizes with the terrorist. Crew members should understand the Stockholm syndrome, expect it in a hijack or other terrorist action, and resist it when they see it in effect. The crew and passengers will usually outnumber any hijack team by a great margin. There is strength in numbers, favouring the crew and passengers as long as they are not paralysed by intimidation or subverted by the Stockholm syndrome.

- Flight deck procedures or aeroplane manoeuvres to defend the aeroplane

A group of experts deliberated on the question of using the aeroplane itself or its systems to defend against an attempt to breach the flight deck door and take control of a flight.

The experts dismissed depressurization and aggressive aeroplane manoeuvring as effective countermeasures. Depressurization introduces too many unwanted risks and is ineffective against a determined hijacker. Aggressive aeroplane manoeuvring is theoretically effective and might destabilize a would be hijacker.

Such manoeuvres would have to be carefully developed by the airline and the manufacturer of the specific aeroplane make and model. But there is no guarantee that those manoeuvres might be effective. Furthermore, those manoeuvres might work against the people who could subdue the hijackers from within the cabin - C/Cs, security agents and able-bodied passenger helpers. There is also a very real possibility to inadvertently cause catastrophic failure of the aeroplane's structure.

Cabin, Cockpit, Operational Ground Staff

10.7.4 Additional regional procedures

Cabin, Cockpit, Operational Ground Staff

10.7.4.1 USA

If possible, the pilot of a hijacked aeroplane should transmit his situation to ATC in R/T. If not possible proceed as follows:

- Pilot message: “I am being hijacked”;
- Pilot shall set transponder to A7500. If unable to change transponder setting or when not under radar control, transmit aeroplane call-sign and the phrase “transmitting A7500”.
- ATC will acknowledge by transmitting aeroplane call sign and the phrase “verify squawking A7500”. On pilot's affirmative reply, the authorities concerned will be notified.
- On receipt of a hijack message, ATC will assign code A7500 to the aeroplane. This does not preclude subsequent change to code A7700 by the pilot if necessary.

Cabin, Cockpit, Operational Ground Staff

10.7.4.2 Japan

Cabin, Cockpit, Operational Ground Staff

10.7.4.2.1 Under radar control

- Radio contact feasible:
  - Alert the ground station of the hijacking by transmitting the situation, pilot's intention etc., and squawk A7500 ident;

    - if unable to transmit the situation, squawk A7500 and alert the ground station by transmitting the following sentence: “Mayday (this is) call-sign, squawking code 7500". If possible, pilot shall indicate his intention. Acknowledgement by ATC: “Understand your situation, code 7500 observed”.
- Radio contact not feasible:
    - Alert the ground station of the hijacking by squawking A7500 ident. Acknowledgement by ATC: “Confirm you are squawking 7500".

Cabin, Cockpit, Operational Ground Staff

10.7.4.2.2 Not under radar control

- Radio contact feasible:
    - Alert the ground station of the hijacking by transmitting the situation, pilot intention etc., and if aeroplane is believed to be within radar coverage, squawk A7500.
- Radio contact not feasible:
    - Alert the ground station by squawking A7500.

Cabin, Cockpit, Operational Ground Staff

10.8 Unruly Passenger

Cabin, Cockpit, Operational Ground Staff

10.8.1 Legal aspects

The policy on “Unruly Passengers” is based on Edelweiss Air General Conditions of Carriage of Passengers and Baggage, refer to the Edelweiss Air AGB and the Tokyo Convention.

Cabin, Cockpit, Operational Ground Staff

10.8.2 Definition of unruly passengers

Unruly passengers are persons who fail to respect the rules of conduct on board an aircraft or to follow the instruction of crew members and thereby create a threat to flight safety and/or the good order and discipline on board an aircraft. Such acts can be:

- assault, intimidation, menace or wilful recklessness which endangers good order or the safety of property or persons;
- assault, intimidation, menace or interference with a crew member in performance of duties or which lessens ability to perform duties;

- wilful recklessness or damage to an aircraft, its equipment, or attendant structures and equipment such as to endanger good order and safety of the aircraft or its occupants;
- communication of information which is known to be false, thereby endangering the safety of an aircraft in flight;
- disobedience of lawful commands or instructions for safe, orderly or efficient operations.

Generally, unruly passengers can be classified into the following main categories:

- those who behave abusively in general, e.g. against our crew or other passengers;
- those who refuse to follow company regulations, e.g. non-smoking rule, use of electronic equipment, drinking own alcohol, etc.;
- those who repeatedly disregard instructions of the staff and endanger the safety of the flight
- those who make excessive use of alcohol or either prescription or non-prescription drugs.

Cabin, Cockpit, Operational Ground Staff

10.8.3 Policy

Cabin, Cockpit, Operational Ground Staff

10.8.3.1 General policy on unruly passengers

Unruly or drunken behaviour at check-in, at the gate, in lounges or on board the aeroplane conflicts with our goal to be a safe and secure airline.

Edelweiss policy therefore is:

- We will not condone any physical or verbal assault by passengers directed to our employees whilst they are on duty; any disorderly or drunken behaviour by passengers or any person on board our aeroplane.
- We empower crew members and ground staff to take reasonable steps to prevent disruptive and drunken behaviour and, where necessary, to deal with it as effectively as practicable including refusal of carriage of passengers.
- We empower crew members to refuse serving further alcohol to passengers who are intoxicated or on the verge of being intoxicated on board.
- We encourage the police to prosecute disruptive and intoxicated passengers in appropriate cases.
- We assist and support crew members and ground staff who are required, after an incident, to give statements (i.e. witness statements) to the police or to appear in court proceedings when passengers are prosecuted.

- We deny future carriage to abusive passengers who remain a threat to employees or the company.

Cabin, Cockpit, Operational Ground Staff

10.8.3.2 Policy regarding smoking

Smoking is not allowed on board any Edelweiss aeroplane. This is in line with the National Aviation Security Programme of Switzerland (NASP). Edelweiss informs passengers shortly after boarding is completed that smoking is not allowed. The non-smoking policy on board of an Edelweiss flight applies to all kinds of smoking devices, including alternative products (e.g. electronic cigarettes). Any smoking on board is considered to be unruly behaviour as described in OM A Category 2 incident (PDR), and a Passenger Disturbance Report (PDR) shall be submitted. Refer to Forms & Reports Passenger Disturbance Report - PDR.

The Federal Office of Civil Aviation shall be notified about all smoking incidents.

Cabin, Cockpit, Operational Ground Staff

10.8.3.3 Policy regarding alcohol and any other drugs with negative effect on ones behaviour and consciousness

Cabin, Cockpit, Operational Ground Staff

10.8.3.3.1 General

Intoxicated passengers are a danger to themselves and others when on board the aeroplane, especially in the event of an emergency situation. It is the responsibility of passengers not to be intoxicated or to get intoxicated on the aeroplane. Therefore, Edelweiss Air has established a policy in regard to intoxicated passengers.

Cabin, Cockpit, Operational Ground Staff

10.8.3.3.2 Unruly Boarding and/or Offloading

A passenger who boards an EDW aeroplane in an intoxicated state, conflicts with our goal to be a safe and secure airline and lowers the level of customer satisfaction perceived by other passengers. EDW will therefore support all crew members and ground staff who deny boarding to intoxicated passengers.

Cabin, Cockpit, Operational Ground Staff

10.8.3.3.3 Consumption of alcoholic beverages

Passengers are only allowed to drink alcoholic beverages served to them by the cabin crew. Alcohol consumption from a bottle brought on board or from a bottle bought at the duty-free is not allowed.

No alcoholic beverages shall be served to passengers who:

- are under the age of 16;
- appear to be drunk;
- are under the influence of drugs;
- are admitted to the flight deck;
- are security officials on duty, e.g. escorts to DEPA or tiger;
- have a known, explicit negative behaviour under the influence of alcohol (e.g. known from a previous flight on EDW).

Young people older than 16 years may be served with alcoholic beverages gained by fermentation, e.g. beer or wine.
However, the minimum age to serve beverages based on spirits is 18 years.

Cabin, Cockpit, Operational Ground Staff

10.8.3.3.4 Intoxication on board the aeroplane

Excessive drinking of alcoholic beverages often causes disruptive incidents and assaults on board. It is therefore important that crews should exercise discretion in serving alcohol to passengers who appear to be near the limit of intoxication. If there is any doubt in the minds of cabin crew, they should act with caution and tactfully refuse serving the passenger more alcohol. The cabin crew shall make sure, that every cabin crew member is aware, which passenger is meant. When in doubt, the cabin crew should refer to the CMD for further assistance. The CMD must be informed immediately if a passenger's behaviour threatens flight safety or the safety of other passengers or the crew.

Cabin, Cockpit, Operational Ground Staff

10.8.3.3.5 Removal of alcohol

The crew may, at the absolute discretion of the CMD or the CRP (during CMD rest time), remove alcohol (including the passenger's own supply) for safe custody. This should only be done where safety would be compromised if the passenger were to retain the alcohol. Passenger's alcohol kept in custody must be returned to the passenger when leaving the aeroplane.

Cabin, Cockpit, Operational Ground Staff

10.8.3.3.6 No alcohol on the flight deck

Alcohol must never be taken on the flight deck except when in a sealed bottle.

Cabin, Cockpit, Operational Ground Staff

10.8.4 Handling of unruly passengers by crew members

Cabin, Cockpit, Operational Ground Staff

10.8.4.1 Pre-flight

There are several opportunities for staff to identify a potential troublemaker; including at the check-in, in the lounges, at the boarding gate and on board the aeroplane. Given the emphasis during this phase of "prevention", training is provided to avoid or prevent a situation becoming violent in-flight.

If a crew member notices strange passenger behaviour, the CMD must be informed immediately. It is much easier to refuse a potential unruly passenger on ground as to deal with him or her in flight.

