

**République Algérienne Démocratique et Populaire**  
**Ministère de l'Enseignement Supérieur et de la Recherche**  
**Scientifique**  
**Université SAAD DAHLAB Blida**  
**Faculté de Technologie**  
**Institut D'Aéronautique et Etudes Spatiales**



## **Mémoire de Fin d'Etudes**

Présenté en vue de l'obtention du  
Diplôme de Master en Aéronautique  
Spécialité : Opérations Aériennes  
Exploitation Aériennes

Thème

**AUDIT IOSA SELON ISM6**

**Appliqué sur la compagnie Tassili Airlines**

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Année universitaire : 2012/2013

## **RESUME :**

Ce Mémoire est fait dans le but de la préparation d’Audit IOSA selon la check-list ISM6 dans le cadre du renouvellement de la certification IOSA de TASSILI AIRLINES Prévu en 2014, en Parcourant les ISARPs de la ISM6 et Relever les Ecart de la Compagnie, puis Proposé des Améliorations pour les réponses à fin d’obtenir le Zéro Ecart.

\_\_\_\_\_ :

IOSA تجديد شهادة	ISM6	IOSA	هذه
تحسينات		مرجعية ISM6 تحديد	2014.
		المصادقية و تأكيدها بالأدلة و تحصيل الاستحقاق صفر ثغرة.	

## **ABSTRACT:**

This thesis is done for the purpose of preparing Audit IOSA according to check-list ISM6 Within the framework of the renewal of IOSA certification of “TASSILI AIRLINES” company planned in 2014. Browsing through the ISARPs from ISM6 and identifying company gaps ,then proposed Enhancements for the answers in the order to obtain zero credibility gap.

**DEDICACES :**

Á Mes Très chers parents qui ont sue me transmettre les valeurs les plus nobles et ce travail n'est qu'une graine de reconnaissance envers eux.

Á Ma Chère Sœur Rihabe

Á Mon Unique Frère Housseem Eddine

Á Toutes Ma famille et Spécialement à mon oncle Tahar et Ma tante Nachida

Á Tout mes Amis, en particulier Adel, Sid Ali, Anis, Rihabe et Rokaia

Á Ma Chère Selma

Je Dédie ce Mémoire.

**Mohamed Oussama**

## DEDICACE

<< Approcher la beauté >>, ma formule magique pour dissoudre les angoisses et les problèmes de mes années d'études. Le détergent universel qui efface les auréoles de la folie, mon sésame << ouvre-toi >> qui permet à la raison de fuir devant les assauts de l'imaginaire, là où l'homme devient Dieu dans son royaume, car l'homme est un Dieu quand il imagine et un mendiant quand il réfléchit.

Faut-il être Dieu ou un pauvre hère ?

Moi j'ai choisi de mendier jusqu'à ce qu'un fragment de divinité tombe dans ma sébile. Telle est ma conception de la vie sans le moindre remord ni blasphème, pour la simple raison que j'ai pris mon destin en main, et de même que je ne peux guère dédier ce mémorandum, je ne peux point oublier ceux que j'aime et que je respecte. Alors :

À ceux qui ont pris leur destin en mains.

À mes parents que Dieu les bénisse.

À mes frères et sœurs : ABIR, WADIH, LABIB, FIRAS, AYA, DIRAR.

À mes amis : MEHDI, JEFF, KARIM, RABAH, MONCEF, OUSSAMA, ANTAR

Je dédie ce Mémoire

**Hamoudi**

## **REMERCIEMENTS**

Merci a notre DIEU tout puissant « ALLAH » qui nous a donnés la force et nous a guidés afin de réaliser ce travail.

On adresse Nos Remerciements à Monsieur Driouche qui était la depuis le début de notre cursus d'étude avec son soutien et des conseils très utiles.

On remercie Monsieur Deiboune Khalid qui a consacré son temps très précieux a ce travail et nous a assisté jusqu'au bout, grâce a son assistance on a eu des expériences professionnelles et assurer un passage de la théorie a la pratique et achever ce Mémoire.

On remercie toute l'équipe de « Tassili Airlines » qui nous a mis à laise et surtout Mr Khaled qui nous a aidé a travers ces informations, l'accès a la documentation, les machines et nous traité pas comme des stagiaires mais comme des futurs collègues.

Nos remerciements les plus sincères s'adressent a Mr Rezoug Tahar qui nous a poussé vers l'avant sans relâche avec ces encouragements, ces conseils efficaces et ces orientations pendant et hors les cours.

Merci a tous.

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**GLOSSAIRE**

C /O.....	Charge Offerte
CAB.....	Cabin Operations
CGO.....	Cargo Operations
DSP .....	Operational Control and Flight Dispatch
ETP.....	Point du temps égale/Pont non retour
FLT .....	Flight Operations
GRH .....	Ground Handling Operations
IATA.....	International Air Transport Association
IOSA .....	IATA Operational Safety Audit
ISM.....	IATA Standard Manuel
ITE.....	Instruction pour l'évaluation de l'agent technique d'exploitation
Kts.....	Nœuds
MANEX.....	Manuel D'Exploitation
MATE .....	Manuel des Agents Technique
MEA.....	Altitude Minimale de Sécurité
MEL.....	Liste Minimale d'Equipements
MQ .....	Manuel de Qualité
MNT.....	Aircraft Engineering and Maintenance
N/A .....	Non Applicable
OMA .....	MANEX partie A
OMC.....	MANEX partie C
OMD.....	MANEX partie D

ORG.....	Organization and Management System
PQ.....	Procédures Qualité
RD.....	Responsables Désignés
RQ.....	Responsable de Qualité
SEC.....	Security Management
TAL.....	TASSILI AIRLINES
TAKE-OFF.....	Décollage
V1 .....	Vitesse de décision
V2.....	Vitesse de sécurité décollage
VFR.....	Vitesse initiale Rétraction
VFTO .....	Vitesse final décollage
VREF.....	Vitesse D'atterrissage
VR .....	Vitesse de rotation
VSR.....	Vitesse décrochage de référence

## INTRODUCTION

Une compagnie aérienne doit prouver sa bonne santé réglementaire, en répondant aux normes et recommandations techniques, disposition de l'ensemble des manuels opérationnels conformément à la réglementation en vigueur (OACI, IATA, DACM), implémentation d'un système qualité lui permettant de contrôler la conformité et l'adéquation des procédures requises pour assurer une exploitation sûre.

Les compagnies aériennes sont surveillées par l'autorité compétente de l'aviation civile de l'Etat (DACM) où se trouve implantée leur base principale d'exploitation. C'est donc l'autorité de ce pays qui est responsable de s'assurer que la compagnie respecte la réglementation technique en vigueur.

Par ailleurs, les compagnies aériennes cherchent un niveau de sécurité et de qualité d'exploitation plus élevé que celui exigé par l'autorité compétente, en s'intégrant dans des associations de transport aérien régis par ses propres réglementations.

La certification se base sur des moyens de conformité proposés par le postulant et acceptés par l'autorité, le postulant propose un programme de certification en collaborant avec l'équipe de certification qui participe aux essais et aux tests et des réunions du déroulement du programme et sa progression.

Lorsque le postulant fournit tous les documents et les justifications en passant par des audits et accepté par l'équipe de certification, alors la certification peut être signée par l'autorité (OACI, IATA, DACM, EASA, FAA .....).

L'Organisation IATA s'est inspirée des activités de la sécurité de l'OACI ayant pour un but de normaliser harmoniser et rationaliser le nombre grandissant d'audits souvent redondants de transporteurs aériens, pour améliorer ainsi la sécurité d'exploitation, tout en permettant aux intéressés de réaliser des économies.

En 2009, Tassili Airlines, a initié le projet IOSA en mettant tout un mécanisme en place afin de réussir cette Opération d'ordre stratégique.

Dans le cadre du renouvellement de la certification IOSA de Tassili Airlines, Ce travail fait l'objet de la préparation de l'AUDIT IOSA prévu en 2014.

Dans le but de bien cerner cette opération, notre plan travail consiste à :

- Mettre l'œil sur les organisations responsables qui dictent la réglementation.
- Définir le système qualité dans une compagnie aérienne.
- L'application de la check-list d'audit IOSA selon ISM6.
- Vérification de la conformité.
- Diagnostic des écarts et mettre un plan d'action corrective en proposant les mesures à prendre pour remédier les écarts soulevés et convenus à cet effet.

## CHAPITRE 1 : GENERALITES

### 1.1 Introduction :

Le transport aérien doit exercer son rôle et son commerce dans les normes tout en produisant la qualité et assurer la sécurité dans les aires comme sur le sol, pour cela on a du créer des organisations réglementaires qui veillent sur l'application des règles et les normes pour le bien de l'évolution des avions en air.

Les organisations se devise entre organisation international, continental, régional et local ;

Et chacune d'elle a des normes conformes aux exigences minimales en référence avec l'international.

### 1.2 Présentation de la compagnie :

TASSILI AIRLINES est une compagnie aérienne parapétrolière, sous l'action de l'entreprise SONATRACH, elle assure les services du Travail Aérien ainsi que le transport du personnel SONATRACH et ses partenaires des sociétés étrangères [7].

- Historique :

Tassili Airlines a été créée le 30 mars 1998, à l'origine il s'agissait d'une joint - venture entre le groupe pétrolier algérien SONATRACH (51% du capital social) et la compagnie aérienne Air Algérie (49% du capital social).

Sa mission était de réaliser des services aériens dédiés aux sociétés pétrolières et para pétrolières en Algérie.

En avril 2005, le groupe SONATRACH a racheté les parts que détenait Air Algérie pour en faire une filiale à part entière, pour arriver à la création d'une Société de transport aérien pour la prise en charge de la relève pétrolière et parapétrolière dans les meilleures conditions de sécurité, ponctualité, qualité, flexibilité et confort [7].

- IOSA :

Tassili Airlines s'est inscrite volontairement dans le programme IOSA (IATA Operational Safety Audit) en vue de rehausser le niveau de sécurité de ses activités [7].

- Structure de l'organisation:

La compagnie aérienne TASSILI AIRLINES englobe quatre départements généraux qui sont :

- S/Direction Qualité ;
- S/Direction d'Informatique et Télécommunications ;
- Bureau Sûreté Aérienne ;
- Bureau Sécurité des vols.

Ainsi que six directions qui sont les suivantes :

- Direction Etudes Planification ;
- Direction des Ressources Humaines ;
- Direction Finances et Comptabilité ;
- Direction Commerciale ;
- Direction Technique ;
- Direction Exploitation.

Le tout étant sous le patronat du Président Directeur Général (voir l'organigramme de l'organisation de la compagnie) [7].



- Organisation de l'ensemble de la compagnie aérienne TAL :

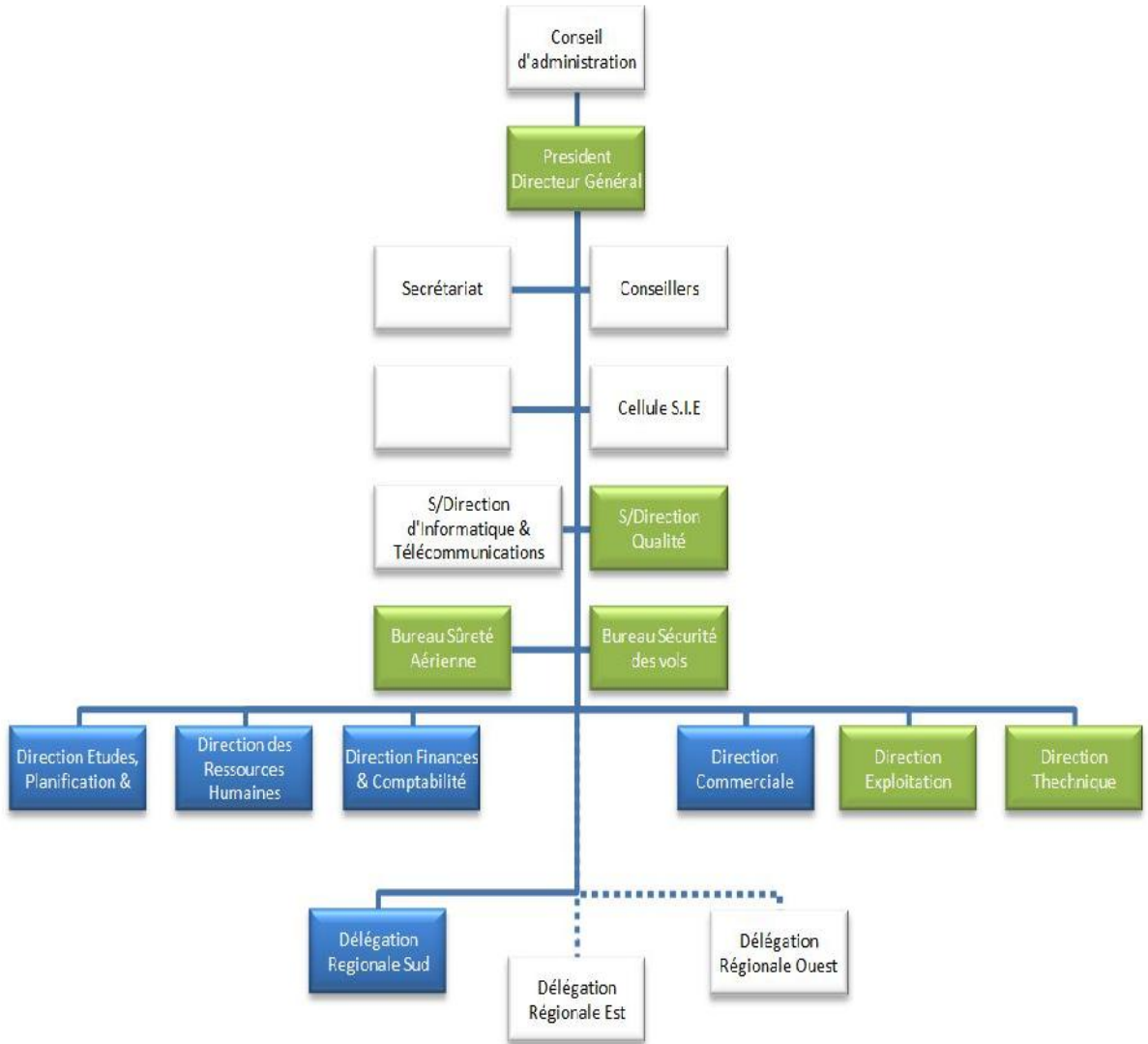


Schéma 1.1 Organigramme de l'organisation de l'ensemble de la compagnie aérienne

TAL [7]

- Organisation générale de la Direction Exploitation :