If the crew was involved in the decision to offload a passenger, Crew reporting via IQSMS is mandatory.

Cabin, Cockpit, Operational Ground Staff

10.8.4.2 In-flight

Cockpit

10.8.4.2.1 Flight crew

The CMD should be familiar with the powers bestowed upon him/her by the Tokyo Convention. The Tokyo Convention comes into effect as soon as doors are closed. It gives the commander the power to decide on necessary actions as soon as a passenger's behaviour is jeopardising the safety of the aeroplane or persons on board.

Cabin

10.8.4.2.2 Cabin crew

If at any time a cabin crew member notices unusual behaviour on the part of a passenger, the S/C must be advised. If a passenger's behaviour results from the non-observance of a legal requirement, the S/C shall verbally inform the passenger about the regulation and the legal requirements.

Before any action is taken against a possibly unruly passenger, the S/C shall:

- Inform the CMD of all developments, and discuss and determine further actions.
- Issue a verbal warning to the passenger with the same wording as on the written notice (red card).
- If the unruly category requires, fill out a PDR form and present the passenger with the written warning (PDR/red card).

An IQSMS report shall be submitted according to the severity of the unruly passenger. Refer to OM A Reporting of an unruly passenger.

Cabin, Cockpit, Operational Ground Staff

10.8.4.2.3 Assault by passenger on crew members

In the event that a passenger physically or verbally assaults a crew member, the crew member should:

- report the assault to the CMD who will request Police/Security to meet the aeroplane on arrival;
- initiate legal proceedings, if deemed necessary, and after prior consultation with the Security Manager.

Cabin, Cockpit, Operational Ground Staff

10.8.4.2.4 Tigers

The in-flight duty of the Tigers is to prevent criminal acts. Tigers are travelling incognito. They are instructed not to intervene in the cabin by FEDPOL. However, the commander is entitled to order an intervention by the tigers if deemed necessary.

Cabin, Cockpit, Operational Ground Staff

10.8.4.3 Post-flight

Cabin, Cockpit, Operational Ground Staff

10.8.4.3.1 Hand over to police

The support that can be expected from ground services and security staff at the arrival station depends on the local set-up. If the CMD assesses that it is appropriate, he shall - upon arrival - make a public announcement, requesting all passengers to remain seated. Otherwise, the S/C shall co-ordinate with the CMD to identify the unruly passenger to the authorities.

Edelweiss Air ground staff must make sure that Police/Security personnel meet the aeroplane on arrival. When Police officials meet the aeroplane, the CMD should communicate with them using a form of words, which approximates the following:

“It is alleged that an incident has occurred on this flight, threatening the safety (or good order and discipline) of the flight and I wish you to investigate it. The following persons were present at the incident...”.

Cabin, Cockpit, Operational Ground Staff

10.8.4.3.2 Assault by passenger on crew members

Crew desiring to institute legal proceedings should initiate the following course of action:

- Lodge a police report immediately after the incident and, if possible, obtain a copy of the report. In Switzerland this will have to be lodged at the aerodrome police station.
- The CMD should act as the company's representative and accompany the crew member to assist in filing the report.
- The S/C should be present if a cabin crew member is involved.
- At stations abroad, ask the Edelweiss Air representative or a senior member of his staff to assist the CMD and the crew member involved in their dealings with the Police and/or local authorities. Sometimes, the Police/Security authorities may not wish to take legal action against the offender.

The Security Manager will advise the Fleet Chief Pilot and Cabin Crew Management and liaises with Edelweiss Air Legal Responsible.

Besides criminal proceedings, it is open to the employee to pursue a civil action for the assault.

Edelweiss Air will provide all legal assistance under restriction of commensurability, including costs and time to an employee who wishes to institute civil proceedings for an assault arising out of and in the course of employment.

Cabin, Cockpit, Operational Ground Staff

10.8.4.4 Additional considerations

Signatory countries to the Tokyo Convention are obliged to take custody of unruly passengers. The CMD has the obligation to deliver evidence and information to the authorities at the point of landing.

The CMD, any crew member and any passenger are relieved from responsibility in any proceeding for necessary and reasonable actions taken in accordance with the Tokyo Convention. Unnecessary measures for the purposes outlined, will not entail immunity.

Under the law, a physical or verbal assault can only take place against an individual, not against a corporation. This is the reason why a crew member must report and initiate legal action. A crew member, which has been assaulted, has the right to file an individual civil or criminal complaint against the offender or offenders. However, utmost consideration must be given to the possible consequences before initiating any complaint. Assistance is available through the Security Manager.

Cabin, Cockpit, Operational Ground Staff

10.8.5 Reporting procedure

Cabin, Cockpit, Operational Ground Staff

10.8.5.1 General

The CMD should communicate his decision and action taken as early as possible to OCC.

First and foremost, the CMD and / or the SC shall write an IQSMS report. In addition, CCM's may also submit further information on the incidents via IQSMS report. These reports however, shall be coordinated with the CMD and / or SC.

For all IQSMS reports, no matter which category they concern, no crew names shall be used, but only the 3 letter codes of the crew members concerned.

Cabin, Cockpit, Operational Ground Staff

10.8.5.2 In-flight

After any in-flight incident, the CMD shall notify OCC via ACARS or SATCOM.

The notification shall include the following information:

- family name
- first name
- seat number
- nationality (if possible)
- nature of unruly behaviour
- specification whether the presence of police is necessary upon arrival at station of arrival.

OCC will inform the station of arrival accordingly and advise on actions to be taken.

If the passenger has a connecting flight with LX, WK OCC may share this information with LX NOC. Whenever possible, WK OSY shall be informed before this information is provided to LX NOC. However, in urgent cases, this information may be provided without consulting WK OSY.

Cabin, Cockpit, Operational Ground Staff

10.8.5.3 Post-flight

The Passenger Disturbance Report forms the basis of a formal complaint on arrival and a copy shall be handed over to the authorities.

The S/C should obtain statements or whatever evidence from other passengers about the incident. Details of witness names and addresses should be noted. Other details which will be useful to the Police will be time of incident, name, nationality (if available) and details of the journey of the unruly person. It must be noted that whenever law enforcement officers are called to meet the flight, written statements will be taken on arrival and crew may be interviewed.

A violent or unruly passenger may be disembarked in any country where the aeroplane lands, irrespective of whether the passenger is of foreign of Swiss nationality. However, the CMD must report any disembarkation and the reason of it:

- to the appropriate Authority in the country of disembarkation
- to the appropriate Diplomatic or Consular office of the passenger concerned (if nationality is known). This can also be delegated to the Edelweiss Air ground representative.

Cabin, Cockpit, Operational Ground Staff

10.8.6 Reporting of an unruly passenger

Cabin, Cockpit, Operational Ground Staff

10.8.6.1 Category 1 incident

Includes behaviour such as minor verbal abuse and does not normally compromise cabin or flight safety. The passenger should receive a verbal warning clearly referencing legal provisions and requesting compliance with the safety instructions. Provided that the passenger cooperates, no further action is required by crew, but the pilot-in-command should be notified.

Cabin, Cockpit, Operational Ground Staff

10.8.6.2 Category 2 incident (PDR)

The crew member asks the passenger to comply with the instructions on board. However, the passenger continues to disturb e.g. with verbal assaults or continuously refuses to comply with regulations (e.g. failure to fasten the seat belt when the sign is illuminated or operation of unauthorised electronic equipment). The crew member shall follow company procedures regarding cockpit notification. After attempting to defuse the situation, the crew member shall give a written warning (red card) to the unruly passenger and issue a “Passenger Disturbance Report”.

Handing out the red card shall only be done with the permission of the CMD/Flight Crew. The red card does not automatically lead to a category 2 incident (PDR). If a situation de-escalates after the red card is issued, a category 1 incident may be reported instead of a category 2 incident (PDR), depending on the severity of the incident.

When there is reason to believe that the red card may further escalate an unruly situation, the CMD and S/C may decide to dispense the written warning to protect the crew and passengers. However, in that case, a verbal warning must have been given by the crew and witnessed by uninvolved passengers. Reporting via IQSMS is mandatory. EDW Security will file an incident report form and send it to FOCA. Although the "red card" expresses a warning, legal proceedings are, nonetheless, always initiated whenever an illegal act e.g. smoking or sexual abuse, is involved.

Cabin, Cockpit, Operational Ground Staff

10.8.6.3 Category 3 incident (PDR)

The following cases are Category 3 incidents:

- Crew member's duties are made impossible due to continuing interference
- A passenger or crew member is injured or subjected to a serious threat of injury
- An unscheduled landing is made and/or restraints such as handcuffs are used
- A passenger continues disturbance after receiving written warning.

In Category 3 cases the crew member shall take the following measures:

- report the incident to the CMD who will request the police authorities to meet the passenger on arrival of the aeroplane
- the CMD should also contact Edelweiss OCC, who will inform the local representation and Edelweiss Security
- complete the IQSMS report "Unruly Category 3 incident PDR" including names and addresses of witnesses (and their written reports if available);
- refer the unruly passenger to the police authorities on arrival;

In addition, a police report may be filled out immediately after the incident and if possible a copy of the report obtained. The CMD should act as the air carrier’s representative and accompany the crew member to assist in filing in the report to the police authorities.

10.8.6.4 ICAO Classification - Threat Levels

Four levels of disruptive passenger behaviour have been defined to give a common reference for characterising an ongoing incident. Based on the degree of seriousness, ground personnel may anticipate crew response and determine what type of reaction may be expected on ground. The threat levels are defined as follows:

- Level 1 — Disruptive behaviour, including suspicious or verbally threatening behaviour
- Level 2 — Physically abusive behaviour
- Level 3 — Life-threatening behaviour
- Level 4 — Attempted or actual breach of the flight crew compartment

Threat levels are internationally recognised, while category incidents 1,2,3 are primarily of national reporting importance.

Cabin, Cockpit, Operational Ground Staff

10.8.6.5 Completion, storage and distribution of PDR

The Passenger Disturbance Report form (PDR) can be found in IQSMS and Yonder Forms & Reports Passenger Disturbance Report - PDR. The PDR shall be filled in exclusively by the CMD and/or S/C in English, including the following mandatory information:

- Passenger name, surname
- Passport number
- Photo of passport (Only with Edelweiss devices. The photo shall be deleted from the device after successful transmission of PDR.)
- Passenger address
- Nationality
- Date of birth
- Seat number
- Nature of incident
- Witness(-es) and/or doctor's contact details

In addition, the S/C shall have at least 2 empty paper PDR forms for each rotation. The primary use of the paper PDR form is for authorities that immediately need a report to process the unruly case on site. A photo of the paper PDR form shall be taken and subsequently attached to an IQSMS report.

If an unruly passenger refuses to disclose his details, the police may be called by the CMD to secure this data after landing. This decision always lies with the CMD.

The IQSMS PDR is sent electronically to OSY. In close cooperation with PCO and CS, the department coordinates measures to be taken concerning possible criminal charges and any further transportation of the unruly passenger. Even if the return or onward flight of the unruly PAX is already known, no direct communication by the involved crew with the corresponding crew is permitted (Data protection, risk of confusion, rebooking etc.). Exceptions for immediate connecting flights via PCC ZRH or handling agents at outstations are allowed.

Cabin, Cockpit, Operational Ground Staff

10.8.6.6 Red Card (PDR Warning)

Red cards (PDR warnings) can be found on the flight deck in the ships library. In addition, every SC shall have PDR warning cards in all available languages in the crew bag.

The following languages are available:

Arabic, Chinese (Hong Kong, Taiwan), Chinese (Mainland China, Singapore), English, French, German, Hebrew, Italian, Japanese, Portuguese, Russian, Spanish, Polish and Czech.

Example of the text on the PDR warnings
Warning You have failed to comply with the instructions of the crew members. In addition, your behaviour may be in violation of the law. If you wish to avoid removal from this aircraft on arrival and prosecution, your immediate cooperation is required. The crew may also ask to see official documentation to enable them to correctly identify you.

The international aviation regulations, for example, prohibit:

- Smoking in the lavatories and/or in the cabin (according to carrier's policy).
- Interfering with crew members or passengers.
- Creating any disturbance endangering flight safety.
- Drinking alcoholic beverages not served by a crew member.

If you do not refrain from such behaviour, you will be met by police authorities on arrival.

Cabin, Cockpit, Operational Ground Staff

10.8.7 Restraining devices

Cabin, Cockpit, Operational Ground Staff

10.8.7.1 General

All aeroplanes are equipped with a restraining device kit, which contains the user instructions. The use of these devices is entirely up to the discretion of the crew. These devices can, however, only be used expressly under approval by the CMD.

Cabin, Cockpit, Operational Ground Staff

10.8.7.2 Restraining devices kit

Cabin, Cockpit, Operational Ground Staff

10.8.7.2.1 Location

For the location of the kit refer to the aeroplane specific equipment checklist.

Cabin, Cockpit, Operational Ground Staff

10.8.7.2.2 General

If directed by the commander, handcuffs may be used to restrain passengers who have become dangerous to themselves or others and/or to the safety of the aircraft. In case of absence of the commander or if unable to contact the commander, the Cruise Relief Pilot may give the order to use the handcuffs.

All EDW crews shall be trained in the proper use of the tuff-ties and application of the Team.

Cabin, Cockpit, Operational Ground Staff

10.8.7.2.3 Contents of the restraint kit

- a minimum of 5 tuff-ties (already assembled for your use);

- 2 Velcro Tapes (for legs);

- 1 Quick reference card

Cabin, Cockpit, Operational Ground Staff

10.8.7.2.4 Handling

If the kit is used, an entry into the Aeroplane Technical Log must be made.

Cabin, Cockpit, Operational Ground Staff

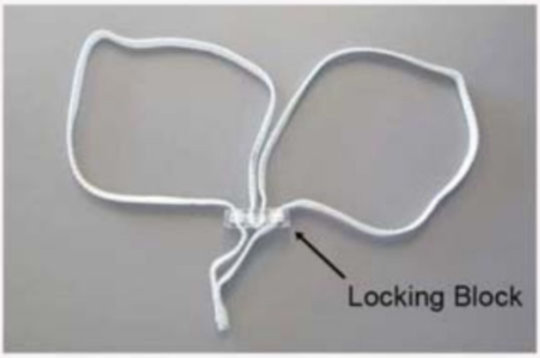
10.8.7.2.5 Instructions on the use of the tuff-ties

- The use of the tuff-ties is explained on the quick reference card which is included in the restraining devices kit (see below).
- After using the tuff-ties, check the person to ensure that blood circulation and free breathing is maintained. If necessary, use a second pair of tuff-ties and only then cut off the first one. Medical scissors from the FAK should be used to cut off the tuff-ties.
- It is recommended to use the scissors from the FAK to remove the tuff-ties.
- Call for a doctor to check on involved crew member(s) and the unruly passenger.
- Place passenger in the prepared seat, fasten the seatbelt and then restrain the legs by using the self-adhesive straps (velcro tapes).
- Assign a cabin crew member to supervise the restrained passenger at all times. (Use able bodied passengers if needed.) Make sure the crew member or able bodied person is relieved regularly. In addition the assigned crew member shall make continuous notes of the ongoing events.
- Release the restrained passenger from the tuff-ties only in case of an emergency. In all other cases hand over the unruly passenger to the authorities on arrival fully restrained.
- The cutting tool (scissors from FAK) is to be placed in the seat pocket behind the restrained passengers' seat. In case of an emergency landing, the assigned crew member (alternatively able bodied person) is responsible to release the restrained passenger at gear down.

- The CMD must inform OCC and the arrival station about the unruly passenger and actions taken. Presence of the authorities on arrival of the aircraft to hand over of the unruly passenger must be clearly requested by the commander in advance.
- The PDR (Passenger Disturbance Report) and a detailed report via IQSMS must be established as protocol. Remember: If it is not written down - it has never happened.

Tuff-ties quick reference guide

How to use and apply the Tuff-Ties



Tuff-Ties will not cut into skin
or cut off circulation if applied properly.

1. Once the Tuff-Tie is prepared, place it on your wrist. Approach the Unruly from the rear.

2. Grab the passengers hand. As you pull his hand through the Tuff-Tie: pull the tie on.

3. Once the Tuff-Tie is on: pull tight.

DO NOT APPLY ANY PART OF THE RESTRAINT PACK OR ANY OTHER ITEM OVER THE PASSENGER´S FACIAL AREA.

How to use and apply the Tuff-Ties

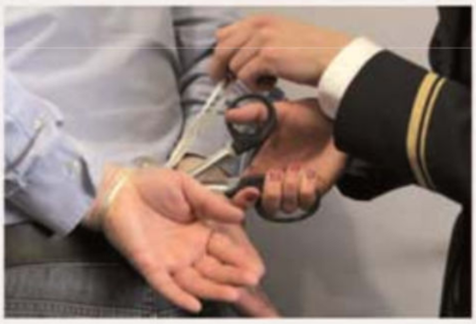
4 Repeat the same procedure with the other hand.

5 As you grab, you pull through and put the Tuff-Tie on.

6 Pull for tightness. Remember to check for tightness regulary. Ensure that they're not causing injury.

Save removal of the Tuff-Tie

Should any emergency or medical condition develop, use the medical scissors to release the restraint person in sufficient time to allow him to evacuate.



Cabin, Cockpit, Operational Ground Staff

10.8.8 Handling of unruly passengers by station personnel

Cabin, Cockpit, Operational Ground Staff

10.8.8.1 General

Under Edelweiss Air conditions of carriage, the carrier may refuse carriage of any passenger for reasons of safety or if, in the exercise of reasonable discretion, the carrier determines the conduct or physical state of the passenger is such as to:

- Cause discomfort or make himself/herself objectionable to other persons or to property;
- involve any hazard or risk to himself/herself or to other persons or to property.

Cabin, Cockpit, Operational Ground Staff

10.8.8.2 Check-in/boarding

There are several opportunities for staff to identify a potential troublemaker; including at the check-in, in the lounges, at the boarding gate and on board the aeroplane. Given the emphasis during this phase of “prevention”, training is provided to avoid or prevent a situation becoming violent during in-flight. Initial action to refuse carriage will normally be taken by the Duty Manager, or the senior staff member present, who must exercise discretion whether to:

- exclude the unruly passenger from the flight;
- confer with the CMD and S/C to decide on the appropriate course of action if it is envisaged to allow the passenger to travel. During check-in or in the lounge or at the boarding gate, the following procedure must be observed;
- staff shall report to the Superior any observation of unusual passenger behaviour at check-in, in the lounges or at the boarding gate. The baggage of such passenger must be checked in on stand-by basis;
- the baggage of a transfer passenger with unusual behaviour shall be put on stand-by as well;
- the Superior shall approach the passenger and assess the situation and, if in his/her opinion the passenger is unfit for travel, inform the Duty Manager or Station Senior;
- the Duty Manager or Station Senior is empowered to exclude any passenger from the flight in accordance with the company's conditions of carriage and his/her action will be fully supported by the Management. Should a passenger be excluded from the flight, these points must be observed;

- Local authority shall be called in to stand-by at the counter or boarding gate, in order to intervene if necessity arises;
- The passenger's baggage must be offloaded and the check-in records and relevant on-board documents amended accordingly;
- The uplifted ticket and airport tax (if applicable) shall be returned to the passenger;
- If necessary, assist the passenger to clear aerodrome formalities;
- If necessary, assist the passenger in obtaining hotel accommodation or transportation and ensure that any expense is put on his/her account;
- If a complaint is to be expected, send a report to the Security manager for follow up action;
- Record the case in the station log with specific details of the passenger's state, i.e. intoxicated, general abuse, etc.