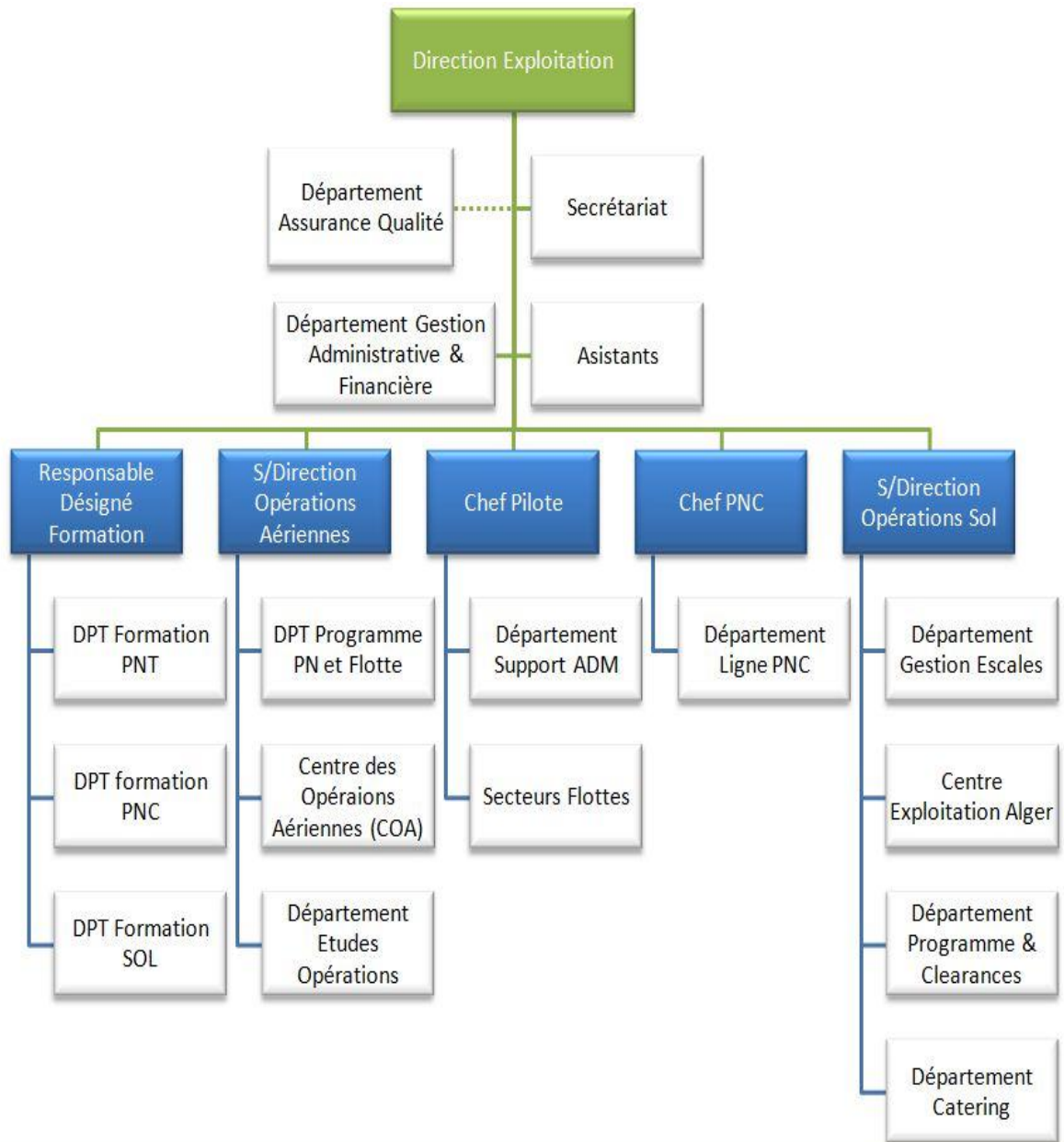


Schéma 1.2 Organigramme de l'organisation générale de la Direction Exploitation [7]

- La flotte exploitée par la compagnie aérienne:

**Boeing B737-800 :**

<b>Immatriculation</b>	<b>Capacité</b>	<b>Rayon d'action</b>	<b>Vitesse de croisière</b>
7T-VCA	155	5000 km	900 km/h
7T-VCB			
7T-VCC			
7T-VCD			

Tableau 1.1 Immatriculation des B737/800 de TAL[7]

**Bombardier DASH 8-Q400 :**

<b>Immatriculation</b>	<b>Capacité</b>	<b>Rayon d'action</b>	<b>Vitesse de croisière</b>
7T-VCL	74	2415 km	667 km/h
7T-VCM			
7T-VCN			
7T-VCO			

Tableau 1.2 Immatriculation des Bombardier DASH 8-Q400[7]

**Bombardier DASH 8-Q200 :**

<b>Immatriculation</b>	<b>Capacité</b>	<b>Rayon d'action</b>	<b>Vitesse de croisière</b>
7T-VCP	37	1802 km	537 km/h
7T-VCQ			
7T-VCR			
7T-VCS			

Tableau 1.3 Immatriculation des Bombardier DASH 8-Q200[7]

**Beechcraft 1900D :**

<b>Immatriculation</b>	<b>Capacité</b>	<b>Rayon d'action</b>	<b>Vitesse de Croisière</b>
7T-VIO	18	2000 km	480 km/h
7T-VIP			
7T-VIQ			

Tableau 1.4 Immatriculation des Beechcraft 1900D[7]

**Cessna 208 G/C :**

<b>Immatriculation</b>	<b>Capacité</b>	<b>Autonomie</b>	<b>Vitesse de croisière</b>
7T-VIG	09	5h00	280 km/h
7T-VII			
7T-VIL			
7T-VIM			

Tableau 1.5 Immatriculation des Cessna 208 G/C[7]

**Pilatus PC6 :**

<b>Immatriculation</b>	<b>Capacité</b>	<b>Autonomie</b>	<b>Vitesse de croisière</b>
7T-VCG	07	7h40	220 km/h
7T-VCH			
7T-VCI			
7T-VCJ			
7T-VCK			

Tableau 1.6 Immatriculation des Pilatus PC6[7]

**Bell 206 LR :**

<b>Immatriculation</b>	<b>Capacité</b>	<b>Autonomie</b>	<b>Vitesse de croisière</b>
7T-WUE			
7T-WUF			
7T-WUH			
7T-WUJ	05	3h00	200 km/h
7T-WUK			
7T-WUL			
7T-WUM			

Tableau 1.7 Immatriculation des Bell 206 LR [7]

## Activité :

- Charters pour la SONATRACH et ses filiales (Groupements ou Associations inclus)
- Mises à disposition permanente (hélicoptères, Beechcraft et STOL)
- EVASAN / Évacuations Sanitaires (en moyenne 2 par mois en Beechcraft)
- Vols à la demande (travail aérien, taxi aérien, VIP ou sensibles)
- Navettes SUD quotidiennes (depuis avril 2009) au départ d'Alger [7].

## Partenariats :

- Tassili Airlines entretient un partenariat avec Air Algérie à travers des conventions d'assistance :
  - Maintenance
  - Assistance au Sol
  - Assistance Technique
  - Catering.
- Contacts avec plusieurs entités en vue de développer des partenariats durables (compagnies aériennes, hôtels, aéroports) [7].

### **1.3 Organisation de l'Aviation Civile Internationale**

#### **1.3.1. Définition :**

L'Organisation de l'aviation civile internationale (OACI) est une institution spécialisée des Nations Unies qui a été créée le 7 décembre 1944 à Chicago, à la signature de la Convention relative à l'aviation civile internationale.

#### **1.3.2 But et objectif :**

Les buts et objectifs de l'OACI, qui sont énoncés à l'article 44 de la Convention de Chicago, ont élaboré les principes et les techniques de la navigation aérienne internationale et de promouvoir la planification et le développement du transport aérien international de manière à :

- assurer le développement sûr et ordonné de l'aviation civile internationale dans le monde entier.
- encourager les techniques de conception et d'exploitation des aéronefs a des fins civiles.
- Contribuer au développement des voies aériennes, des aéroports et des installations et services de navigation aérienne pour l'aviation civile internationale ;
- éviter la discrimination entre États contractants.
- promouvoir la sécurité de vol dans la navigation aérienne internationale
- promouvoir, en général, le développement de l'aéronautique civile internationale sous tous ses aspects [9].

#### **1.3.3 Organisme :**

La constitution de l'OACI est la Convention relative à l'aviation civile internationale, à laquelle chaque État contractant de l'OACI est partie. L'Organisation se compose d'un organe souverain, l'Assemblée, et d'un organe directeur, le Conseil. Les agents exécutifs principaux sont le Président du Conseil et le Secrétaire général.

- a. L'Assemblée
- b. Le Conseil

### c. Le Secrétariat

Elle est dirigée par le Secrétaire général, comprend cinq grandes directions:

- Navigation aérienne,
- Transport aérien,
- Coopération technique,
- Affaires juridiques,
- Administration et services.

Les États contractants membres de l'OACI sont au nombre de 190. L'Organisation a son siège à Montréal et des bureaux régionaux à :

- **Dakar** (Afrique),
- **Nairobi** (Afrique Orientale),
- **Caire** (Moyen Orient et Afrique Orientale),
- **Bangkok** (Asie et Pacifique),
- **Lima** (Amérique du Sud),
- **Mexico** (Amérique du Nord et caraïbe),
- **Paris** (Europe) [9].

## 1.4 Association du transport aérien international(IATA) :

### 1.4.1 Définition :

L'IATA correspond à l'association internationale des transporteurs aériens. Il s'agit d'une importante organisation commerciale regroupant nombreuses compagnies aériennes volontaires, originaires de tous pays du monde entier.

Cette organisation n'a rien à voir avec l'OACI qui est une organisation intergouvernementale officielle à caractère obligatoire (Les membres de l'OACI sont des Etats, tandis que ceux de l'IATA sont des transporteurs).

IATA a été créée pour succéder à l'International Air traffic Association qui résidait à La Haye depuis 1919. A ses débuts, l'association comprenait 31 pays membres avec 57 compagnies aériennes. Après plus de 60 ans d'existence, aujourd'hui, IATA comprend 230 compagnies aériennes qui sont devenues membres sur 126 pays dans le monde entier. Ce chiffre représente les 95% de toutes les compagnies aériennes mondiales [10].

#### **1.4.2 But et objectif :**

L'objectif de l'IATA est de promouvoir la sécurité des vols, améliorer les services, élaborer des standards commerciaux, pour le bénéfice des passagers.

Elle se bat pour les intérêts des compagnies aériennes mondiales, en luttant contre les éventuelles réglementations ou charges inadaptées [10].

Si l'objectif principal de l'association est de représenter ces compagnies aériennes, leurs missions sont nombreuses au profit des compagnies de transport aériennes et également au profit de l'environnement.

IATA travaille ainsi pour aider les compagnies aériennes à préserver leurs intérêts [10].

### **1.5 Agence européenne de la sécurité aérienne (AESA) :**

#### **1.5 .1 Définition :**

L'Agence européenne de la sécurité aérienne (AESA), est une agence de la Communauté européenne qui traite la sécurité aérienne, basée à Cologne (Allemagne) et qui est entrée en fonctions en septembre 2003.[11]

#### **1.5.2 But et objectifs :**

L'AESA a pour mission d'aider la Communauté à :

- promouvoir le plus haut niveau possible de sécurité et de protection environnementale de l'aviation civile
- faciliter la libre circulation des biens, des personnes et des services ;
- favoriser la rentabilisation des processus réglementaire et de certification ;

- aider les États membres à remplir, sur une base commune, les obligations que leur impose l'OACI ;

Promouvoir, au niveau mondial, les vues qu'elle défend quant aux normes de sécurité à appliquer dans l'aviation civile. . [11]

## **1.6 Fédéral Aviation Administration (FAA) :**

### **1.6 .1 Définition :**

La Fédéral Aviation Administration est une agence gouvernementale chargée des réglementations et des contrôles concernant l'aviation civile aux États-Unis. Elle dépend du Département des Transports des États-Unis.

La Fédéral Aviation Agency est née du vote d'une législation de l'utilisation de l'espace, devenue nécessaire après une série de collisions entre aéronefs, le Federal Aviation Act, en 1958. Elle fut donc chargée d'établir les règles de sécurité aérienne ainsi qu'un système de navigation et de contrôle aériens commun aux civils et militaires.

### **1.6.2 But et objectifs :**

La FAA est l'une des deux principales agences mondiales qui est habilitée à certifier les nouveaux avions, les équipements et les formations des pilotes de l'aviation civile.

Au niveau du contrôle aérien, elle établit en particulier les réglementations qui gèrent la coexistence entre le trafic civil et le trafic militaire.

Elle tient à jour les données concernant la sécurité des aéroports, le suivi de la sécurité des avions et des exploitants, les incidents et accidents aériens qui doivent faire l'objet de rapports publics publiés par le Conseil National de la Sécurité des Transports (National Transportation Safety Board, NTSB). Elle publie régulièrement les NOTAM (Notices to Airmen) qui informent au niveau mondial les pilotes des conditions de vol et d'évènements susceptibles de nuire à la sécurité.



## **1.7 DACM:**

### **1.7.1 Définition:**

La DACM a procédé à une refonte majeure du système réglementaire relatif aux activités de l'aviation civile algérienne. Faisant suite à la promulgation de la loi n 98-06 du 27 juin 1998 fixant les règles générales régissant l'aviation civile.

### **1.7.2 But et objectifs:**

La DACM a entamé un processus visant la révision de l'ensemble des textes réglementaire afin d'en assurer la conformité avec les SARP de l'OACI, notamment en matière de navigabilité des aéronefs, d'exploitation technique des aéronefs et de licences du personnel. La mission de suivi d'audit a permis d'établir qu'au stade actuel un certain nombre de texte ont été publiés sous forme de décret exécutifs (ou présidentiels) ou d'arrêtés ministériels.

La DACM a approuvé un ensemble des procédures écrites afin de guider son personnel dans l'exécution des taches. Les fonctions liées à la délivrance, la validation et le renouvellement des licences sont définies dans les attributions des bureaux des licences du personnel.

### **1.7.3 Organisme :**

La DACM a réaménagé sa structure afin de regrouper au sien de la sous-direction des transport aériens les taches et responsabilités relatives a la supervision de la sécurité, permettant ainsi une coordination efficace de l'ensemble de ses activités. Les effectifs de la sous-direction des transports aériens ont été renforcés et de la DACM a développé un ensemble de procédures écrites pour guider son personnel dans l'exécution des ses fonctions. Financièrement, la DACM dépend entièrement du budget du ministère, Cependant depuis 2005 la DACM a un budget annexe lui offrant les crédits additionnels et la flexibilité requise pour assumer ses responsabilités en matière de supervision de la sécurité aéronautique.

## 1.8 Généralités sur le système qualité dans une compagnie aérienne :

### 1.8.1 Introduction :

On peut résumer la Qualité comme la recherche de la meilleure satisfaction du client au moindre coût.

La qualité dans une entreprise ne peut être que Total, où toute l'entreprise s'implique.

### 1.8.2 La Qualité totale :

C'est la combinaison d'une politique choisie et une planification rigoureuse qui englobe le management de qualité et un système de qualité.

Les éléments de la qualité totale sont représentés dans la Figure 1.3 :

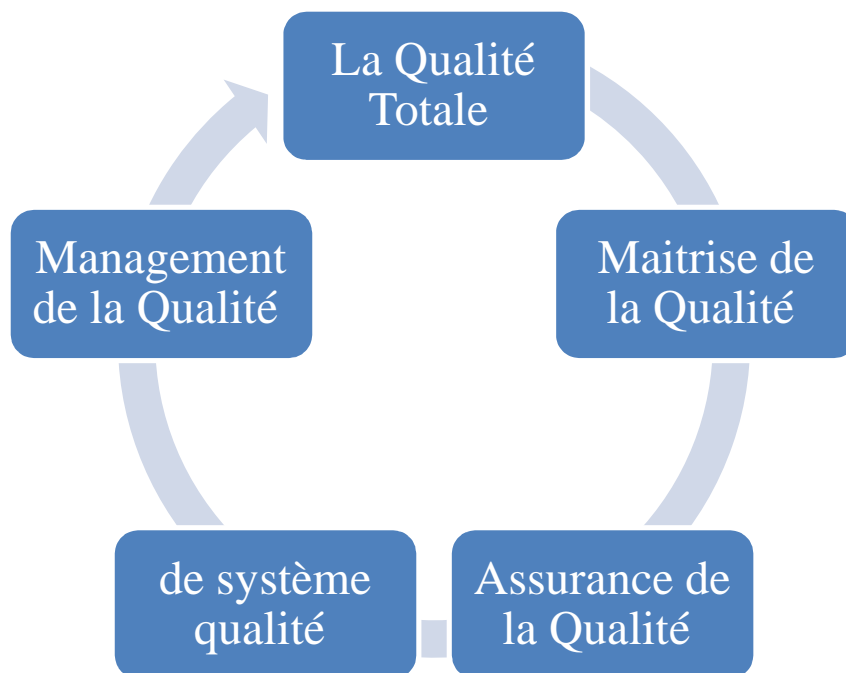


Schéma 1.3 La Qualité Totale

#### 1.8.2.1 Management de la qualité :

C'est une Maîtrise des activités qui concourent à la création du produit (Maitrise de qualité) et Justification des résultats obtenus (Assurance de qualité).

### **1.8.2.2 Maitrise de la qualité :**

Actions effectuées par les opérationnels qui permettent de «faire» la Qualité. Elles s'appuient sur la notion de contrôle, vérifiant si les résultats obtenus s'avèrent conformes aux exigences spécifiées (référentiels).

### **1.8.2.3 Assurance de la qualité :**

Par des actions planifiées et systématiques (Audits, Analyse de processus, suivi de mesures correctives), elle doit, en interne comme vis-à-vis des clients, donner confiance en la continuité de la conformité du produit.

### **1.8.2.4 Définition de système qualité :**

Le système qualité est l'ensemble de l'organisation, des procédures, des processus, et des moyens nécessaires pour mettre en œuvre le management de la qualité.