Once a passenger has been identified as a potential troublemaker and the decision is made to allow carriage, these points must be observed:

- Confer with the CMD and S/C and get a decision on the appropriate actions to be taken;
- The CMD and the S/C must be informed of the situation in order to allow special attention to the passenger;
- Record the case in the station log with specific details of the passenger's state for further reference.

Cabin, Cockpit, Operational Ground Staff

10.8.8.3 After boarding

If the passenger must be offloaded after boarding, this procedure applies:

- The CMD or S/C shall inform the ground staff or Duty Manager;
- The Duty Manager shall notify the local authority to stand-by at the gate to offload the passenger if necessity arises; the passenger's baggage must be offloaded and the check-in records and relevant on-board documents amended accordingly;
- The uplifted ticket and airport tax (if applicable) shall be returned to the passenger;
- If necessary, assist the passenger to clear aerodrome formalities;
- If necessary, assist the passenger in obtaining hotel accommodation or transportation and ensure that any expense is put on his/her account.

Cabin, Cockpit, Operational Ground Staff

10.8.8.4 In-flight/arrival

If during flight an unruly passenger is identified and action is necessary, the following procedure must be observed, if action is required at station of arrival:

- The Duty Manager or Station Senior shall notify the local authority to stand-by on arrival at the aeroplane exit;
- Retrieve and return baggage to the passenger, if she/he is being detained by the local authority. Inform the Embassy or Consular office of respective passenger's nationality;
- If necessary, assist passenger in obtaining hotel accommodation or transportation and ensure that any expense is put on his/her account.

Cabin, Cockpit, Operational Ground Staff

10.8.8.5 Reporting

Record all cases in the station log with specific details of the passenger's state, i.e. intoxicated, general abuse, etc. Advise OCC immediately who is contacting the Security Manager.

Cabin, Cockpit, Operational Ground Staff

10.9 Deportees / inadmissible passengers

Cabin, Cockpit, Operational Ground Staff

10.9.1 Definition

Cabin, Cockpit, Operational Ground Staff

10.9.1.1 Inadmissible passenger

An inadmissible passenger (INAD) is a person, who is not (or will not be) permitted by the competent authorities to enter the respective state (e.g. due to lack of visa, expired passport, insufficient funds, etc.).

Based on the handling of the inadmissible passenger, there are two categories:

- Unescorted INAD (INAD)
- Escorted INAD (INAD escorted)

The responsibility for the inadmissible passenger lies fully with the carrier concerned (Edelweiss Air).

Cabin, Cockpit, Operational Ground Staff

10.9.1.2 Deportee

A deportee is a person who:

- Is required by the competent authorities to be removed from the state; or
- Is extradited from a state on request of the competent authorities of another state.

Based on the handling of a deportee, there are two categories:

- Unaccompanied deportees (DEPU)
- Accompanied deportees (DEPA)

The responsibility for deportees lies fully with the states concerned.

10.9.1.3 Persons in custody

EDW does not transport any persons in custody.

Cabin, Cockpit, Operational Ground Staff

10.9.2 Inadmissible passenger

Cabin, Cockpit, Operational Ground Staff

10.9.2.1 General

If a passenger is declared to be inadmissible by the immigration authorities, the transporting carrier is responsible for the removal of the passenger in accordance with ICAO Annex 9.

Each contracting State shall ensure that a person found inadmissible is transferred back into the custody of the operator(s) who shall be responsible for prompt removal to:

- The point where the person commenced his journey; or
- To any other place where the person is admissible.

> The public authorities shall without delay inform the operator when a person is found inadmissible and consult the operator regarding the possibilities of departure.

Stations are responsible to organise and coordinate inadmissible-removals with local authorities and consulates / embassies concerned, with on-line stations and Manager Ground Operations if necessary.

An INAD under the influence of medication shall not be accepted without a medical certificate.

Cabin, Cockpit, Operational Ground Staff

10.9.2.2 Handling of inadmissible passengers

INAD shall be treated with the same courtesy and tact as any other passenger. Special assistance shall be given by the ground staff.

Usually, an inadmissible passenger does not need to be accompanied. However, if there are reasons to believe that such a person will be a source of annoyance to other passengers and crew, the DEPA procedure (Deportees Accompanied) must be applied.

Travel documents of unescorted, inadmissible passengers shall be collected by the S/C for safekeeping in the security locker (or if not available on the flight deck). Upon arrival, the travel documents must be handed over to the ground staff meeting the flight.

In case of an escorted INAD, the travel documents remain with the escorts.

The commander must be informed about inadmissible passengers through the load sheet, the passenger list or directly by the handling agent.

Cabin, Cockpit, Operational Ground Staff

10.9.3 Deportees (DEP)

Cabin, Cockpit, Operational Ground Staff

10.9.3.1 General

Deportees shall be accompanied by law enforcing officers or equivalent unless they are expelled for one of the following reasons only:

- Lack of working permit;
- Illegal entry;
- Expired Visa;
- Cancelled or invalid permit of residence;
- Insufficient funds;
- Repatriation (run-away youth, refugee)

And when there is a reasonable assurance that the deportee:

- Needs no special handling;
- Will not be a source of annoyance to other passengers;
- Does not jeopardise the safety of persons, goods or the aeroplane.

A DEPU/DEPA under the influence of medication shall not be accepted without a medical certificate.

Cabin, Cockpit, Operational Ground Staff

10.9.3.2 Handling of deportees

Before departure the station personnel shall inform the commander of any deportee intended for transportation. At ZRH the information based on planning status is passed to the commander via NOTAM or directly via OCC. For LX flights performed by WK (wetlease), the information about a possible deportee is provided via cabin TOI. The S/C must forward this information to the flight crew before or during crew briefing.

Deportees shall be treated with the same courtesy and tact as any other passenger. Special assistance shall be given by the personnel of the deporting state.

Persons who refuse to board the aeroplane with physical resistance shall be excluded from carriage.

Arrangements shall be made that deportees generally will be boarded ahead of passengers and as discreetly as possible. In certain cases of DEPA, post-boarding might be required by the escorts. In such case crew will be informed by police on-site and boarding will be via external stairs at rear door. Deportees should be seated in the last row of Y-class.

For DEPU thetravel documents are normally handed over to the crew by the ground staff for safekeeping in the SEC locker or on the flight deck.Upon arrival the documents shall be handed over to the ground staff.

For DEPA the travel documents remain with the escorts.

Cabin, Cockpit, Operational Ground Staff

10.9.4 Transportation restrictions for INAD/DEPU/DEPA

Each DEPA and escorted INAD needs at least two escorts.

DEPA and escorted INAD may be handcuffed if required but not gagged or foot manacled.

Children under 16 years of age travelling with an adult, family or group shall not be considered for the number of deportees or inadmissible passengers.

Category	Responsible for transport	Handling of travel documents	Max no. if booked by foreign authority or if other bookings by foreign authority already exist	Max no. if bookings by Swiss authority and no other booking by foreign authority exist	Service restriction
INAD	EDW	with INAD or crew	8 2[1]	8 2[1]	as normal PAX

Category	Responsible for transport	Handling of travel documents	Max no. if booked by foreign authority or if other bookings by foreign authority already exist	Max no. if bookings by Swiss authority and no other booking by foreign authority exist	Service restriction
INAD escorted	EDW	with escort	2	2	up to escorts
DEPU	State	with crew	2	4[4]	as normal PAX
DEPU (Dublin Treaty5)	State	with crew	4[2]	6[3,4]	as normal PAX
DEPA	State	with escort	2	4[4]	up to escorts

[1] Only 2 are allowed if in combination with DEPA or escorted INAD on the same flight.

[2] In combination with normal DEPU, the maximum number of DEPU (normal and/or Dublin) is 2.

[3] In combination with normal DEPU, the maximum number of DEPU (normal and/or Dublin) is 4.

[4] In case of exceedance of any limit stated above (usually for family members obviously belonging together), prior approval must be obtained from Flight Ops (Duty Officer) in cooperation with SWISS Aviation Security if needed. The crew shall be informed by TOI accordingly.

[5] DEPU, according to the "Dublin treaty", are passengers being repatriated to the country where they filed their first request for asylum but not to their home countries (only on intra-schengen flights).

Cabin, Cockpit, Operational Ground Staff

10.9.5 Authority of the commander

According to the Tokyo Convention the CMD has the right to refuse any passenger who is believed to jeopardise the safety of the flight. Persons, who, due to their behaviour, are believed to be a hazard to the aeroplane, crew or passengers, shall be refused.

The CMD shall make the decision after due evaluation of all relevant factors and consequences. He cannot be overruled by the authorities.

Cabin, Cockpit, Operational Ground Staff

10.10 Security guards (Tigers & Foxes)

Cabin, Cockpit, Operational Ground Staff

10.10.1 General

Security guards (tigers, foxes) act according to the "Luftfahrtsverordnung" (LVF) in order to prevent criminal acts against civil aviation in general and Edelweiss Air in particular. Security guards are designated by Fedpol and Edelweiss Air when considered appropriate.

Cabin, Cockpit, Operational Ground Staff

10.10.2 Special duties for Tigers

Tigers are trained and instructed to use their weapons as ultimate means and with due regard to safety of passengers, crew and aeroplane. The CMD may give additional instructions to Tigers concerning safety of the flight; however, he is only authorised to restrict their duties assigned by the Swiss federal authority or attribute additional instructions if so dictated by special circumstances pertaining to general air safety.

Cabin, Cockpit, Operational Ground Staff

10.10.2.1 Subordination

Tigers are subordinated to the CMD as regular crew members on duty and also off duty when away from home base. Tigers take orders from the CMD pertaining to general flight safety and crew matters. Duties and responsibilities for their specific task are laid down in the “Richtlinien für die Tätigkeiten von Sicherheitsbeauftragten an Bord von schweizerischen Luftfahrzeugen im internationalen gewerbsmässigen Luftverkehr” issued by the “Bundessicherheitsdienst” of the “Bundesamt für Polizei” and filed with the Security Manager.

Cabin, Cockpit, Operational Ground Staff

10.10.2.2 On ground

Tigers shall:

- attend the cabin crew briefing;
- keep the CMD informed about all special occurrences in respect to security.

Procedure shorthaul flights:

Tigers appear in civilian clothing for the cabin briefing, then leave the crew and board via the normal passenger process. Seat numbers of Tigers must be communicated to all crew members.

IMPORTANT: As soon as the crew arrives at the aeroplane, the gate shall be informed by the S/C, that Tiger have seat reservations and will board via the normal passenger way. At outbound station, S/C shall discreetly verify Tiger seats for return flight. Tigers stay on board during turnaround.

Procedure longhaul flights:

S/C shall check that Tigers are on Gen Dec. If not, OCC shall be contacted to include them on Gen Dec before departure.

Tigers attend the cabin briefing and proceed with the crew to the aeroplane. Seat numbers of Tigers must be communicated to all crew members.

IMPORTANT: As soon as the crew arrives at the aeroplane, the S/C shall inform the gate that Tigers are already on board and the gate SHALL BOARD THEM MANUALLY. If flight crew changes during layover, the S/C shall inform the new flight crew about Tiger operation.

Cabin, Cockpit, Operational Ground Staff

10.10.2.3 Inflight

Tigers shall:

- supervise the passengers closely in order to detect potential hijackers who have managed to come on board undetected;
- take the necessary steps within the frame of their duties and responsibilities to counteract a hijack attempt/sabotage with adequate means;
- inform the CMD automatically and immediately about special occurrences with regard to security and the use of weapons.

Cabin, Cockpit, Operational Ground Staff

10.10.2.4 Seating on aeroplanes

The assignment of the respective seat will be made by Fedpol and Edelweiss Air Commercial for every single flight covered with Security Agents. In exceptional cases, the Station Manager, in coordination with the Commander, the Tiger and the S/C is allowed to reseat the 1st and/or 2nd Tiger on a seat other than that assigned by Fedpol and Edelweiss Air Commercial.

No Tiger shall be offloaded unless authorized by the Security Manager and/ or the Tigers decide to terminate their Tiger operation.

Inflight, in coordination with the Commander and the S/C, Tigers may occupy any adequate seats within the same class/compartment.

Cabin, Cockpit, Operational Ground Staff

10.10.2.5 Fatigue management

Controlled rest during flight may be used. Concerning its application, the following points have to be observed:

- It is the duty of the individual tiger to keep the other tiger informed about his need for rest.
- The maximum time for an individual rest period shall not exceed 30 minutes.
- More than one rest period is permitted per individual tiger if required.
- Only one tiger at a time shall make use of controlled rest. During this time tigers have to stay in their seats.
- Controlled rest should be used only during the cruise phase of the flight when the majority of passengers are recreating until 1:30 hours prior to landing.
- Silent alert systems shall be used.
- The cabin crew is not involved in tiger's fatigue management.

Cabin, Cockpit, Operational Ground Staff

10.10.3 Special duties for foxes

Cabin, Cockpit, Operational Ground Staff

10.10.3.1 General

Foxes support local security staff and take additional security functions in and around the aircraft during ground stops. Foxes are unarmed.

Cabin, Cockpit, Operational Ground Staff

10.10.3.2 Travel

Foxes, who travel between two duty stations abroad (e.g. NBO/MBA & v.v.) are considered DHC without any flight duty.

Cabin, Cockpit, Operational Ground Staff

10.10.3.3 On ground

Foxes perform their duties in accordance with the local procedures laid down by the Security Manager and Fedpol.

Cabin, Cockpit, Operational Ground Staff

10.10.3.4 In-flight

Foxes have no duty in-flight.

Cabin, Cockpit, Operational Ground Staff

10.10.4 Exemptions to the general Tiger and Fox Procedures

Due to certain circumstances or higher security level, the above described Tiger and Fox duties can deviate from the normal procedures. Special procedures will be distributed to the crew by means of flypad app, NOTAM or personal briefing.

Cabin, Cockpit, Operational Ground Staff

10.11 Armed bodyguards and law enforcement officers

Cabin, Cockpit, Operational Ground Staff

10.11.1 General

It is not permitted to transport any passenger in possession of any weapon on board of an Edelweiss Air aeroplane. Special security procedures are in force for armed bodyguards, law enforcement officers as well as for personal private weapons.

Cabin, Cockpit, Operational Ground Staff

10.11.2 Armed bodyguards

Cabin, Cockpit, Operational Ground Staff

10.11.2.1 General

A written message must be sent to OCC and/or the Security Manager as soon as booking and travel dates of armed bodyguards of any high ranking officials are known.

Cabin, Cockpit, Operational Ground Staff

10.11.2.2 Conditions of travel

- Bodyguards have to hand over their discharged arms (checked by a qualified person) to the authorities or the ground personnel at aerodrome of departure;

- Arms and ammunition have to be put into the respective security-item envelope and must be handed over to the CMD by authorities or ground personnel in order to store them on the flight deck or in the hold.
- CMD has final decision in any case;
- CMD shall be informed before boarding about such bodyguards and about the arms;
- The departure station shall send a message to the arrival station, mentioning bodyguards and location of arms in order to inform authorities of arrival station.

Cabin, Cockpit, Operational Ground Staff

10.11.2.3 Arrival Station

Inform respective authorities about bodyguards and arms and adhere to local procedures of authorities regarding the delivery of arms upon arrival.

> Under no circumstance may arms and ammunition be given back to the owner after arrival unless respective authorities are present and allow to do so.

Cabin, Cockpit, Operational Ground Staff

10.11.3 Firearms/weapons of private persons

Cabin, Cockpit, Operational Ground Staff

10.11.3.1 Conditions

Firearms and ammunition for private use of passengers must either be transported in their checked baggage or taken at the security checkpoint in order to be put into the security item envelope and loaded in the hold together with registered baggage. Handover to CMD is not allowed. In any case, the regulations of all countries in the passenger's routing must be checked and adhered to.

Cabin, Cockpit, Operational Ground Staff

10.11.4 Law enforcement officers

Cabin, Cockpit, Operational Ground Staff

10.11.4.1 Policy

For the carriage of firearms/weapons by armed law enforcement officers (except inflight security officers), the same procedures as for bodyguards apply.

Cabin, Cockpit, Operational Ground Staff

10.12 Handling of diplomats, and diplomatic mail/courier

In accordance with the provisions of the Vienna Convention on Diplomatic Relations (Article 36), diplomats and other privileged persons and their personal baggage will be searched in the same way as all passengers.

Exception:

- Presidents and Heads of State; all members of the Swiss Federal Council and the Swiss Federal Chancellor are considered as head of state.
- President of the European Commission;
- Foreign Prime Ministers and Heads of Government;
- Foreign Affair Ministers;
- Secretary General of the United Nations;
- Directors General of the United Nations Agencies (e.g. UNHCR, etc.);
- Secretary General of NATO;
- official guests of the Federal and/or State Government (only if previously announced by the protocol services);
- members of Royal Families (down to the second generation);
- official Head of Churches.

The spouse and children travelling with any person listed above should be exempted from screening. In such cases, Edelweiss Air shall be informed of such exemptions.

- Police protection officers acting in pursuance of their duties, the person or persons they are protecting, and any other person with the protection officer as he enters the sterile area at the aerodrome.

In accordance with the Vienna Convention, diplomatic pouches may be excluded from screening, provided they are properly sealed and necessary documents from the respective diplomatic mission are available. Diplomatic couriers and their personal baggage are not exempted from security screening.

Cabin, Cockpit, Operational Ground Staff

10.13 Layover Security

10.13.1 Layover Security Levels

10.13.1.1 General

Security levels are implemented in alignment with OC/PC/OSY. The security level is published as a Risk Info via LHG Security App (TrustCase) or SSI on the Flypad. For Layover Security Level 2 & 3 cases, additional information is provided via a “Read&Acknowledge” Yonder info.

When no security level is published for a destination, normal layover procedures according to the OM A/FAM or SSI apply.

Crew members who intend to leave the area of the layover city or plan to sleep in a hotel other than the crew hotel during the layover are obliged to inform the CMD (or the deputy) accordingly. Regarding the signing of the hotel, readiness and reachability of crew members refer to OM A Crew-Layover Readiness and Reachability of Crewmember.

To fulfil the duty of care, the CMD may issue a recommendation to avoid certain areas at or near the hotel. Further, the CMD can make an urgent recommendation not to leave the hotel in case of significant deterioration of the security situation. This information shall be shared with the crew.

For areas/layover destinations with a specific security situation, a Risk Info with the according security level and recommendations will be given by the LHG Security Desk and displayed in the Security App. The security situation shall be discussed in the crew briefing by the CMD.

Adhering to the following recommendations ensures personal security and a stable flight operation.

In general:

- Inform yourself on-site about the current security situation and development.
- Carry your staff ID.
- In case the situation requires, follow the instructions of local security forces.

Specific recommendations for special cases are found in the current Risk Info in the Security App or via SSI on the Flypad.

According to the current risk level, the following non-exhaustive recommendations according to OM A Security Levels may apply.

10.13.1.2 Security Levels

10.13.1.2.1 Layover Security Level 1

Abstract indication of a potentially security-relevant event with possible effects on personal security in the layover

It is recommended to avoid certain critical places, means of transport, demonstration or similar.

Crew info is provided as a Risk Info via the Security App and SSI on the Flypad.