\* Procédure : manière spécifiée d'accomplir une activité.

\*\* Processus : ensemble de moyens et d'activités liés qui transforment des éléments entrants en éléments

## **1.8.3 Les principes et les exigences de la qualité :**

### **1.8.3.1 Les principes de la qualité :**

Il y a 5 règles principes

- ❖ Mettre par écrit ce que l'on va faire
- ❖ Vérifier que cela convient, ce qui a été écrit permet d'atteindre les objectifs prévus.
- ❖ Réaliser conformément les procédures correspondent à ce qui a été prévu et écrit
- ❖ Corriger éventuellement les failles en rassemblant des preuves qui conduisent à réduire, éliminer, mais surtout prévenir les écarts,
- ❖ Conserver des traces écrites.

### **1.8.3.2 Exigences de l'assurance qualité :**

L'assurance qualité exige :

- ❖ L'établissement des procédures (organisationnelles et opérationnelles),

- ❖ Le respect des procédures,
- ❖ L'enregistrement des données qualité.

#### **1.8.4 Le Fonctionnement de service d'assurance qualité dans une compagnie :**

##### **1.8.4.1 les Dimensions du système d'assurance qualité :**

Il ya Quatre dimensions importantes dans un Système d'Assurance Qualité dans une compagnie :

- ❖ Des réunions régulières
- ❖ Des problèmes circonscrits et concrets
- ❖ Un processus rigoureux de résolution de problèmes
- ❖ Notion d'amélioration permanente

##### ➤ Des réunions régulières :

Dans les réunions régulières doit être périodique d'une période qui dépasse pas les 3 semaines et avec une durée de chaque réunion en moyennes 2h tout dépend des points traité en respectant un Calendrier convenu d'avance et la possibilité d'invités.

##### ➤ Des problèmes circonscrits et concret :

Problèmes constaté par les membres du service ou leurs collègues de travail.

##### ➤ Un processus rigoureux de résolution des problèmes :

###### ❖ Une Phase d'expression :

Les membres vont faire un inventaire des différents problèmes et déterminer les problèmes qui traitent en priorité.

###### ❖ Une Phase d'analyse :

Affiner l'étude du problème grâce aux outils auxquels les membres ont été formés et vérifier sur le terrain le bien fondé de ses analyse et consulte les services concernés et faire un diagnostic précis des causes du problème.

###### ❖ Une Phase de résolutions des problèmes :

Proposé un grand nombre de solutions les classé les évalués puis définir et comparé deux ou trois.

❖ Retenir la Solution la plus efficace et formulé un plan de la rendre effectif.

➤ Phase de suivie et de contrôle :

Les responsable doivent se soucier des suites de leurs recommandation du point de vue de la mise en œuvre et du point de vue des résultats obtenus .

#### **1.8.4.2 Responsabilités :**

Responsable de Qualité (RQ) :

C'est le responsable acceptable par autorité, de la gestion du système qualité de la fonction surveillance et de la demande d'actions corrective.

➤ RQ devrait :

- Avoir directement accès au Dirigeant Responsable ;
- Ne pas être l'un des responsables désigné ;
- Et avoir accès a toute les parties de l'organisation de la Direction **[6]**.

➤ Attribution du RQ :

- Superviser les actions de qualité dans leur ensemble ;
- Informer le DR accès direct au DR
- Gérer le SAQ
- N'a pas autorité hiérarchique ;
- Surveiller la rédaction des procédures, leur conformité et leur application ;
- Indépendant et compétent ;
- Rôle de surveillance et demande d'actions correctives ;
- Assister aux réunions régulières de cycle qualité **[6]**.

Deux Responsables Désignés (RD) :

Deux RD sont le Responsable Désigné Personnel Navigant et Responsable Désigné Exploitation, dont le rôle est de l'application des normes **[6]**.

➤ Attribution du Responsable Désigné Personnel Navigant :

- Assister aux réunions régulières de cycle qualité
- S'assurer que les méthodes de travail adaptées sont dans les normes Réglementées.
- Participer au contrôle de la délivrance des attestations réglementaires aux ONM ayant satisfait aux contrôles périodique
- Procéder à la réalisation et le suivi des contrôles en vol périodiques réglementaires.
- S'assurer que le besoin en équipages est fixé selon le plan de la flotte de l'entreprise.
- Surveiller l'élaboration de la liste des candidats pour la fonction d'instructeurs.
- Veiller à ce que les problèmes soulevés par les équipages dans le cadre de l'exécution de leurs tâches sont pris en charge et procéder à des enquêtes, proposer des solutions et informer les équipages des suites à donner
- Surveiller les dossiers inhérents aux problèmes de discipline.
- Participer à l'élaboration du MEL
- Veiller à l'élaboration de la documentation et à sa mise à jour (Manuel de sécurité, livret, annonces)
- Surveiller l'élaboration des programmes de formation, recyclage, et remise en vol et s'assurer de leur proposition aux services de l'aviation civile pour homologation.
- Veiller à l'établissement mensuel d'un rapport au plan qualité de service.
- Veiller à l'établissement et la mise à jour des dossiers professionnels de chaque personnel navigant.
- S'assurer de l'enregistrement et le contrôle de l'envoi des rapports de vol systématique des chefs de cabine et des fiches de contrôles des instructeur suivant le programme établi et s'assurer que le programme est dans les normes réglementées
- Vérifier le maintien des niveaux de formation et qualification du personnel navigant technique au sol et sur simulateur.
- S'assurer de l'actualisation des programmes d'instruction en fonction de l'évolution des nouvelles technologies.
- Vérifier l'élaboration du plan d'action annuel et l'établissement des rapports d'activité mensuel et annuels.
- Veiller à la bonne construction des rotation d'avions et la couverture de ces dernières par des équipage.
- Veiller au traitement des irrégularités d'exploitation des vols.

- Surveiller le traitement de tout les cas litigieux important pouvant survenir dans la gestion quotidienne des vols.
- Veiller à la mise à jour constante du programme d'exploitation et du programme P.N dans le système AIMS.
- Veiller à l'élaboration des plan de ramassage des équipages, à la rédaction et le lancement des convocations de ramassage et l'information dans les délais nécessaires les services Quart OPS de tous retard de ramassage pouvant influencer le déroulement des vols.
- Veiller au contrôle quotidienne de la composition des équipages de chaque vol y l'apport d'éventuels corrections.
- S'assurer de l'élaboration des manuels des manuels de procédure et de sa conformité.
- Contrôler la mise à jour du registre d'incidents d'exploitation.
- Veiller à, la mise à jour du système HERMES et s'assurer de la protection des données enregistrées.
- Veiller au traitement et au suivi quotidien des messages émanant des avions en vol et à l'information des équipages des données liées à la sécurité et la sûreté du vol.
- S'assurer de l'exploitation et la diffusion, sans délais, aux structures concernées, des messages reçus.
- Veiller au suivi de la localisation et du statut en temps réel des avions [6].

➤ Attribution du Responsable Désigné Exploitation :

- Assister aux réunions régulières de cycle qualité.
- Veiller à l'élaboration de la mise à jour du manuel d'exploitation.
- Contrôler l'établissement des plans de vols techniques pour la préparation des vols par type d'avion et tronçon de ligne.
- Veiller au fonctionnement correct du réseau local client-serveur du système JETPLAN, à sa configuration et à la mise à jour de sa base de données.
- Contrôler le traitement, le suivi et la diffusion quotidienne de NOTAMs destiné aux équipages et aux différents services OPS chargés la préparation, de l'exécution et du contrôle du vol.
- Veiller au contrôle et à l'analyse des documents, des dossiers de vol et à leur conversation

- S'assurer de l'établissement et la mise à jour des manuel de vol réduits des avions, des manuels de chargement, des fichiers, de données aéroportuaires relatives aux limitations au décollage, les rapports de pesé avion et les manuels de devis de poids et centrage et diffuser ces derniers par note de service au contrôle technique.
- Vérifier l'établissement des documents IATA pour le devis de poids et centrage informatisé conformément à la procédure IATA (AHM 050) et le transmettre aux différentes escales.
- Veiller au contrôle des programmes des limitations au décollage et à l'atterrissage, programme performance manuel (PPN) fourni par le constructeur. Ces limitations au décollage sont indispensables (masse maxi autorisée par la réglementation).
- Vérifier la mise à jour des différents manuels techniques aéronautiques aux moyens des correctifs régulièrement.
- Contrôler la préparation des tous dossiers concernant les règles et normes d'exploitation en matière de sécurité aérienne et de sûreté.
- Recenser les anomalies relevés dans l'application de la réglementation en vigueur et propose par voie de conséquence, les mesures correctives nécessaires.
- Surveiller l'élaboration des procédures d'exploitation requises par la réglementation OACI, JAR OPS.
- Contrôler et suivre les activités liées aux questions d'ordonnancement, des enlèvements carburant au niveau des escales ainsi que la gestion et le suivi de tous les contrats liées au carburant.
- Contrôler les activités de l'enregistrement, du contrôle et de l'ordonnancement des facteurs du carburant avion, de redevances du survol et d'hébergement du PN.
- S'assurer de l'établissement des règles de procédure de travail propre à la gestion du personnel et veiller à leur application et diffusion.
- Veiller à l'application de la réglementation administrative en financière en vigueur.
- S'assurer de l'application et du respect du statut du personnel de l'entreprise ainsi qu'aux textes s'y rapportant.
- Suivre le passage du PNT et PNC auprès du centre d'expertise médical.
- S'assurer de la transmission au département de rémunération les états d'alerte et textes de raccordement téléphonique du PNC et PNT.
- Contrôler le suivi des procédures de recrutement du personnel au sol.
- Vieller à l'élaboration des plans de commandes mensuels trimestriels et annuelles en fourniture de bureaux conformément à la procédure.



- Contrôler la réalisation de tous les travaux de tirage, de photocopie ...etc.
- S'assurer au recueil et l'enregistrement des dossiers de vol.
- Veiller au recueil et l'enregistrement des dossiers de vol
- S'assurer de la mise à jour des fichiers tarifs, lignes, tronçon dans le cas notification ou création en relation avec les sections chargées de l'ordonnement des factures [6].

## CHAPITRE 2 : PROCESSUS DE SUIVI DE CONFORMITE (MECANISME D'AUDIT)

### 2.1 Introduction :

L'audit, véritable outil de management pour Surveiller et Vérifier la conformité d'une entité (organisme, processus, activité...) vis-à-vis d'un référentiel déterminé (qualité, environnement, sûreté, navigabilité...)

### 2.2 Définitions :

- Audit :

Processus méthodique, indépendant et documenté permettant d'obtenir des preuves d'audit et de les évaluer de manière objective pour déterminer dans quelle mesure les critères d'audits sont satisfaits.

- Audit interne :

Les audits internes, appelés parfois « audit de première partie » sont réalisés par, ou au nom de l'organisme lui-même pour des raisons internes et peuvent constituer la base d'une auto-déclaration de conformité.

- Audit externe :

Les audits externes comprennent ce que l'on appelle généralement les « audits de seconde ou de tierce partie ». Les audits de seconde partie sont réalisés par des parties, telles que des clients, ayant un intérêt dans l'organisme, ou par d'autres personnes en leurs noms.

Les audits de tierce partie sont réalisés par des organismes externes indépendants. De tels organismes, généralement accrédités fournissent l'enregistrement ou la certification de conformité à des exigences comme celles de l'ISO 9001 , relative aux systèmes de management de la sécurité de l'information.

- Commanditaire :

Personne ou organisme qui demande un audit (par obligation réglementaire, par droit contractuel ...)

- Auditeur :

Personne possédant la compétence nécessaire pour réaliser un audit.

- Responsable d'audit :

Personne qualifiée et nommée responsable de l'équipe d'audit.

- Expert :

Personne apportant des connaissances ou une expertise spécifique.

- Observateur : Ne fait pas partie de l'équipe

- personne accompagnant une équipe d'audit
- et n'ayant aucune responsabilité dans l'audit

Type d'audit	Commanditaire	Audit	Auditeur
Première partie (interne)	Service Qualité	Même organisme que le commanditaire	Même organisme que le commanditaire ou Entreprise de conseil
Seconde partie (fournisseur)	Client	Fournisseur	
Tierce partie (externe)	Autorité ou Service Qualité ou Autre partie intéressée	Organisme à agréer, certifier ou surveiller	Autorité ou Organisme de certification ou Entreprise de conseil

Tableau 2.1 Définition l'équipe de l'audit

- Programme d'audit :

Ensemble d'un ou plusieurs audits planifiés dans un laps de temps et dans un but déterminés.

- Plan d'audit :

Description des activités et des dispositions nécessaires pour réaliser un audit

- Les activités :

- 1) la réunion d'ouverture ;
- 2) la revue documentaire ;
- 3) la revue des processus : entretiens, observations ;
- 4) la réunion de synthèse ;
- 5) la réunion de clôture.

- Les dispositions :

salle de réunion, salle de travail des auditeurs, guides, badges d'accès à des zones réservées, déplacement.

- Le système documentaire :

La fonction de preuve des enregistrements implique directement des notions de droits d'accès, notamment aux auditeurs, de durée de conservation et d'accessibilité.

### **2.3 Planification des audits :**

- Application du cycle P.D.C.A. – DEMING :

1. Planifier (Plan) établir un programme d'audits.
2. Faire (Do) réalisé effectivement les audits planifiés.
3. Vérifier (Check) surveillance et revue du programme.
4. Agir (Act) amélioration du programme d'audit.

- Dans quels cas planifie-t-on des audits ?

1. en vue d'une reconnaissance d'aptitude ou pour son suivi
2. pour répondre à une obligation légale ou à une nécessité commerciale

3. en cas de modification majeure du système
4. pour identifier les améliorations possibles
5. suite à des non-conformités constatées...

- Les contraintes du programme d'audit :

1. tenir compte des ressources financières
2. former les auditeurs, conserver les compétences
3. gérer les disponibilités des auditeurs et experts
4. tenir compte des aspects logistiques :
  - a) temps et moyens de transport
  - b) conditions d'hébergement
  - c) délais d'obtention des autorisations d'accès.

- Mise en œuvre du programme d'audit :

Communiquer le programme d'audit puis constituer les équipes d'audit et en final gérer les enregistrements relatifs aux audits :

- d) plans d'audit, rapports d'audit, plans d'actions correctives.
- e) résultats de la revue du programme d'audit.
- f) fiches d'évaluation de compétence des auditeurs.

- Suivre le programme d'audit :

Revue du programme d'audit :

- menée à intervalles appropriés
- vérifie la conformité aux procédures
- analyse l'évolution des besoins d'audit
- tient compte des retours d'information des audités ou des auditeurs
- analyse les évolutions de pratiques

Selon les résultats de la revue, prendre des actions correctives pour améliorer le programme d'audits.

- Le rôle du gestionnaire du programme d'audit :
  - détermine la nécessité de réaliser des audits
  - définit les objectifs des audits
  - établit un programme d'audits
  - déclenche les audits

Dans l'audit le commanditaire a des attentes, l'auditeur a des obligations.

## **2.4 Les Etapes de l'Audit :**

### **2.4.1 Déclenchement :**

- Le déclenchement de l'audit :
  - désignation du responsable d'audit
  - définition du champ et des critères d'audit
  - détermination de la faisabilité
  - mise en place de l'équipe d'audit
- Le responsable d'audit doit être expérimenté :
  - il coordonne l'équipe d'audit
  - il prépare le plan d'audit
  - il a autorité pour toute prise de décision
  - il écrit ou valide, et diffuse le rapport d'audit.
- Il est obligatoire de savoir :
  - les objectifs de l'audit – motivations du commanditaire
  - le contexte et le périmètre d'intervention – lieu, ambiance de l'organisme à auditer.
- Mise en place de l'équipe d'audit :

Pour la mise en place de l'équipe qui va auditer on doit respecter les critères de sélection :

- indépendance vis-à-vis des activités à auditer

- disponibilité pour toute la période d’audit prévue
- aptitudes et connaissances du métier
- proximité géographique

#### **2.4.2 Préparation :**

- Préparation de l’audit :

- revue de la documentation
- préparation du plan d’audit
- répartition des tâches au sein de l’équipe
- préparation des documents de travail

- Examen de la documentation :

Comprendre le processus et l’activité décrits dans le document remis par l’audité, et prendre le temps, d’analyser celui-ci quant à sa forme et son contenu.

- Le plan d’audit :

Il comporte les informations qui doivent être transmises à l’audité afin d’obtenir son accord :

- noms et titres des membres de l’équipe d’audit
- objectifs d’audit, critères d’audit, langue
- domaine soumis à l’audit, services concernés
- date, durée et lieu de l’audit.

- Le Questionnaire d’audit :

Le responsable d’audit doit superviser l’établissement ou la sélection du questionnaire d’audit, en tenant compte :

- du type d’audit à réaliser
- de l’organisation à auditer
- d’éventuels résultats d’audits antérieurs
- de l’objectif recherché.

- Les obligations du responsable d'audit :
  - informe son personnel de la réalisation de l'audit
  - désigne un/des responsables accompagnateur(s)
  - a mis à disposition des ressources matérielles
  - assure l'accès aux installations et preuves.

### 2.4.3 Audit sur site :

- Exécution de l'audit chez l'audité :

#### 1. Réunion d'ouverture :

La réunion d'ouverture est une étape indispensable pour permettre de réaliser dans de bonnes conditions les étapes suivantes à savoir la revue documentaire et les entretiens. Elle permet une meilleure compréhension des objectifs de l'audit par les audités.

Avec l'audité, sur le site avant les interviews une réunion d'introduction se doit d'être réalisée avec les fonctions auditées concernées, en vue d'obtenir leur coopération et de préciser les méthodes d'investigations et valider le plan.

Objet de cette réunion :

- présenter succinctement les participants
- rappeler les objectifs et le champ de l'audit
- clarifier tout point au regard du plan d'audit
- confirmer les horaires de la réunion de clôture
- présenter les méthodes d'audit (échantillonnage)
- rappeler les règles de confidentialité
- répondre aux questions de l'audité.

#### 2. Recueil de preuves d'audit :

- Revue de la documentation
- Entretiens
- Observations



A la fin de chaque journée d'audit :

3. Réunion de synthèse
4. Débriefing avec un représentant de l'audité

Et pour Clôturer :

5. Réunion de clôture

- Préparation des entretiens :

En étroite collaboration avec le responsable de la fonction auditée il faut s'assurer que l'environnement de travail peut garantir l'efficacité du processus d'audit.

- Conduite des entretiens :

Au cours de l'entretien, l'auditeur doit valoriser l'audité, demander sa fonction, niveau de participation et rassurer l'audité en rappelant de l'objectif, amélioration puis apporter une valeur ajoutée à l'audité sans donner de conseil.

Au regard du questionnaire et du plan d'audits préétablis, il s'agit de poser les questions afin de s'assurer, sur le terrain, de la réelle application du système par les audités, par la démonstration de preuves tangibles qui sont les enregistrements.

Utilisé les différentes questions ouvertes, fermées, alternatives, ricochet et reformulation, afin d'avoir des explications des informations sur des contextes du jargon des pratiques des procédures...etc.

- Recueil de preuves d'audit :

L'observation par l'auditeur peut conduire à un constat de non-conformité appelé ECART. Cet écart peut être :

- majeur, mineur, voire une remarque.
- de niveau 1, niveau 2.

L'écart peut concerner la documentation, l'application ou les deux à la fois.

- Préparation des conclusions de l'audit :

Effectué sous couvert du responsable d'audit :

Au delà des éventuels écarts constatés, il s'agit de déterminer, pour chaque écart, s'il s'agit d'une situation pouvant affecter d'une manière significative le système observé, Points forts, points faibles, améliorations.

- Conduite de la réunion de clôture :
  - exposer les conclusions avec une synthèse des points forts/faibles, et des axes d'amélioration
  - expliciter les écarts constatés
  - faire accepter ces écarts par les audités
  - annoncer les délais de remise du rapport
  - définir les délais de réponse ainsi que les délais de mise en œuvre des actions correctives
  - préciser les modalités de suivi de ces actions.

#### **2.4.4 Rapport et suivi :**

Il est le reflet fidèle et factuel de ce qui a été constaté par les auditeurs et exposé aux audités lors de la réunion de clôture.

Ce rapport d'audit doit être :

- élaboré sur un modèle préétabli
- clair, concis, fidèle et impartial
- signé par le responsable d'audit
- communiqué dans les délais convenus
- diffusé aux destinataires cités par le commanditaire

Il doit être Rédigé par le responsable d'audit, il comprend :

- une date et une référence
- le plan d'audit
- les noms et fonctions des personnes rencontrées

- les références des documents consultés
- les conclusions de l'audit
- les points forts, les constats et les remarques
- les fiches de non-conformité
- les contestations de l'audit

- Suivi des actions correctives :

Il est de la responsabilité de l'audit de :

- analyser les écarts et définir des actions appropriées
- répondre au rapport en s'engageant sur la réalisation de ces actions dans des délais définis
- réaliser les actions dans les délais convenus
- vérifier leur mise en œuvre et leur efficacité
- communiquer les résultats au responsable d'audit.

Effectué par le responsable d'audit ou par une fonction autorisée :

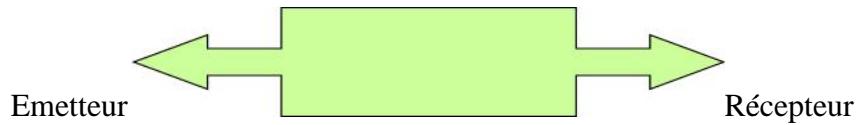
- obtention d'un engagement des audités, avec détermination d'un planning réaliste pour la mise en œuvre des Actions Correctives
- méthodologie claire pour le suivi de ces actions.

- Le rôle du commanditaire de l'audit :

- analyser les résultats d'audit – le rapport
- s'assurer que les actions à mener sont prévues
- s'assurer de la pertinence des réponses de l'audit
- s'assurer que les actions sont bien menées, avec l'effet escompté.

## **2.5 Communication lors de l'audit :**

Pour que cela fonctionne, le schéma de la communication qui obéit à des règles communes, doit être compris et appliqué par l'auditeur.



Schémas 2.1 : Canal encodage/décodage

- Pour bien communiquer, il faut donc :
  - un message court, un langage commun,
  - un langage simple et adapté à l'audité.
- Le langage au cours d'audit :

Attention à l'utilisation de certains termes :

- je ne suis pas d'accord
- vous faites erreur, vous vous trompez
- je suis inquiet, je suis soucieux
- soyez sans crainte
- excusez-moi de vous demander.
- je crois, je pense, il me semble que.

## 2.6 Comportement et attitude de l'auditeur :

Qualités personnelles de l'auditeur :

- intègre, sincère, honnête, discret, diplomate
- ouvert d'esprit, observateur, perspicace, tenace
- polyvalent, autonome, capable de décision
- respecter l'audité
- ne pas se laisser influencer, rester ferme
- garder toute impartialité, vérifier les faits
- veiller à rester méthodique, respecter le temps
- ne pas se laisser dériver
- rester à l'écoute.

## **CHAPITRE 3 : LES DOUCUMENTS DE REFRENCE (SOURCES REGLEMENTAIRES)**

### **3.1 Introduction :**

Le transport aérien est un domaine très réglementé, cela apparait clairement dans la nécessité d'avoir une liste des manuels opérationnels afin d'englober toutes les normes et les recommandations.

Dans ce chapitre, on passe en revue les manuels ayant une importance capitale sur les réponses de l'audit.

### **3.2 C'est quoi une source réglementaire ? :**

C'est une Référence où une exigence réglementaire et/ou une recommandation sont bien définies pour enlever l'ambigüité sur une tache ou action liée à l'exploitation aéronautique.

### **3.3 Définition du Manuel Opérationnel :**

Un manuel Opérationnel c'est un Manuel qui contient des procédures avec des exigences et des recommandations que la compagnie doit les mettre en œuvre et veillé d'une façon continuelle qu'on les respects et les voir en actions sur le terrain.

### **3.4 Définition du MANEX :**

Le manuel d'exploitation est un document destiné a mettre à la disposition du personnel de la compagnie concerné par l'exploitation d'un avion particulier, les règles et procédures a suivre, ainsi que toutes les informations nécessaires pour que les divers objectifs de l'exploitation soient atteints dans des conditions de sécurité satisfaisantes [9].

Le manuel d'exploitation au sein de la compagnie « TASSILIAIRLINES » est rédigé selon le canevas établi par la DACM, conformément a la réglementation algérienne.

### 3.5 La Structure du MANEX :

La Structure Actuel contient 4 parties au lieu de 3 par rapport à l'ancienne structure.

Les 2 Figure suivante nous montrent la structure selon la réglementation Européenne et l'Algérienne.

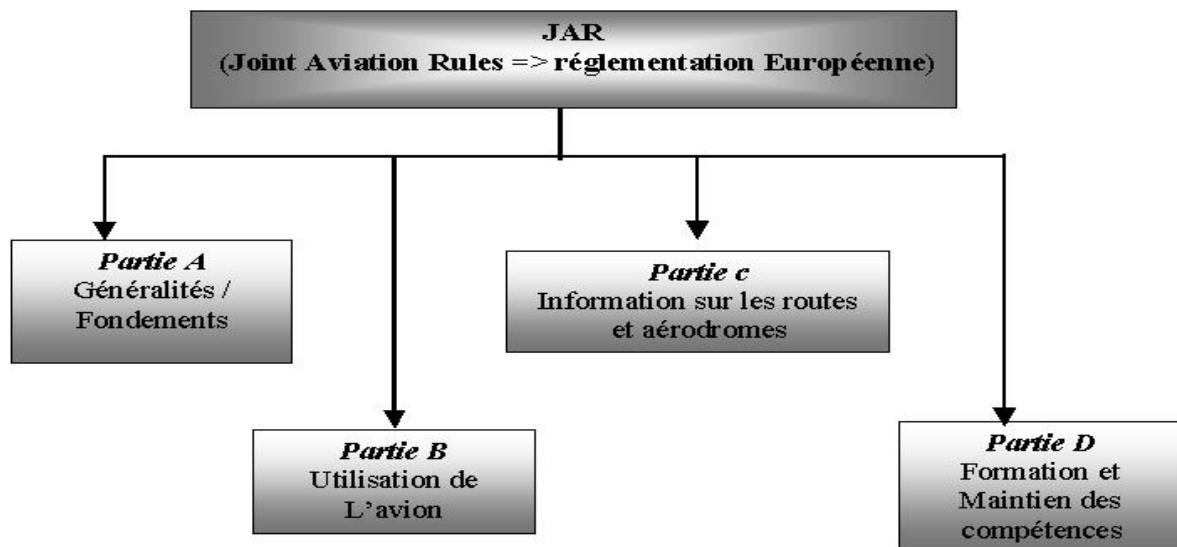


Schéma 3.1 Structure du MANEX selon la Réglementation Européenne

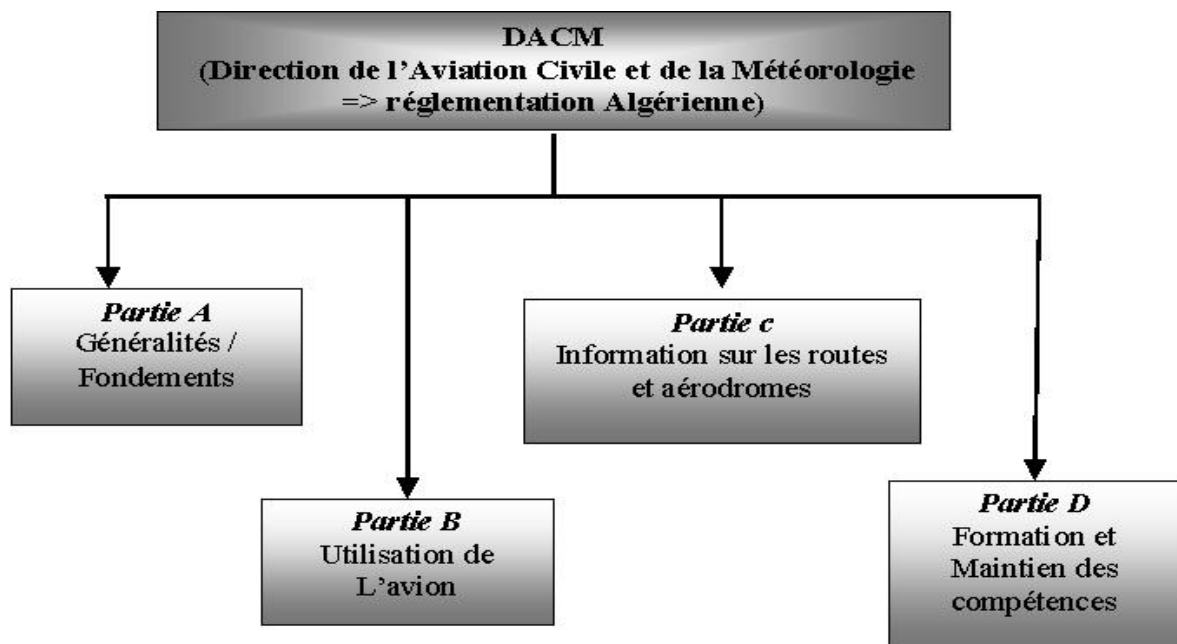


Schéma 3.2 Structure du MANEX selon la Réglementation Algérienne

### 3.6 Les Différents Parties du MANEX et Leurs Contenu :

La Compagnie « TASSILIAIRLINES » ne fait pas l'exception, elle suit et respecte la réglementation Algérienne, le MANEX contient Quatre Parties, et Chaque Partie englobe des sections et la section Contient des Chapitre.

❖ PARTIE A. Généralités/Fondements :

- Cette partie comprend l'ensemble des politiques, consignes et procédures d'exploitation communes à tous les avions, nécessaires à une exploitation sûre et à l'efficacité du personnel d'exploitation lors de l'exécution de ses tâches [2].

Cette partie se divise en 13 Sections :

0. Administration et contrôle du manuel d'exploitation
  1. Organisation et responsabilités
  2. Contrôle et supervision de l'exploitation
  3. Système qualité
  4. Composition de l'équipage
  5. exigences en matière de qualification
  6. Précautions en matière de santé
  7. Limitations des temps de vol
  8. Procédures d'exploitation
  9. Marchandises dangereuses et armes
  10. Sécurité
  11. traitement des accidents et incidents
  12. règles de l'air

❖ PARTIE B. Utilisation de l'avion/Relative au Type d'avion :

Cette partie comprend toutes les instructions et procédures liée au type d'aéronef, nécessaire pour une exploitation sûre. Elle tient compte des différences ou variantes entre différents appareils d'un même type exploités par la compagnie.

Cette partie comporte 13 sections [2] :

0. Informations générales et unités de mesure
1. Limitations
2. Procédures normales
3. Procédures anormales et d'urgence
4. Performances
5. Préparation et gestion du vol
6. Masse et centrage
7. Chargement
8. Liste des déviations tolérées par rapport à la configuration type
9. Liste minimale d'équipements
10. Equipement de sécurité-sauvetage, oxygène compris
11. Procédure d'évacuation d'urgence
  - 11.1 Consignes de préparation à une évacuation
  - 11.2 procédure d'évacuation d'urgence
12. Système d'avion

❖ PARTIE C. Information et consignes sur les routes et aéroports :

Cette partie comprend les consignes et informations se rapportant à la zone d'exploitation de la compagnie en particulier ce qui concerne les communications, la navigation et les aéroports [2].



1. Altitude ou niveau de vol minimum :
2. Minimum opérationnels pour les aérodromes de départ, de destination, de dégagement et déroutement
3. Moyen de communication et aides à la navigation
4. Données sur la piste et d'infrastructure de l'aérodrome ;
5. Procédures d'approche, d'approche interrompue et de départ y compris les procédures de réduction de bruit
6. Procédure en cas de panne des moyens de communication ;
7. Moyen de recherche et de sauvetage dans la zone que l'avion doit survoler
8. Une description des cartes aéronautique devant être à bord eu égard à la nature du vol et la à la route à suivre, y compris la méthode de vérification de leur validité ;
9. Disponibilité des services d'information aéronautique et météorologiques ;
10. Procédures de communications et de navigation en route ;
11. Catégorisation de l'aérodrome pour la qualification de l'équipage de conduite ;
12. Limitation spéciales d'aérodrome (limitations de performances et procédures opérationnelles, etc....)

❖ PARTIE D. Formation et maintien des compétences :

Cette partie comprend l'ensemble des dispositions relatives à la formation et au maintien des compétences du personnel y compris celles nécessaires pour assurer la sécurité de l'exploitation [2].