10.13.1.2.2 Layover Security Level 2

Specific indication of a potentially security-relevant event with possible effects on personal security in the layover

- Crew members have to remain in the hotel vicinity or away from the respective risk area.
- Evacuation has to be possible within 4 hours.
- Crew members have to check with the hotel reception before leaving the hotel building.
- CMD has to be reachable by OCC and OC.
- CMD has to organise the accessibility of his crew.
- Crew members are obliged to remain accessible.
- Regular reassessment of the situation by OSY/OC/PC.

Crew info is provided as a Risk Info via the Security App, SSI or Yonder "Read&Acknowledge" Memo.

10.13.1.2.3 Layover Security Level 3

Latent high, abstract, or specific risk situation with impact on personal security in the layover

- Crew members may not leave the hotel building.
- Evacuation has to be possible within 2 hours.
- CMD has to be reachable by OCC and OC.
- CMD has to organise the accessibility of his crew.
- Crew members are obliged to remain accessible.
- The CMD will be designated by OC as the responsible crew representative for all crew members staying at the layover destination.
- Regular reassessment of the situation by OSY/OC/PC, at least every 24 hours.
- Regular briefings by the CMD to crew and reporting to OC.

Crew info is provided as a Risk Info via the Security App, SSI, Yonder "Read&Acknowledge" Memo or email.

10.13.1.2.4 Duties of station manager

The station manager and his deputy shall have an emergency contact with the crew hotel concerned available. Such a contact shall include:

- Name of manager in charge and deputy
- Respective telephone numbers
- Respective email address These contact details shall also be sent to OSY and kept always updated. The contact person must be briefed in detail about the concept in place.

Cabin, Cockpit, Operational Ground Staff

10.13.2 Hotel

Cabin, Cockpit, Operational Ground Staff

10.13.2.1 General

- Even a hotel can become the scene of an emergency situation, such as personal threat, fire, bomb threat or earthquake.
- In the interest of your own safety the following basic precautions should be taken.

Cabin, Cockpit, Operational Ground Staff

10.13.2.2 Personal Security and Precautions

Cabin, Cockpit, Operational Ground Staff

10.13.2.2.1 General

There are several scenarios individuals should be aware of that could potentially place them in a dangerous and life-threatening situation. It is, therefore, important to devise a response to each threat so that individuals can quickly and effectively mitigate the impacts of the threat. If travelling in a group or with a security team present, individuals must coordinate their response with them. The most common risk individuals will face is opportunistic crime. This may involve criminals stealing possessions, accessing bank accounts, mugging or physical assault. The following suggestions will help individuals to reduce the risk of criminal attention.

- Do not display wealth or carry large amounts of money, but always have some money in your pockets.
- Avoid areas prone to crime or where you might stand out.
- Avoid walking alone at night or through risky areas, and travel in groups.
- The shortest is not always the safest way.

- Avoid accepting invitations from strangers, and be aware of your surroundings.
- Do not accept drinks from strangers.
- Avoid becoming intoxicated.
- Do not leave your possessions unattended.
- Look for suspicious persons or persons who might be following you.
- Lock your car doors and windows when travelling. Do not leave any belongings in the car, especially in sight.
- Only travel in official transport, marked or known taxis, or hotel vehicles whenever possible.
- Do not share a taxi with or accept lifts from strangers.
- Avoid public transport late at night.
- Do not communicate your room number out loud to your colleagues in the lobby. The receptionists can hand out a room number list to the CMD and/or S/C.
- Check your room after entering. Put valuables and important documents in the room safe.
- Take a copy of your passport with you when you leave the hotel.
- Lock the door behind you. Double-lock with a chain if available.
- Identify any visitor through the door spyglass or verbally before you open the door. Keep the chain locked. Call reception in case of doubts.
- If you leave your room in the evening, put the “do not disturb” tag at the door.
- Inform at least one person from the crew when you leave the hotel, where you are going and when you intend to be back.
- Take the phone number/address of the hotel with you.
- Respect the traditions and costumes (dress code) of the country.
- Avoid demonstrations.
- We recommend to ask the hotel front desk about the current security situation when leaving the hotel.

Cabin, Cockpit, Operational Ground Staff

10.13.2.2.2 When taking occupancy of your room check/find out

- whether there is an emergency information sheet available;
- how will I be notified of an emergency;
- how do I activate an alarm;
- where are the closest fire extinguishers;

- how do I reach the fire escape stairs (marked escape route); and
- whether there is a torch or an escape mask, and if so, place them with the room key on the night table within easy reach.

Cabin, Cockpit, Operational Ground Staff

10.13.2.2.3 How to react in case of alarm

- remain calm, act sensibly, do not panic;
- put on shoes, take your mobile phone, passport, flashlight (if available) and room key;
- evacuate your room via the marked escape route, if possible;
- if there is smoke bend over while walking and use the escape mask, if available;
- do not use the elevators, and
- obey the instructions of the hotel staff and fire brigade.

What to do in case of fire:

- notify others (guests in adjoining rooms, too);
- extinguish any small fire;
- put on shoes and evacuate the hotel on your own initiative (take room key with you);
- if escape is impossible, remain in your room, close windows and doors and turn off room ventilation or seal it shut; and
- wait for the fire brigade and make yourself visible at the window.

Cabin, Cockpit, Operational Ground Staff

10.13.2.3 Criminal Activities

Cabin, Cockpit, Operational Ground Staff

10.13.2.3.1 Emergency response drill

- Hand over all items without resistance;
- Be respectful and polite – try to be confident;
- If alone explain that you are expecting someone at any moment and you don’t want them to be there when that person arrives.;
- Avoid staring the robber in the face;
- Inform EDW and Captain as soon as possible;

- Provide a list of items stolen or missing to the police and the company.

Cabin, Cockpit, Operational Ground Staff

10.13.3 Earthquake

Do:

- Take cover under a desk, table, bench against the inside or doorway.
- Ensure your shoes are always ready to put on.
- Open the doorway and stay away from windows.
- Turn on the radio/TV for emergency bulletins.
- Use torches if necessary.
- If in an elevator, exit on the next possible floor.

Do not:

- Use the telephone except for urgent calls.
- Use candles, matches or open flames.
- Rush out of a building.
- Touch power lines, electrical wiring, etc.

If you are outdoors:

- Stay away from buildings and power lines, and try to get to an open area.
- Watch out for falling debris, and protect your head.
- Check for fire and fire hazards, and stay calm.
- Contact crew members and/or local Edelweiss organisation.
- Try to reach the aerodrome, meet at the Edelweiss aeroplane or aerodrome office, and contact OCC in ZRH.
- Depending on the location, consider a possible tsunami.

Cabin, Cockpit, Operational Ground Staff

10.13.4 Tropical storm

- Consult the weather channel or your local TV or radio station for accurate and timely updates on developing tropical storms in your area;
- Gather items for your safety kit;
- Stock up on water, batteries, non-perishable food;
- Bring in or tie down loose outdoor objects;
- If along the immediate coast, seek higher ground inland;

After the storm:

- Listen to local officials;
- Stay clear of downed power lines, trees, debris;
- Do not drive across flooded road ways;
- Stay clear of moving water especially near rivers, streams and drainage systems;
- Stay tuned to radio (or TV if available) for weather and news bulletins;
- Use flashlights as a source of light. Candles can easily become a fire hazard.

Cabin, Cockpit, Operational Ground Staff

10.13.5 Tsunami

Cabin, Cockpit, Operational Ground Staff

10.13.5.1 What is a Tsunami?

Tsunamis are ocean waves produced by earthquakes or underwater landslides. A tsunami is actually a series of waves that can travel at speeds averaging 450 (and up to 600) miles per hour in the open ocean. In the open ocean, tsunamis would not be felt by ships because the wavelength would be hundreds of miles long, with a height of only a few feet. This would also make them unnoticeable from the air. As the waves approach the coast their speed decreases and their height increases. Unusual wave heights have been known to be over 35 meters. However, waves that are 3 to 6 meters high can be very destructive and cause many deaths or injuries.

Cabin, Cockpit, Operational Ground Staff

10.13.5.2 What to do if you feel a strong coastal earthquake?

If you feel an earthquake that lasts 20 seconds or longer when you are on the coast:

- Drop down, cover, and hold on. You should first protect yourself from the earthquake.
- When the shaking stops, gather your crew members and evacuate quickly. Leave everything else behind. A tsunami may be coming within minutes. Move quickly to higher ground away from the coast.
- Be careful to avoid downed power lines and stay away from buildings and bridges from which heavy objects might fall during an aftershock.
- If time permits inform OCC about the earthquake and action taken.

Cabin, Cockpit, Operational Ground Staff

10.13.5.3 What to do when a Tsunami WATCH is issued?

- Switch on radio/TV for emergency bulletins.
- Locate crew members e.g. by mobile phone and review the evacuation plans. Make sure everyone knows about a potential threat.
- Be ready to evacuate. Being prepared will help you to move more quickly if a tsunami warning is issued.
- If time permits inform OCC about the Tsunami WATCH.

Cabin, Cockpit, Operational Ground Staff

10.13.5.4 What to do when a Tsunami WARNING is issued?

A noticeable recession in water away from the shoreline is nature's tsunami warning. You should move away immediately.

- Listen to radio or TV for emergency bulletins. Authorities will issue a warning only if they believe there is a real threat from tsunami.
- Follow instructions issued by local authorities and/or hotel staff. Recommended evacuation routes may be different from the one you use, or you may be advised to climb higher.
- If you hear an official tsunami warning or detect signs of a tsunami, evacuate at once. Get to higher ground as far inland as possible. Officials cannot reliably predict either the height or local effects of tsunamis. Watching a tsunami from the beach or cliffs could put you in grave danger. If you can see the wave, you are too close to escape it.
- Try to locate your crew members by mobile phone.
- If time permits inform OCC about the Tsunami WARNING and action taken.