1. Programmes de formation et de contrôle-Généralités.
2. Programmes de formation et de contrôles.
3. Procédures.
4. Documentation et Archivage.

### 3.7 Manuel Qualité (MQ) :

Le MQ a pour objet de décrire le système de management de la qualité (SMQ) mis en œuvre au sein de la compagnie aérienne afin :

- D'assurer la conformité Vis-à-vis la réglementation, exigences et recommandations.
  
- D'assurer la satisfaction des parties prenantes par l'efficacité de son fonctionnement et son amélioration continue.

Il est destiné à une communication au personnel de la compagnie, aux experts et aux parties prenantes.

La Direction de la compagnie approuve ce manuel en s'assurant que les exigences définies dans ce manuel sont connues et comprises.

Il répartie en 4 chapitre [3]:

1. Chapitre 00 Gestion du manuel :  
Ce chapitre contient dans ces lignes toutes les personnes qui ont accès a ce manuel, qui peut le consulté et les détenteurs.
  
2. Chapitre 01 Politique Qualité :  
Ce Chapitre inclus tout les engagements de la compagnie approuvé par les responsables.
  
3. Chapitre 02 Système Qualité :  
Il contient les méthodes les responsabilités les Processus et les cellules qui assure le system management qualité.
  
4. Chapitre 03 Programme d'assurance Qualité :  
Il contient le programme des taches et comment les procédés et par qui, ainsi la formations des auditeurs afin de maintenir et évolué la qualité.

### **3.8 Manuel des Agents Technique d'Exploitation (MATE) :**

Le Manuel des Agents techniques d'exploitation (MATE) est établi à l'intention du personnel d'exploitation (L'Agent technique d'exploitation «ATE» dit TNA/O) dans le but de le guider dans l'exécution de ses tâches [1].

Ensemble, MATE et MANEX de Tassili Airlines contiennent tous les renseignements Pertinents et sont censés respecter toutes les normes, les pratiques et les procédures de la Direction de l'Aviation Civile et de la Météorologie et conformes aux normes de l'IATA.

Les Agents Technique d'Exploitation doivent connaître à fond le contenu du présent Manuel, car il porte sur leurs domaines de responsabilité, ils doivent posséder de bonnes Connaissances pratiques de tous les règlements et des autres manuels de Tassili Airlines. Les normes, les pratiques, les procédures et les Standards que contient ce manuel sont Conformes au règlement de l'Aviation civile Algérien DACM, aux normes OACI et Standards IATA [1].

Ce Manuel Contient Six Chapitres :

➤ Chapitre 00 :

Ce chapitre contient des généralités et des abréviations sur l'ensemble du manuel

➤ Chapitre 01 Organisation et Responsabilité :

Il contient l'organisation, la hiérarchie et les attributions des responsabilités

➤ Chapitre 02 Administrations et contrôle d'exploitation :

Il contient la politique d'administrations et les engagements, ainsi les moyens et les systèmes de communication au sein de la compagnie

➤ Chapitre 03 Communication, Documentation Et Système D'information :

Il contient tous qui concernent le système d'information et a messagerie et l'enregistrement.

➤ Chapitre 04 Procédures D'exploitation :

Il contient l'ensemble des procédures concernant directement l'exploitation.

➤ Chapitre 05 Procédures d'urgence :

Il contient les procédures et les attributions des taches dans le cas d'urgence.

### **3.9 Autres manuels Opérationnels :**

En plus des manuels détaillés précédemment, il importe à citer les manuels opérationnels suivant :

- Manuel des Opérations au Sol (MOS) ;
- Manuel de sûreté (MS) ;
- Manuel de sécurité des Vols (MSV) ;
- Manuel de système gestion de sécurité (MSGs) ;
- Manuel d'Urgence (ERP).

## **CHAPITRE 4 : APPLICATION DE LA CHECK-LIST IOSA SELON ISM6 SUR TAL (DISPATCH (DSP))**

### **4.1 Introduction :**

La Compagnie « Tassili Airlines » a déjà obtenue la certification selon ISM5 autant que cliente de l'IATA avec Zéro écarts, Mais due aux divers changements et l'évolution de la compagnie et après l'obtention des Turbo Jet et le passage de l'utilisation du « LOGNAV » au « JETPLAN », on a constaté l'obligation de faire un contrôle de conformité et cela rentre dans le cadre de la préparation de l'audit prévu en 2014.

### **4.2 Que ce que c'est l'ISM6 ?**

Le Manuel des normes IOSA (ISM) est publié dans le but de fournir les normes opérationnelles, pratiques recommandées, des documents d'orientation associés et autres informations de support nécessaire pour un opérateur de préparer avec succès d'un audit. L'ISM peut également être utilisé comme un guide pour tout opérateur désireux de structurer son fonctionnement, systèmes de gestion et de contrôle en conformité avec les dernières pratiques opérationnelles de l'industrie.

L'ISM6 (IOSA STANDARD MANUEL EDITION 6) Manuel des normes IOSA Cette sixième édition du Manuel de normes IOSA a été introduite suite à une variété de demandes de changement à partir d'un certain nombre de sources. L'ISM6 est structuré de 8 sections, chaque section comprend des sous sections, ces dernières inclus des items [4].

### **4.3 Descriptions des sections:**

#### **4.3.1 SECTION 1 SYSTÈME D'ORGANISATION ET DE GESTION (ORG)**

La Section 1 Traite l'organisation et le système de gestion de l'opérateur dans le but d'assurer la sûreté et la sécurité des opérations aériennes.

#### **4.3.2 SECTION 2 Opérations aériennes (FLT) :**

La Section 2 répond aux exigences de sécurité pour les opérations de vol et de sécurité, et est applicable à un opérateur qui utilise deux pilotes avion multi moteur à mener:

- Les vols passagers avec ou sans équipage de cabine;
- vols cargo avec ou sans le transport de passagers ou figurants [4].

#### **4.3.3 SECTION 3 Contrôle opérationnel et de régulation des vols (DSP):**

- Section 3 traite des exigences pour le contrôle opérationnel de turbine multi-moteur, turbo-hélice ou piston à hélices alimenté vols, et est applicable à un opérateur qui effectue ces vols si des fonctions de contrôle opérationnels sont effectués par l'exploitant ou réalisées pour l'opérateur par une tierce partie organisation (sous-traitance) [4].
- Des dispositions particulières de la présente section sont applicables à un opérateur basé sur le système de contrôle opérationnel utilisé par l'exploitant et les fonctions, les tâches ou les tâches du personnel impliqué.
- Catégorise personnel qui lui sont déléguées par l'autorité pour exercer un contrôle opérationnel.
- Confier la responsabilité globale pour le contrôle opérationnel ou assigné la responsabilité individuelle à porter des fonctions spécifiques, fonctions ou tâches liées au contrôle opérationnel de chaque vol.
- Tout le personnel utilisés des fonctions de contrôle opérationnelle qui agissent d'une manière compatible avec la catégories fonctionnelles spécifiées, quelle que soit la direction ou poste titre de titulaire, sont soumis à dispositions concernant la formation et la qualification spécifiés dans cette section pertinente à la fonction de contrôle opérationnel exécutée.
- Lorsque les fonctions de contrôle opérationnel, fonctions ou tâches sont sous-traitées à des prestataires de services externes, un l'opérateur conserve la responsabilité globale pour le contrôle opérationnel et avoir des processus permettant de surveiller applicable.

#### **4.3.4 SECTION 4 Motorisation et Maintenance des avions (MNT):**

Section 4 est applicable à tous les exploitants, et aborde les fonctions de maintenance technique des avions et pertinents à la navigabilité des aéronefs, de moteurs et de

composants.

Lorsqu'un exploitant externalise la performance de l'ingénierie aéronautique et des fonctions de maintenance organismes externes, l'opérateur conserve la responsabilité globale de ces fonctions, et doit démonstration de procédés de suivi de l'organisation externe applicable (s) conformément aux MNT 1.11.7 [4].

#### **4.3.5 SECTION 5 Operations en cabine (CAB) :**

La Section 5 porte sur les exigences de sûreté et de sécurité associés à la cabine passagers. Cette section s'applique uniquement à un Exploitant qui effectue des vols de passagers avec ou sans équipage.

#### **4.3.6 SECTION 6 Les Operations de Manutention au Sol (GRH):**

La section 6 traite fonctions dans le cadre des opérations de manutention au sol et est applicable à un opérateur qui effectue passagers, du fret et / ou combi (fret et passagers confondus) avions opérations.

Fonctions au sein du périmètre des activités d'assistance en escale suivantes:

assistance aux passagers;

La manutention des bagages;

pilotage de l'aéronef et de chargement;

Contrôle de charge

Aircraft ravitaillement en carburant;

dégivrage et d'antigivrage des aéronefs.

Dans cette section, le fret non-revenus et le courrier sont traitées de la même manière que le fret de revenus pour les fins de manutention, de chargement, la sécurisation et le transport. MATCIE est cargo non-recettes.

Lorsqu'un opérateur sous-traite l'exercice de fonctions dans le cadre de la manutention au sol

opérations à des fournisseurs de services externes, l'opérateur conserve la responsabilité globale de ces fonctions, et doit démontrer processus de surveillance des prestataires de services externes applicables conformément à GRH 1.10.2 [4].

#### 4.3.7 SECTION 7 Operations de fret (CGO):

Section 7 traite fonctions dans le cadre des opérations de manutention des cargaisons, et est applicable à un opérateur qui transporte des recettes ou des non-recettes du fret et / ou par la poste. MATCIE (Société Matériel) est non comptabilisée cargaison.

Fonctions dans le cadre des opérations de manutention sont les suivants:

- fret et le courrier d'acceptation;
- Cargo et le traitement du courrier;
- ULD chargement / build-up;
- L'application des mesures de sécurité requises.

#### 4.3.8 SECTION 8 Gestion de la Sureté (SEC):

La Section 8 porte sur la gestion de la sécurité opérationnelle, conformément aux exigences d'un programme de la sécurité du transport aérien. Cette section est applicable à tous les opérateurs.

#### 4.4 Les Modifications de L'ISM6 par rapport ISM5 (Partie DSP) :

Comme on s'intéresse au Flight DSP, on focalise notre travail sur les Modification qui ont eu lieu sur cette dernière.

Région a changé	Description du changement
général	(modifications rédactionnelles) Word, révisions de ponctuation (grammaire)
Provisions a éliminées	Pas de dispositions éliminées
Nouvelles Normes	Pas de nouvelles normes
Nouvelles Pratiques Recommandées	Pas de nouveaux Domaines: recommandées
Application Box	(changement de rédaction) suppression Libellé (grammaire)
Orientation générale	(changement de rédaction) Libellé révision à clarifier la compréhension
DSP 1.3.4	(changement de rédaction) Libellé suppression (grammaire)



DSP 1.3.5	(changement de rédaction) Libellé suppression (grammaire)
DSP 1.3.5 Orientation	(changement de rédaction) Libellé révision pour améliorer la précision
DSP 1.3.8 Orientation	(changement de rédaction) Libellé révision pour améliorer la précision
DSP 1.5.6 Description des modifications	(changement de rédaction) révision du libellé (grammaire)
DSP 1.6.1	(changement de rédaction) Sous-spec iv), mot subjective supprimé
DSP 1.8.2 orientation	(changement de rédaction) Références révisées à l'erreur correcte
DSP 1.12.2 orientation	(changement technique) Référence à la GIR ajoutée, plus de mots pour répondre les risques opérationnels généralement considérés lors de la planification de vol
DSP 2.1.1 Orientation	(changement technique) suppression de libellé de la cohérence (facteurs humains intervalle de formation périodique)
DSP 2.2.3	(changement technique) Intervalle de formation périodique minimum de base révisé à 36 mois
DSP 2.4.1 Orientation	De nouvelles directives pour expliquer l'intention
DSP 3.2.8 Orientation	(changement technique) libellé révisé pour répondre RFFS
DSP 3.7.1	(changement technique) la révision de la terminologie de la cohérence
DSP 3.7.1 Orientation	(changement technique) Référence aux dispositions de la FLT et CAB ajouté à définir l'urgence pertinentes et équipement de survie (changement de rédaction) la révision de mots pour améliorer la clarté
DSP 4.1.1	(changement technique) BCP date d'expiration prolongée
DSP 4.1.2	(changement de rédaction) révision du libellé (grammaire)
DSP 4.1.2 Orientation	(changement de rédaction) révision du libellé (grammaire)
DSP 4.1.6	(changement technique) BCP date d'expiration prolongée
Date DSP 4.3.2	(changement technique) BCP expiration prolongée

Tableau 3.5	(changement technique) Sous-spec x) révisé pour corriger marchandises dangereuses intervalle de formation périodique
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Tableau 4.1 des Modifications sur la SECTION 3 DSP [4]

#### 4.5 Vérification de la conformité :

Après application de la check-list ISM6 sur Tassili Airlines, les résultats de l'audit sont résumés dans le tableau qui suit :

ITEM	STATUT	REFERENCE	OBSERVATION
DSP 1.1.1	DOCUMENTED/IMPLEMENTED	OMA 0.3, 1.1 MQ 2.5 MATE 1.3	/
DSP 1.2.1	DOCUMENTED/IMPLEMENTED	OMA 0.1 MATE 00.GDM.1	/
DSP 1.3.1	DOCUMENTED/IMPLEMENTED	OMA 1.4 MATE 1.5	/
DSP 1.3.2	DOCUMENTED/IMPLEMENTED	OMA 1.3.3	/
DSP 1.3.3	DOCUMENTED/IMPLEMENTED	OMA 1.3	/
DSP 1.3.4	DOCUMENTED/IMPLEMENTED	MATE 1.5	/
DSP 1.3.5	DOCUMENTED/IMPLEMENTED	OMA 1.4 MATE 1.5	/
DSP 1.3.6	N/A	/	/
DSP 1.3.7	DOCUMENTED/IMPLEMENTED	OMA 11.2 MATE 5.2	/

DSP 1.3.8	DOCUMENTED/IMPLEMENTED	MATE 5.0.2 ,5.3	/
DSP 1.4.1	DOCUMENTED/IMPLEMENTED	OMA 1.3.3, 2.4 MQ 3.12 MATE 3.1	/
DSP 1.4.2	DOCUMENTED/IMPLEMENTED	MATE 3.2	/
DSP 1.4.3	DOCUMENTED/IMPLEMENTED	OMA 11 MATE 5.0	/
DSP 1.5.1	DOCUMENTED/IMPLEMENTED	OMA 1, 3.1.1 MATE 2.1	/
DSP 1.5.2	DOCUMENTED/IMPLEMENTED	OMD 4.11, MFDP 6	/
DSP 1.5.3	DOCUMENTED/IMPLEMENTED	OMD 4.11 MFDP 6	/
DSP 1.5.4	N/A	/	/
DSP 1.5.5	N/A	/	/
DSP 1.5.6	N/A	/	/
DSP 1.5.7	DOCUMENTED/IMPLEMENTED	OMD 4.11	/
DSP 1.5.8	DOCUMENTED/IMPLEMENTED	OMD 4.11.4 OMD 4.11.14	/
DSP 1.5.9	DOCUMENTED/IMPLEMENTED	OMA 6.1.7 MATE 2.2.3	/
DSP 1.6.1	DOCUMENTED/IMPLEMENTED	MQ 2.9 PQ02 all	/

DSP 1.6.2	DOCUMENTED/IMPLEMENTED	MATE 3.2	/
DSP 1.6.3	DOCUMENTED/IMPLEMENTED	OMA 1.1 MATE 3.2	/
DSP 1.6.4	DOCUMENTED/IMPLEMENTED	OMA 2.5 MQ 3.16 PQ02 all, PQ06 all	/
DSP 1.6.5	N/A	/	/
DSP 1.7.1	DOCUMENTED/IMPLEMENTED	MATE 3.2	/
DSP 1.7.2	DOCUMENTED/IMPLEMENTED	OMA 8.1.8	/
DSP 1.7.3	DOCUMENTED/IMPLEMENTED	OMA 0.2.3 MATE 3.2.1	/
DSP 1.7.4	DOCUMENTED/IMPLEMENTED	OMA2.annexe.5	/
DSP 1.8.1	DOCUMENTED/IMPLEMENTED	QM 1.2.9 OMA 2.3.2 MATE 3.4	/
DSP 1.8.2	DOCUMENTED/IMPLEMENTED	OMA 2.3.2 MATE 3.4.1 MATE 2.2.6 MATE 4.2.4	/
DSP 1.8.3	N/A	/	/
DSP 1.8.4	DOCUMENTED/IMPLEMENTED	OMA 2.3.2, 2.3.3 PQ02 all	/

DSP 1.8.5	DOCUMENTED/IMPLEMENTED	MATE 3.4	/
DSP 1.8.6	DOCUMENTED/IMPLEMENTED	MATE 2.2.6	/
DSP 1.8.7	DOCUMENTED/IMPLEMENTED	ITE all	/
DSP 1.8.8	N/A	/	/
DSP 1.8.9	N/A	/	/
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DSP 1.10.2	DOCUMENTED/IMPLEMENTED	PQ05 all	/
DSP 1.10.3	DOCUMENTED/IMPLEMENTED	MQ 3.11 PQ10 all	/
DSP 1.10.4	DOCUMENTED/IMPLEMENTED	MQ 3.7, 3.8 PQ03 all PQ04 all	/
DSP 1.11.1	DOCUMENTED/IMPLEMENTED	MQ 3.14 PQ08 all	/
DSP 1.11.2	DOCUMENTED/IMPLEMENTED	MQ 3.14, 3.16 PQ08 all	/
DSP 1.11.3	DOCUMENTED/IMPLEMENTED	MQ 3.15, PQ08 all	/
DSP 1.11.4	DOCUMENTED/IMPLEMENTED	OMC 0.3	/
DSP 1.11.5	DOCUMENTED/IMPLEMENTED	MQ 3.14.1 PQ08 all	/
DSP 2.1.1	DOCUMENTED/IMPLEMENTED	OMD 4.11.4	/

		OMD 4.11.5	
DSP 2.1.2	DOCUMENTED/IMPLEMENTED	OMD 4.11.4, 4.11.5	/
DSP 2.1.3	DOCUMENTED/IMPLEMENTED	OMD 4.1.1	/
DSP 2.1.7	DOCUMENTED/IMPLEMENTED	ITE all	/
DSP 2.2.1	DOCUMENTED/IMPLEMENTED	OMD 4.1.2, 4.1.3, 4.11.4	/
DSP 2.2.2	DOCUMENTED/IMPLEMENTED	OMD 4.1.2, 4.1.3, 4.11.5	/
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DSP 2.3.3	N/A	/	/
DSP 2.3.4	N/A	/	/
DSP 2.4.1	N/A	/	/
DSP 3.1.1	DOCUMENTED/IMPLEMENTED	MATE 4.2.2	/
DSP 3.1.2	DOCUMENTED/IMPLEMENTED	OMA 8.1.10 MATE 4.2.4	/
DSP 3.2.1	DOCUMENTED/IMPLEMENTED	OMA 1.3.20 MATE 4.2.4, 4.2.5	/
DSP 3.2.2	DOCUMENTED/IMPLEMENTED	OMA 2.5, 8.1.10 MATE 4.2.2	/

DSP 3.2.3	DOCUMENTED/IMPLEMENTED	OMA 8.1.7, 8.1.8 MATE 4.2.2	/
DSP 3.2.4	DOCUMENTED/IMPLEMENTED	OMA 1.3.20, 1.4.1, 1.5.3 MATE 4.2.4	/
DSP 3.2.5	DOCUMENTED/IMPLEMENTED	OMA 1.3.20 MATE 4.2.4	<b>Amélioration</b>
DSP 3.2.6	<b>N/A</b>	/	/
DSP 3.2.7	DOCUMENTED/IMPLEMENTED	OMA 8.1.7 MATE 4.2.2	/
DSP 3.2.8	DOCUMENTED/IMPLEMENTED	OMA 8.1.2 MATE 4.2.2	/
DSP 3.2.9	DOCUMENTED/IMPLEMENTED	OMA 8.1.2 MATE 4.2.2	/
DSP 3.2.10	DOCUMENTED/IMPLEMENTED	OMA 8.1.5 MATE 4.2.2	/
DSP 3.2.11	DOCUMENTED/IMPLEMENTED	OMA 8.1.5 MATE 4.2.2	<b>Amélioration</b>
DSP 3.3.1	DOCUMENTED/IMPLEMENTED	OMA 8.1.6 MATE 4.2.2	<b>Amélioration</b>
DSP 3.3.3	DOCUMENTED/IMPLEMENTED	OMA 1.3.20, 8.1.6 MATE 4.2.2	/

DSP 3.4.1	DOCUMENTED/IMPLEMENTED	OMA 8.3.8 MATE 4.2.2	/
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DSP 3.5.1	DOCUMENTED/IMPLEMENTED	OMA 8.1.2, 8.1.8 MATE 4.2.2	/
DSP 3.5.2	DOCUMENTED/IMPLEMENTED	OMA 8.1.2 MATE 4.2.2	/
DSP 3.5.3	DOCUMENTED/IMPLEMENTED	OMA 8.1.8 SOPQ 400 3.7 SOPQ200 3.3.9 SOPB19 3.7	<b>Amélioration</b>
DSP 3.5.4	DOCUMENTED/IMPLEMENTED	OMA 8.1.2 MATE 4.2.2	/
DSP 3.5.5	DOCUMENTED/IMPLEMENTED	OMA 8.1.2, 8.1.3, 8.3.7, 8.3.8	/
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DSP 3.6.2	N/A	/	/
DSP 3.6.3	NOT DOCUMENTED NOT IMPLIMENTED	/	<b>Recommandation</b>
DSP 3.6.4	N/A	/	/
DSP 3.6.5	DOCUMENTED/IMPLEMENTED	OMA 11.3 MATE 5.4	/



DSP 3.6.6	DOCUMENTED/IMPLEMENTED	OMA 1.3.20, 1.5.5 MATE 3.3	/
DSP 3.7.1	DOCUMENTED/IMPLEMENTED	OMA 8.1.7 MATE 5.4 ERP3.1	/
DSP 3.7.2	DOCUMENTED/IMPLEMENTED	MATE 5.3	/
DSP 4.1.1	DOCUMENTED/IMPLEMENTED	OMA 8.1.2	/
DSP 4.1.2	DOCUMENTED/IMPLEMENTED	OMA 8.1.2	/
DSP 4.1.3	N/A	/	/
DSP 4.1.4	DOCUMENTED/IMPLEMENTED	OMA 8.1.1 SOPQ400 3.7.1 SOPQ200 3.3.9 SOPB 19 3.7.1	/
DSP 4.1.5	N/A	/	/
DSP 4.1.6	N/A	/	/
DSP 4.2.1	DOCUMENTED/IMPLEMENTED	OMA 8.1.1, 8.1.3	/
DSP 4.3.1	N/A	/	/
DSP 4.3.2	DOCUMENTED/IMPLEMENTED	OMA 8.1.5	/
DSP 4.3.3	N/A	/	/
DSP 4.3.4	DOCUMENTED/IMPLEMENTED	OMA 8.1.5	/
DSP 4.3.5	N/A	/	/

DSP 4.4.1	DOCUMENTED/IMPLEMENTED	OMA 8.8  OMBQ400 10.4, 10.5  OMBQ200 10.5  OMBB19 10.5	/
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Tableau 4.2 Les ISARPS et Les réponses

#### 4.6 Les Non-conformités Soulevés :

Après l'application de la check-list et la vérification des documents de référence (Manuels Opérationnels) pour contrôler la conformité, on constate :

- **Aucun écart n'a été soulevé.**
- **Une recommandation Non respectée (DSP 3.6.3).**

Il importe à signaler que lors de parcours des ISARPs, la majorité des réponses trouvées sont explicites et des fois documentés doublement (Plus d'une référence réglementaire).

Par ailleurs, et concernant les ISARPs DSP 3.2.5 ,3.2.11, DSP 3.3.1, DSP 3.5.3, les réponses envisagées manquent de précision cela est du à l'absence des procédures détaillées malgré l'existence des guides dans les manuels Opérationnels.

Le chapitre suivant fera l'objet des propositions des procédures afin d'augmenter la certitude des réponses sur les ISARPs DSP 3.2.5 ,3.2.11, DSP 3.3.1, DSP 3.5.3.

## **CHAPITRE 5: PROPOSITION D'UN PLAN D' ACTIONS CORRECTRICES POUR LA CLOTURE DES ECARTS SOULEVES**

### **5.1 Les Améliorations Proposées:**

Les ISARPs DSP 3.2.5 ,3.2.11, DSP 3.3.1 et DSP 3.5.3 sont documentés en OMA (MANEX parte A) d'où Le manuel d'exploitation présente clairement un guide d'utilisation et d'interprétation du Jet plan, Calcul des limitations Opérationnelles et Franchissement des Obstacles en cas de DRIFT DOWN, alors que l'ISARP stipule l'existence du guide ainsi que la procédure qui définit qui fait quoi ? Et comment ? En réponse à cette action, on propose l'instauration :

- D'une procédure d'établissement des JETPLAN.
- D'une procédure de calcul de limitations opérationnelles.
- D'une procédure de traitement Drift Down.

### **5.2 Etablissement d'une Procédure pour le JETPLAN :**

- Destinataire : Service PVD et toutes les escales de « TASSILIAIRLINES »
- Objet de la Procédure : définir toutes les modalités de fonctionnement des services lors de l'établissement, l'utilisation et le suivi des Plans de Vol Exploitation (Jet Plan).
- Domaine d'application : Sous Direction Centre des Operations Aériennes.  
Département PVD.  
Service infos Vols.
- Définitions : Le plan de vol exploitation donne le cheminement de l'aéronef du point de départ au point destination et aux déroutements choisis avec les éléments de navigation associés, notamment les altitudes de vol , les temps de vol partiels et cumulés, les consommations de carburant estimé et le carburant minimal à embarquer compte tenu des paramètres du vol et des conditions météorologiques prévus.
- Document de références : Manuel JEPPSEN, MATE

- Documents et équipements associe :  
 JEPPSEN sous forme de Logiciel de JETPLANNER ou JETPLAN.COM  
 Les paramètres, relevés et informations qui doivent être obligatoirement consignés sur ce document sont les suivants :
  - Heure bloc départ
  - Heure bloc d'arrivée
  - Heure décollage
  - Heure d'atterrissage

En croisière :

- Quantité de carburant consommée, au moins une fois par heure.
- Heure de passage réel au moins une fois par heure.

Choix du dégagement : Lors de la préparation du vol, l'aérodrome le plus proche accessible est retenu sauf cas particuliers.

La Validité du JETPLAN : Le chargement dans JETPLAN des données météorologiques et la mise à jour tout dépend les Serveurs :

- UK : Quatre Fois Par Jour (06H ,12H ,18H, 00H)
- ADF : Deux Fois Par Jour (12H ,00H)
- NWS : Quatre Fois Par Jour (06H ,12H ,18H, 00H)

- Logigramme :

### Processus Service JETPLAN

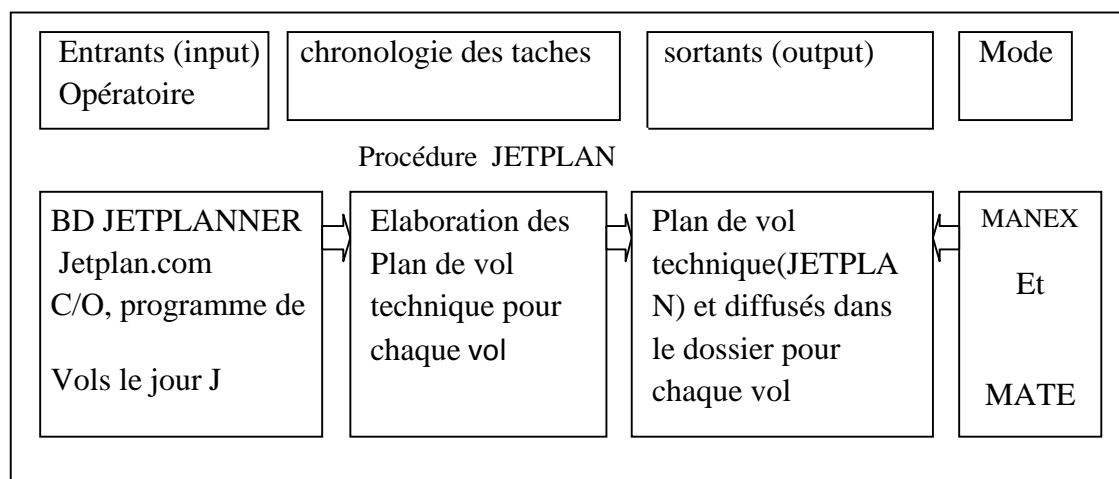
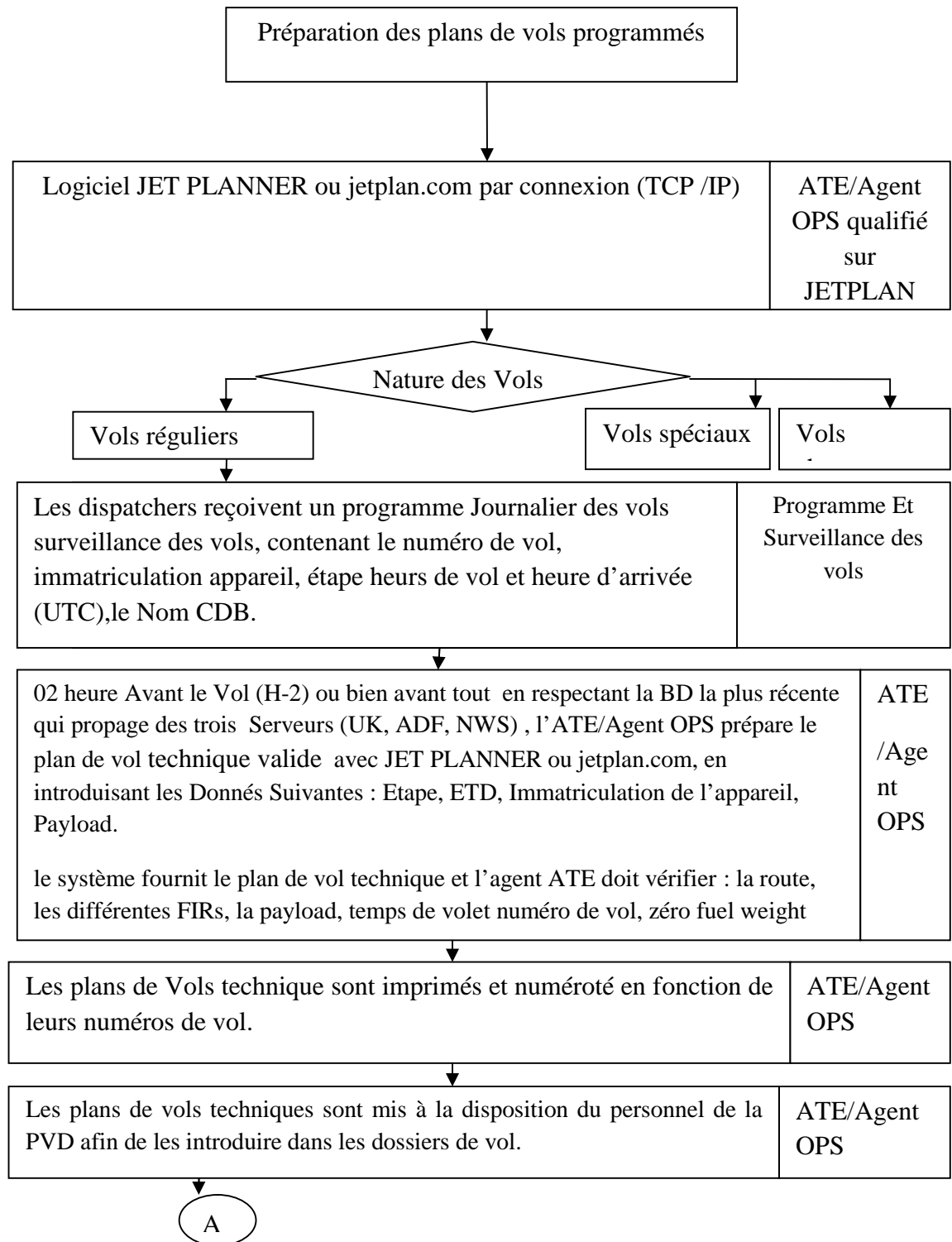