Return to your hotel only after local officials tell you it is safe. A tsunami is a series of waves that may continue for hours. Do not assume that after one wave the danger is over. The next wave(s) may be larger than the first one.

Cabin, Cockpit, Operational Ground Staff

10.13.6 Actions on Demonstrations and Civil Disturbances

Civil disturbances can result from seemingly peaceful public gatherings (social, religious or political events) which can quickly turn violent. Often within a peaceful crowd there are instigators of violence who can turn a peaceful march or public protest into a riot. Individuals should avoid public gathering, whether politically or socially orientated as these can expose individuals to the risk of injury, arrest or kidnapping. Often non-local persons can also become the targets of crowd attention and as a foreigner they will stand out and be more at risk than the local participants.

Cabin, Cockpit, Operational Ground Staff

10.13.6.1 Emergency Response Drills

- If caught within a hostile public gathering, individuals should seek to distance themselves quickly from the crowd and seek a safe place to wait until the gathering moves on or disperses.
- Do not show fear – vulnerable people are more likely to be attacked or robbed.
- Move to a place which is safe and can protect individuals either from the crowd or aggressive police responses.
- Individuals should avoid remaining in the area to watch events as this will expose them to avoidable risk.
- Where possible individuals should return to their place of residence and remain inside until the problem has ceased.
- Individuals should also stay in a safe location for a sensible period after the event, as often violence can return quickly and without warning.
- Travelling individuals should contact their embassy for advice, as well as notify their company of the situation.
- Individuals should lock external gates and doors, as well as internal doors and windows.
- Individuals should stay away from windows or balconies and should close curtains and turn off lights.
- Individuals should watch the television to track events and alert the company to the situation, as well as the number and names of persons sheltering at the location.
- Contact your security focal point and alert them to the situation.

11 Handling of Accidents and Occurrences

Cabin, Cockpit, Operational Ground Staff

11.1 General

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The overall purpose of accident and occurrences notification, handling and reporting is:

a. To provide, as fast as possible and by the quickest mean available a maximum of help/medical aid to all persons involved, and of secondary importance;
b. To keep damage to property to a minimum; and
c. To prevent, where possible, the re-occurrence of a similar accident or incident; and
d. To inform the authorities and other involved entities.

11.2 Definitions

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11.2.1 Incident

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An occurrence, other than an accident, associated with the operation of an aeroplane which affects or could affect the safety of operation.

Often used synonymous to the term occurrence.

11.2.2 Occurrence

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Any safety-related event which endangers or which, if not corrected or addressed, could endanger an aircraft, its occupants or any other person and includes in particular an accident or serious incident.

11.2.3 Serious incident

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An incident involving circumstances indicating that there was a high probability of an accident.

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11.2.4 Accident

An occurrence associated with the operation of an aeroplane which takes place between the time any person boards the aeroplane with the intention of flight until such time as all persons have disembarked, in which:

- A person is fatally or seriously injured as a result of:
  - Being in the aeroplane;
  - Direct contact with any part of the aeroplane, including parts which have become detached from the aeroplane; or
  - Direct exposure to jet blast.

A serious injury in this context is defined as:

- Hospitalization of more than 48 hours within 7 days after the accident;
- a fracture of any bone (except simple fractures of fingers, toes, or nose);
- Any wound that leads to severe bleeding, damage to a nerve, muscle or tendon;
- second or third degree burns, or any burns affecting more than 5% of the body surface;
- Injury to any internal organ;
- verified exposure to infectious substances or harmful radiation.

If in doubt about the degree of injury it should be considered as serious.

Except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or

- The aeroplane sustains damage or structural failure which adversely affects the structural strength, performance or flight characteristics of the aeroplane; and would normally require major repair or replacement of the affected component; except for engine failure or damage, when the damage is limited to the engine, its cowlings or accessories; or for damage limited to wing tips, antennas, tyres, brakes, fairings, small dents or puncture holes in the aeroplane skin; or
- The aeroplane is missing or is completely inaccessible.

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11.2.5 Hazard

Means a situation or an object with the potential to cause death or injury to a person, damage to equipment or a structure, loss of material, or a reduction of ability to perform a prescribed function.

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11.3 Reporting

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11.3.1 Accident and serious incidents

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11.3.1.1 General

The CMD shall notify the appropriate local Authority without delay in the event of any accident, serious incident (resulting in injury, death or substantial aircraft damage) or emergency situation that necessitated action in violation of local regulations and/or procedures. If required by the State of occurrence, he shall submit a report to the appropriate local Authority and also to the Authority of the State of the Operator.
For reportable events of LVOs, the report should additionally be submitted to the aerodrome involved when relevant.

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11.3.1.2 Reporting procedure

Any accident according OM A Accident above has to be reported immediately to REGA by the involved crew (normally the CMD).

Contact REGA via phone:

- Within Switzerland: 1414
- From abroad: +41 333 333 333

REGA will relay the accident report to SUST.

In addition, the CMD shall notify OCC without delay using any suitable means of communication (e.g. ACARS, mobile phone).

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11.3.2 Mandatory and voluntary reporting

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11.3.2.1 General

Any occurrence that has or might have endangered the aircraft or its occupants or any person on ground is considered reportable. Instances of a specific type of occurrence which in isolation would not be considered reportable but which could form a potential hazard when occurring repetitively must be reported.

Additionally the CMD of an aeroplane shall submit a report of any incident/occurrence that has endangered or may have endangered the safe operation of a flight.

IQSMS is the primary reporting tool to promptly inform the Head of Flight Operations, the Head of Ground Operations, the Head of Maintenance & Engineering, the Technical Pilot, Flight Safety and Security, Head of Inflight Services and any other department. It shall be used to report any noticeable operational irregularities or occurrences and should be written in English.

IQSMS allows feedbacks, problems, process improvement proposals and occurrences to be reported to the company (including mandatory occurrence reports according EU 376/2014). It is also used to report other safety-related information which is perceived by the reporter as an actual or potential hazard to aviation safety in order to allow proactive measures to be set-up by the responsible department. IQSMS will automatically distribute the reports to the relevant responsible within the organisation of EDW according to the issue concerned.

In case of disagreement with the CMD concerning the reporting of a noticeable irregularity or violations of procedures, the copilot may write an additional report. This secondary information will assist the Head of Flight Operations to gain knowledge of an otherwise unreported case or assist in a more detailed analysis of the situation. If the copilot intends to write a report or an additional report, he shall inform the CMD as well.

In any case when damage occurs to the own aircraft, to another aircraft, a vehicle or an installation on ground or when a person is hurt, immediately call the airport authority to set up an official report.

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11.3.2.2 Technical defects and exceedance of limitations

The CMD shall ensure that all technical defects and exceedance of technical limitations occurring while he was responsible for the flight are recorded in the aeroplane's Technical log.

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11.3.3 Reporting procedure

Cabin, Cockpit, Operational Ground Staff

11.3.3.1 General

For reporting the IQSMS App or the IQSMS online system (accessible via COSMOS) shall be used.

All reports shall be completed as soon as practicable during or after the flight via IQSMS. When using the app, reports can be generated offline. As soon as a connection with the internet is established, all filed reports are sent automatically. When working with the online IQSMS tool, the report is entered directly into the system. Once a report is fed into the system, IQSMS will distribute it according responsibility for further processing.

The reports are classified as follows:

- Kind of report (e.g. Flight Crew);
- Area of occurrence (e.g. Technical);
- Type of occurence (e.g. Major system defect as per example);
- Event classification (Loss of a system #).

> If the system automatically shows the same description under "Type of occurrence" and "Event classification", there is no further choice possible under Event classification.

11.3.3.2 Verbal notification of air traffic incidents to ATC

An air traffic incident in this context means:

- Undue proximity of other aircraft in flight or on the ground when an avoidance manoeuvre was required to prevent a collision or an unsafe situation (e.g. TCAS RA, AIRPROX)
- Other hazards to aircraft, caused by:
  - hazardous ATS procedures, non-compliance with ATS procedure
  - inadequacy or failure of any ground facilities (e.g. approach lights, radio stations etc.)
  - birdstrike;
  - incidents involving dangerous good;
  - undue proximity with remotely piloted aircraft systems (e.g. drones);
  - laser illumination;
  - other hazardous conditions.

The verbal notification shall be done using the quickest available means (e.g. using the active ATC frequency).

Cabin, Cockpit, Operational Ground Staff

11.3.3.3 Mandatory occurrence reporting

Occurrences which may represent a significant risk to aviation safety require a mandatory occurrence report (MOR) and shall be reported to the FOCA.

MORs are marked in IQSMS with a hash tag (#) after the description under “Event Classification”.

MORs shall be reported by the indivdual to EDW within 72 hours after the ocurrence is identified, unless exceptional circumstances prevent this. After receiving an MOR, EDW shall forward the collected details of the occurrence to the FOCA as soon as possible, and in no case later than 72 hours after becoming aware of the occurrence.

The types of occurrence are structured in such a way that they are linked with categories of activities during which they are normally observed, according to experience, to facilitate reporting. However, this presentation shall not mislead to deter from reporting an occurrence which is not linked with a category of activity.