Schéma 5.1 : Processus Service JETPLAN

## Procédure JETPLAN



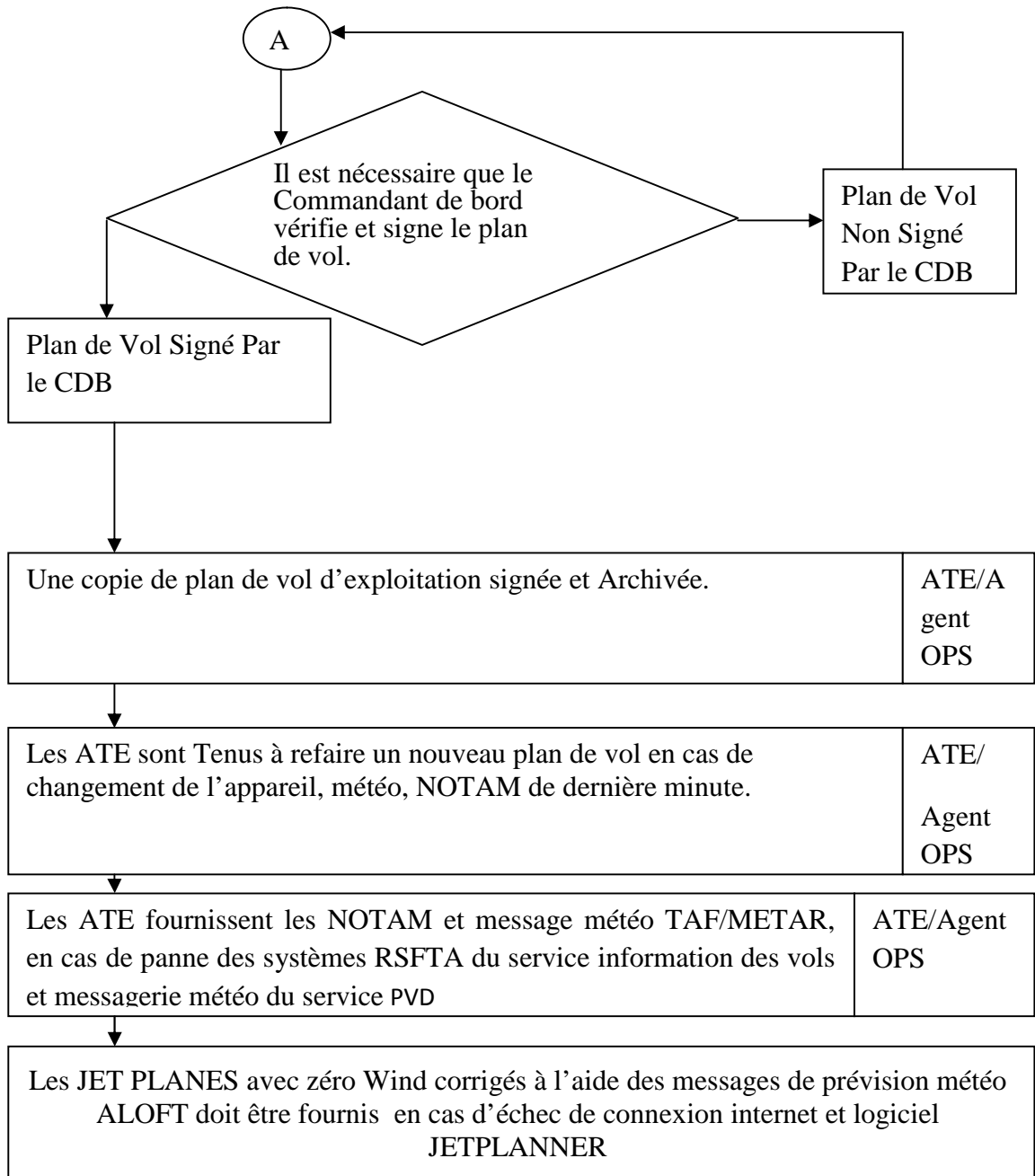


Schéma 5.2 : Logigramme de la Procédure JetPlan

- Annexe : « jpdUserGuide ».

### 5.3 Etablissement d'une procédure de Calcul de Limitations Opérationnelles:

- Destinataire : Service PVD (Préparation de Vols et Documentations)
- Objet de la Procédure : Définir la méthode de calcul et de vérifications des limitations Opérationnelles (Secteur DH8D Bombardier Q400).
- Domaine d'application : Centre des Opérations Aériennes
- Document de références : AOM « Vol2-Metric »
- Documents et équipements associe : Logiciel Jet Plan.
- Logigramme:

#### Processus Calcul Des Limitations

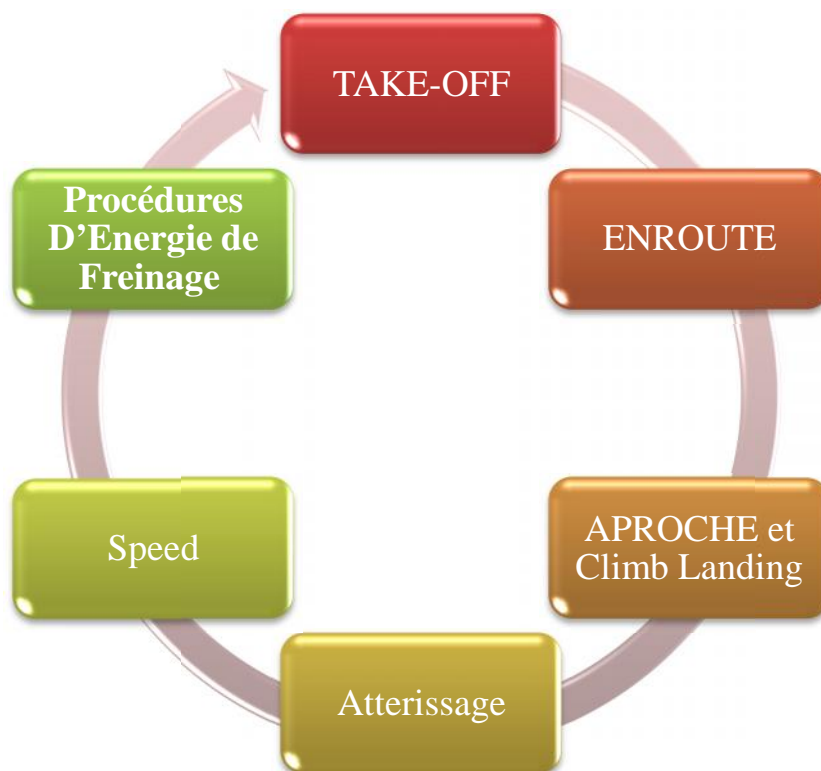


Schéma 5.3 : Processus de La Procédure Calcul des Limitations

### Procédure Calcul des Limitation

Les Tableaux utilisés se trouvent dans l'ANNEXE 2(BOMBARDIER VOLUME 2 CHAPITRE 4)

1. Procédures Du Take-off(Décollage) et Paramètres de Performance :

1.1La Masse retenue Par rapport Altitude et Température :