List of MOR:

Flight operations

Type of Occurrence	Event Classification
Activation of any flight envelope protection	Activation of any flight envelope protection #
Aircraft upset/inappropriate airspeed	Aircraft upset/inappropriate airspeed #
Approach below published min with inadequate visual references	Approach below published min with inadequate visual references #
Conflicting instructions from different ATS	Conflicting instructions from different ATS #
Contaminated air (cockpit/passenger compartment)	Contaminated air (cockpit/passenger compartment)#
Dangerous goods incident	Dangerous goods incident #
Descent below DH or MDA without required visual reference	Descent below DH or MDA without required visual reference #
Deviation from ATC instruction	Deviation from ATC instruction #
Deviation from track greater than 2 x RNP value or 10 NM (whichever is lower)	Deviation from track greater than 2 x RNP value or 10 NM (whichever is lower) #

Type of Occurrence	Event Classification
Duty Time Report	Duty Time Report GAV & EASA Limit #
eFM	App not available inflight #
eFM	U/S inflight not resettable #
Emergency declared on ATC	Emergency declared on ATC #
Exceedances during PBN Approach	Loss of integrity, e.g. RAIM function, whereas integrity was predicted to be available during preflight planning #
Exceedances during PBN Approach	Significant misleading information without a failure warning #
Exceedances during PBN Approach	Significant navigation errors attributed to incorrect data or a database coding error #
Exceedances during PBN Approach	Total loss or multiple navigation equipment failure #
Exceedances during PBN Approach	Unexpected deviations in lateral/vertical flight path not caused by flight crew input or erroneous operation of equipment #
Fatigue Report	Fatigue Report #
Forced landings	Forced landings #
Foreign object damage	Foreign object damage #
FS+	App not available inflight #
FS+	U/S inflight not resettable #
FS+	Wrong calculation #
Fuel quantity below final reserve	Fuel quantity below final reserve #
GNSS Occurrence Report	GNSS Occurrence Report #
GPWS activation	GPWS warning #
Ground handling	Incorrect/contaminated fuel #
Hardware (EFB)	U/S inflight, not resettable #
Inability to achieve required/expected performance during T/O, G/A or LDG	Inability to achieve required/expected performance during T/O, G/A or LDG #
Inadequate/incorrect use of emergency procedure	Inadequate/incorrect use of emergency procedure #
Inadvertent Slide Deployment	Inadvertent Slide Deployment #

Type of Occurrence	Event Classification
Incorrect ALT setting	Incorrect ALT setting #
Incorrect configuration setting	Incorrect configuration setting #
Landing at an airport other than the destination	Precautionary landing #
Level bust	Level bust #
Loss of ATC communication	Loss of ATC communication #
Loss of Control	Loss of Control #
Loss of SA	Loss of SA #
Minimum Fuel declared	Minimum Fuel declared #
Misinterpretation of automation mode/ flight deck information	Misinterpretation of automation mode/ flight deck information #
Misinterpretation of R/T communication endangering the flight	Misinterpretation of R/T communication endangering the flight #
mPilot	App not available inflight #
mPilot	U/S inflight not resettable #
Operation below the minimum certified crew complement	Operation below the minimum certified crew complement #
Short/long landing	Short/long landing #
Tail- or wingtip strike	Tail- or wingtip strike #
Take-off or landing incidents	Hard LDG #
Take-off or landing incidents	Rejected Take-off #
Taxiway or runway excursion	Taxiway or runway excursion #
Taxiway or runway incursion	Taxiway or runway incursion #
TCAS RA	TCAS RA #
Unintentional release of cargo/externally carried equipment	Unintentional release of cargo/externally carried equipment #
Unsafe ATC clearance	Unsafe ATC clearance #
Unstabilised approach	Unstabilised approach #
Use of crew oxy system by crew	Use of crew oxy system by crew #

Type of Occurrence	Event Classification
Use of emergency equipment/non-normal procedure affecting in-flight or landing PERF	Use of emergency equipment/non-normal procedure affecting in-flight or landing PERF #
Yonder	App not available inflight #
Yonder	U/S inflight not resettable #

Technical

Type of Occurrence	Event Classification
Aircraft structural failure or engine disintegration	Aircraft structural failure or engine disintegration #
Failure of an emergency system or equipment (e.g. door, slide, emergency lighting)	Failure of an emergency system or equipment (e.g. door, slide, emergency lighting) #
Fire, smoke, explosion, toxic or non-toxic fumes	Fire, smoke, explosion, toxic or non-toxic fumes #
Major system defects as per example	Engine operation limitation exceedance #
Major system defects as per example	Failure or malfunction of any major part of an engine, powerplant, APU #
Major system defects as per example	Flameout, in-flight shutdown of any engine or APU when operationally required (ETOPS, MEL) #
Major system defects as per example	Flight control problem #
Major system defects as per example	Fuel leakage resulting in fire hazard #
Major system defects as per example	Loss of a major system #
Major system defects as per example	Loss of redundancy of a major system #
Major system defects as per example	Major fuel system malfunctions #
Major system defects as per example	Major indication system malfunction #
Major system defects as per example	Powerplant control malfunction #
Major system defects as per example	Uncontrollable cabin pressure #

Environment and Meteo

Type of Occurrence	Event Classification
Hail encountered resulting in damage to the aircraft	Hail encountered resulting in damage to the aircraft #
Icing encountered resulting in handling difficulties, damage to the aircraft or malfunction of any essential system	Icing encountered resulting in handling difficulties, damage to the aircraft or malfunction of any essential system #
Lightning strike	Lightning strike #
Severe turbulence	Severe turbulence #
Unexpected poor RWY conditions	Unexpected poor RWY conditions #
Volcanic ash	Volcanic ash #
Wake Turbulence	Wake Turbulence #
Wildlife strike (incl. birdstrike)	Wildlife strike (incl. birdstrike) #
Windshear/thunderstorm encounter	Windshear/thunderstorm encounter #

Security

Type of Occurrence	Event Classification
Bomb threat	Bomb threat #
Discovery of stowaway	Discovery of stowaway #
Hijack	Hijack #
Interference from ground (e.g. laser beam blinding, UAS, fireworks, etc.)	Interference from ground (e.g. laser beam blinding, UAS, fireworks, etc.) #
Unruly Passenger	Unruly Category 2 PDR #
Unruly Passenger	Unruly Category 3 PDR #
Unruly Passenger	Unruly Restraint PDR #

Ground OPS

Type of Occurrence	Event Classification
Ground collision	Ground collision #
Ground handling	Fuel Leaking/spillage #
Ground handling	Missing, incorrect or inadequate de-icing/ anti-icing #

Type of Occurrence	Event Classification
Jet blast from own aircraft causing damage or injury	Jet blast from own aircraft causing damage or injury #
Weight & Balance	Ground Stability #
Weight & Balance	Wrong Loadsheet #
Weight & Balance	Wrong/Inadequate Loading #

Medical

Type of Occurrence	Event Classification
Crew member incapacitation entire flight	Burn #
Crew member incapacitation entire flight	Circulatory (-collapse) #
Crew member incapacitation entire flight	Gastrointestinal problems (diarrhoea, vomiting) #
Crew member incapacitation entire flight	Heart #
Crew member incapacitation entire flight	Influenza #
Crew member incapacitation entire flight	Injury #
Crew member incapacitation entire flight	Other #
Crew member incapacitation entire flight	Pain #
Crew member incapacitation part of flight	Burn #
Crew member incapacitation part of flight	Circulatory (-collapse) #
Crew member incapacitation part of flight	Gastrointestinal problems (diarrhoea, vomiting) #
Crew member incapacitation part of flight	Heart #
Crew member incapacitation part of flight	Influenza #
Crew member incapacitation part of flight	Injury #
Crew member incapacitation part of flight	Other #
Crew member incapacitation part of flight	Pain #

Cabin, Cockpit, Operational Ground Staff

11.3.3.4 Hazard Reporting

With the IQSMS Reporting Module there is a possibility to select under “Type of Report” the “Hazard Identification” form. This type of report shall only be used for situations with the potential to create a safety or security issue in the future. Hazard reports will be assessed by the safety department and forwarded to the responsible department for further risk evaluation and corrective actions. Keep in mind that Hazard reports are not confidential reports.

Cabin, Cockpit, Operational Ground Staff

11.3.4 Confidential Human Factor Report (CHFR)

The Confidential Human Factor Report (CHFR) is available in IQSMS and on Cosmos. The CHFR can be completed after a human factor event by any Edelweiss employee. As a courtesy to the other person(s) involved, he should normally be informed that a CHFR will be filed.

Refer as well to OM A Operational Control and Supervision and OM A Duties and Responsibilities.

Forward completed form to OS.

Cabin, Cockpit, Operational Ground Staff

11.3.5 Damage Report

In addition to a report via IQSMS, any damage caused by the operation of an Edelweiss aeroplane to persons or material not belonging to the company, e.g. by collision with other aeroplane on the ground or with fixed or mobile ground installations, must be reported on a Damage Report, whereby all important details such as cause, identity of originator, course of event etc. shall be listed.

If any damage is occurring to the own or another aircraft or if any vehicle or ground installation is damaged the airport authority shall be called.

A damage reports is required by the insurance company for an accurate evaluation of the damage caused by or on an Edelweiss aeroplane.

The same form can be used for damage done by third party to Edelweiss.

Forward the completed form to T.

Cabin, Cockpit, Operational Ground Staff

11.3.6 Smell/Smoke Malfunction Report

Inform T/MCC verbally about the smell / smoke event and place the report in the protective case of the ELB.

Cabin, Cockpit, Operational Ground Staff

11.3.7 Vibration Reporting Sheet

Fill in the reporting sheet and place the form in the protective case of the ELB.

Cabin, Cockpit, Operational Ground Staff

11.4 Emergency Response Organization (ERO and SERP)

Edelweiss, together with SWISS, has set up an emergency response organization in order to deal with any emergency situation occurring at our home base (ZRH) or at any destination in our network.

The OPS Pikett and Duty Officer of EDW, as well as the Swiss Emergency Organization maintain a 24 hour picket service.

For details refer to the CERM (Crisis & Emergency Response Manual) or the Station Emergency Response Plans (SERP).

To initiate measures according to the CERM contact OCC:

- +41 (43) 456 55 55

OCC will then trigger the corresponding alarm by the means of the Fact24 alarm system.

12 Rules of the Air

Cabin, Cockpit, Operational Ground Staff

This chapter is regulated in OM C Rules and Regulations (OM C RAR)

13 Leasing

Cabin, Cockpit, Operational Ground Staff

Refer to OMM Contracting and Leasing.