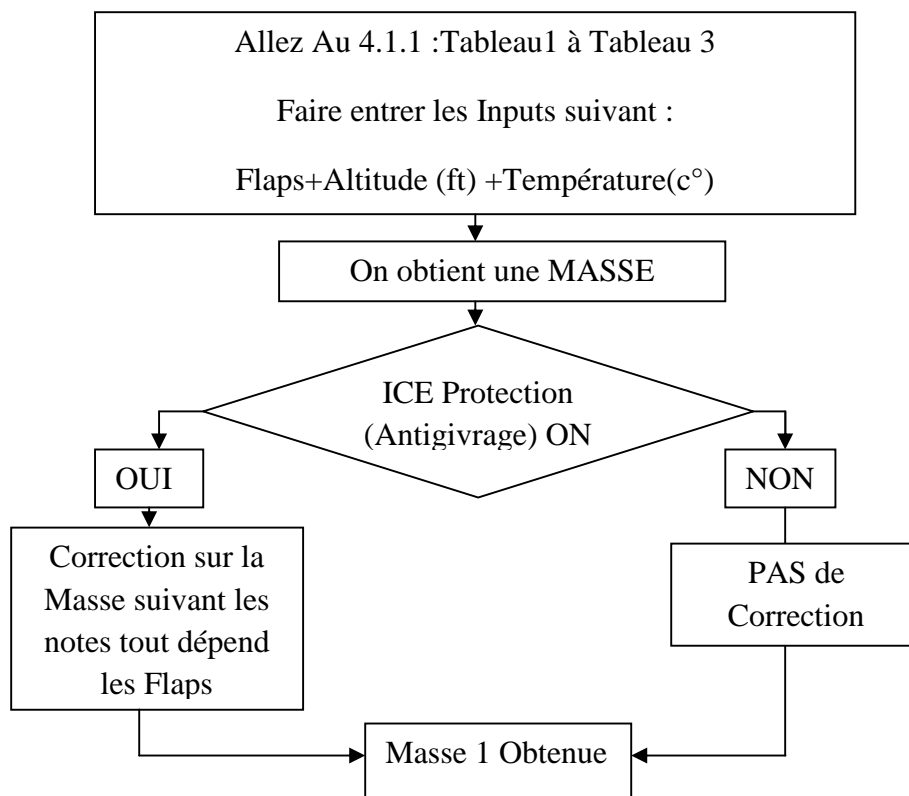


Schéma 5.4 : Logigramme de La Masse retenue Par rapport Altitude et Température



## 1.2 La Masse retenue pour la piste de décollage :

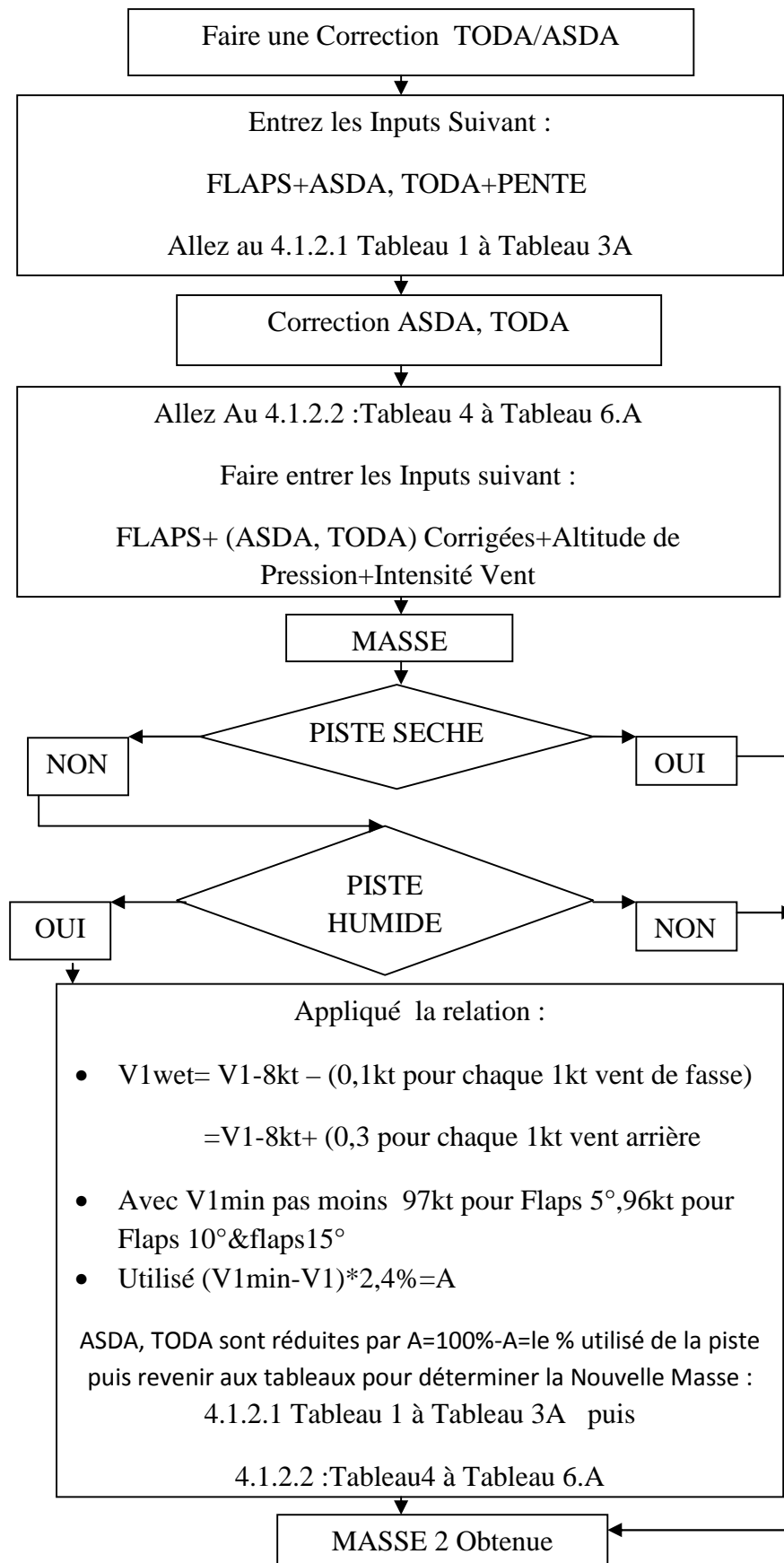


Schéma 5.5 : Logigramme de La Masse retenue pour la piste de décollage

## 1.3 La Masse retenue pour le Take-off :

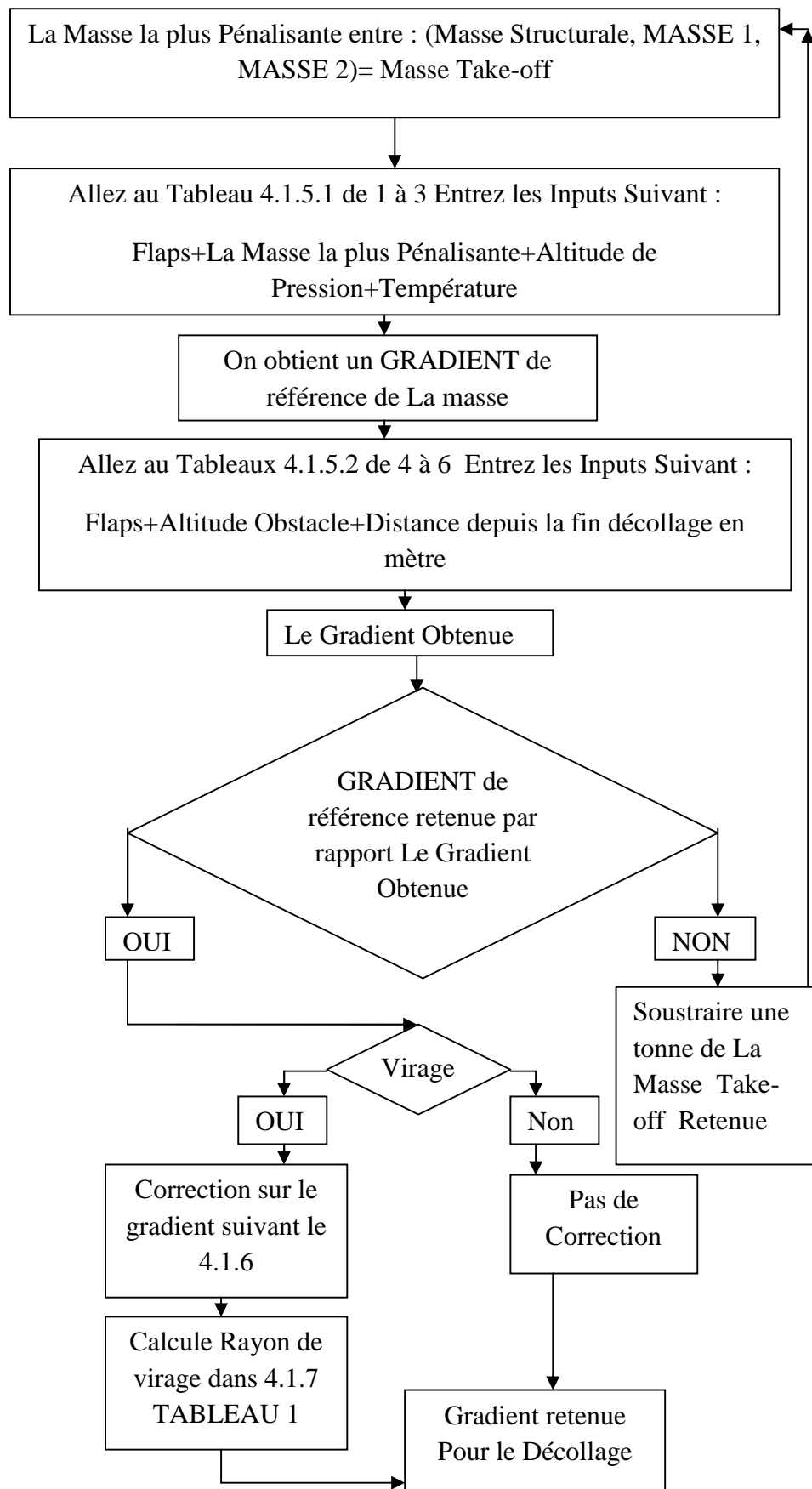
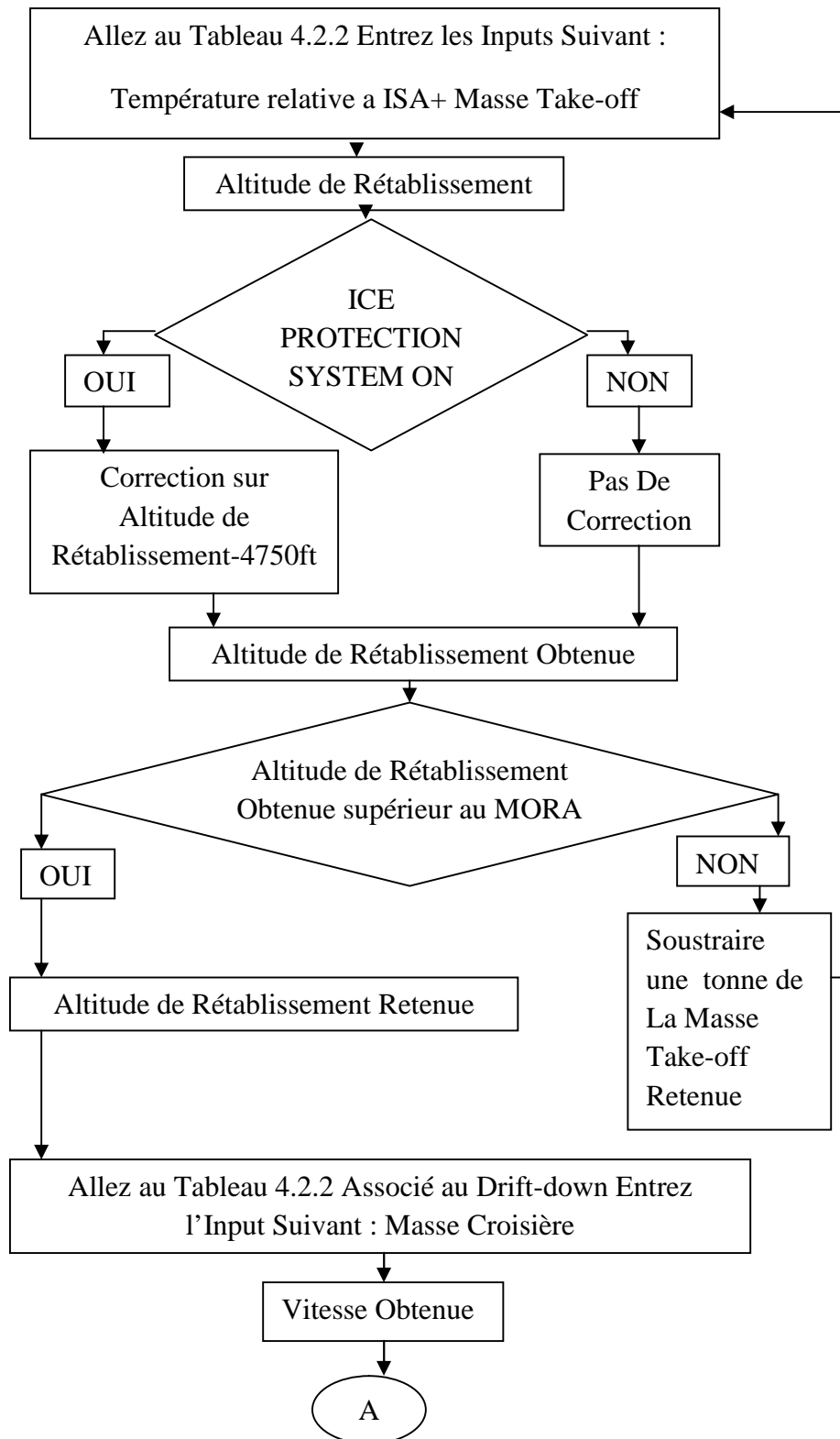


Schéma 5.6 : Logigramme La Masse retenue pour le Take-off

## 2. Procédures Performances En Route :



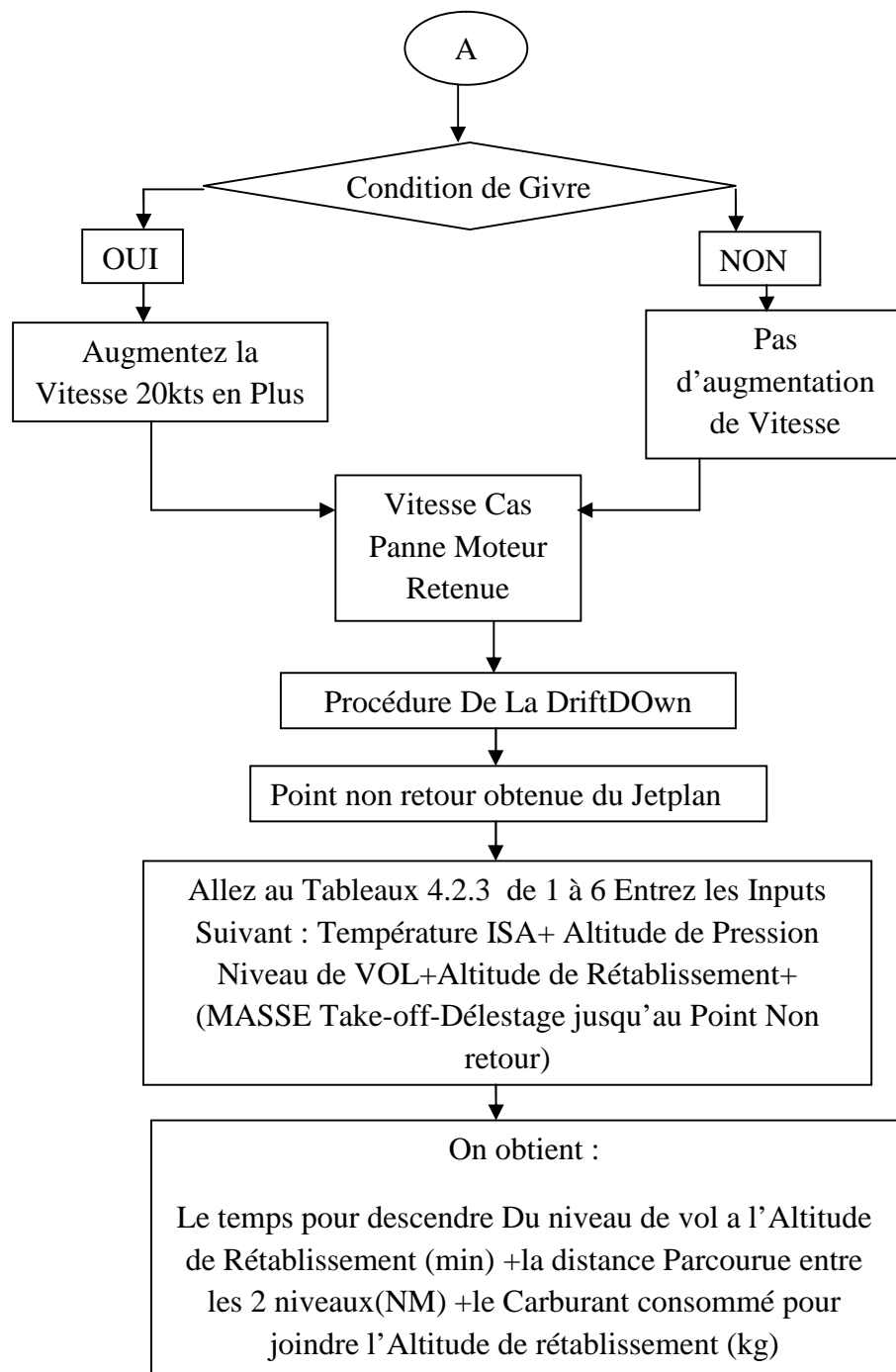
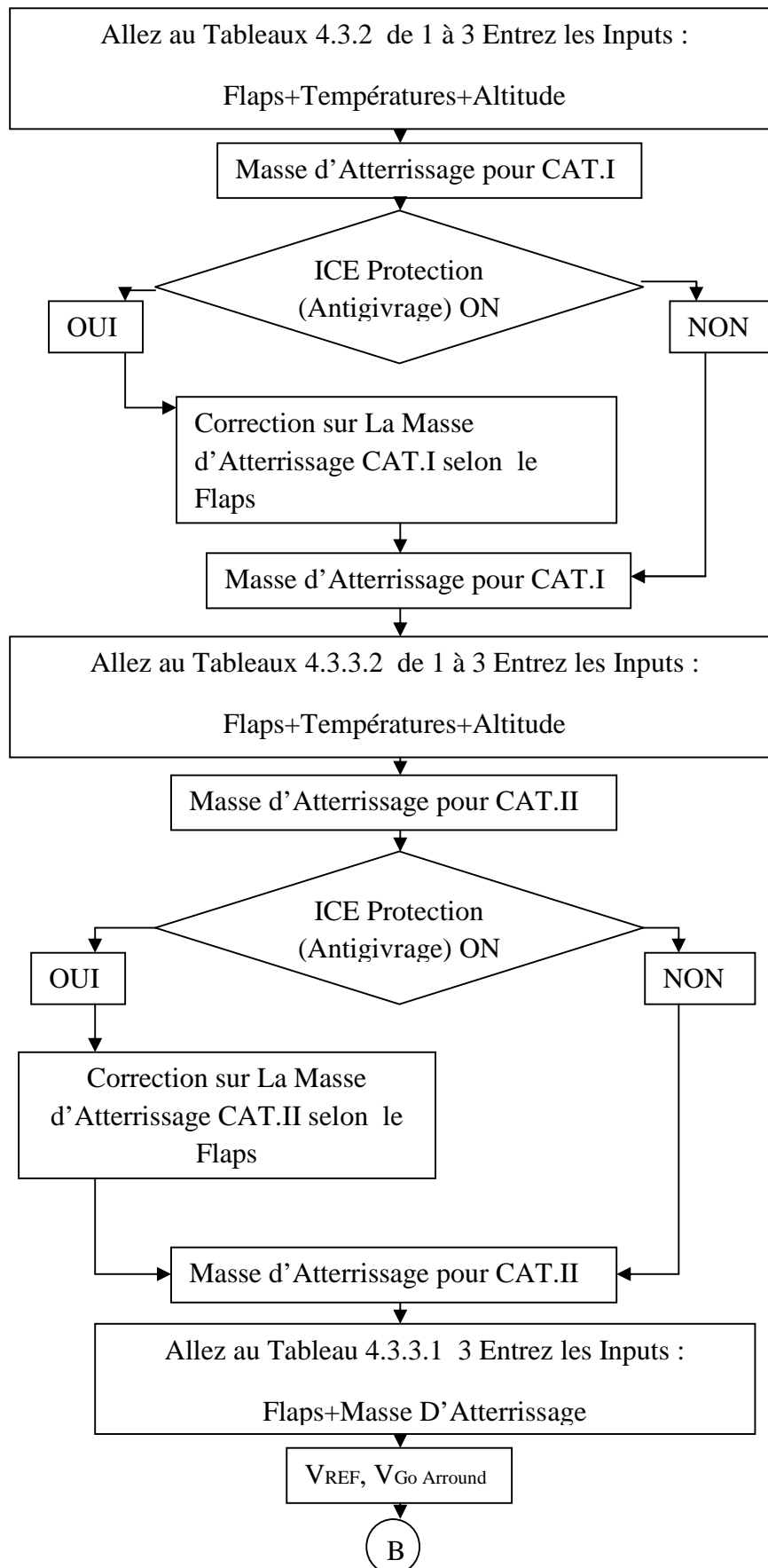


Schéma 5.7 : Logigramme de la Procédure Performances En Route

## 3. Procédures d'Approche :



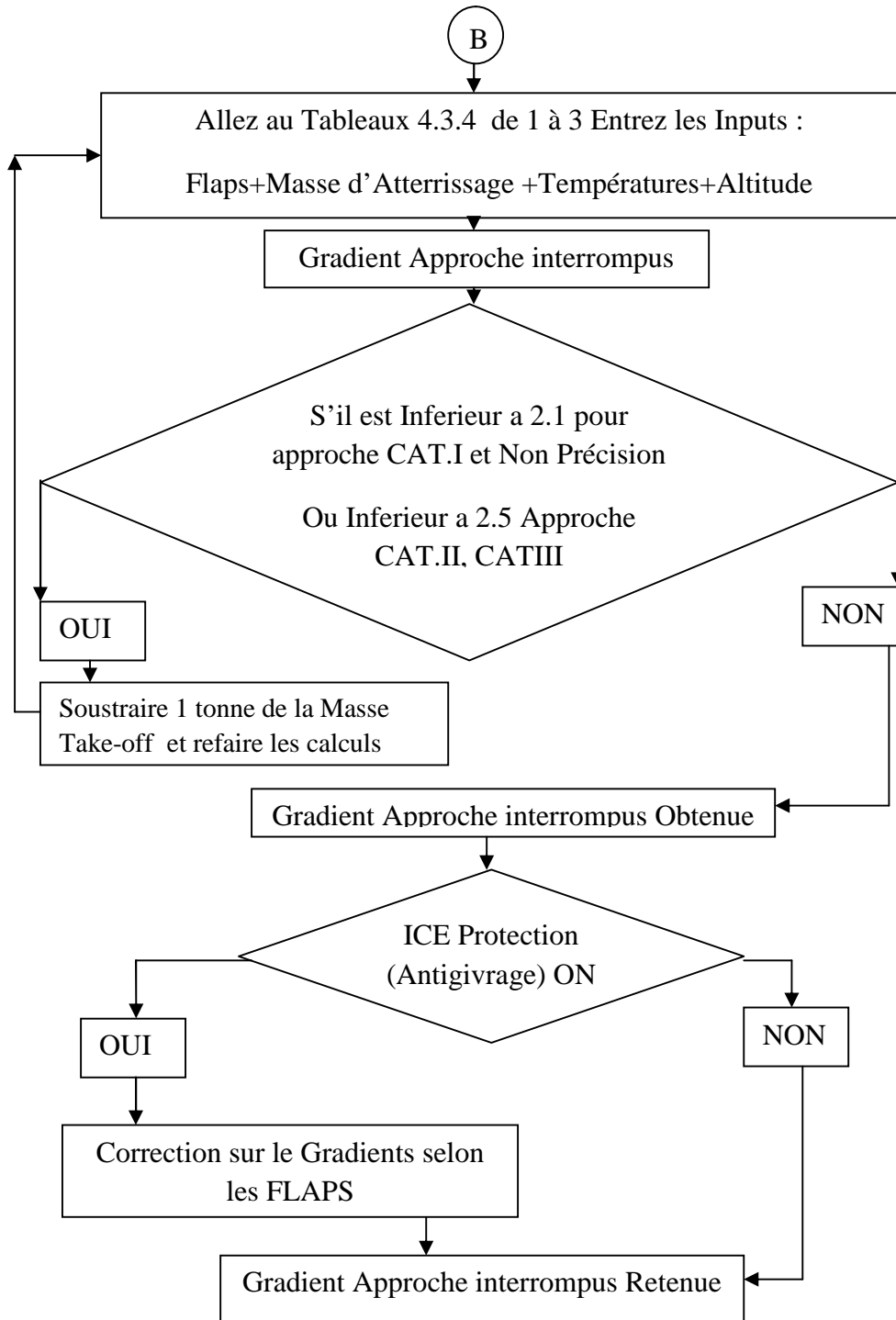
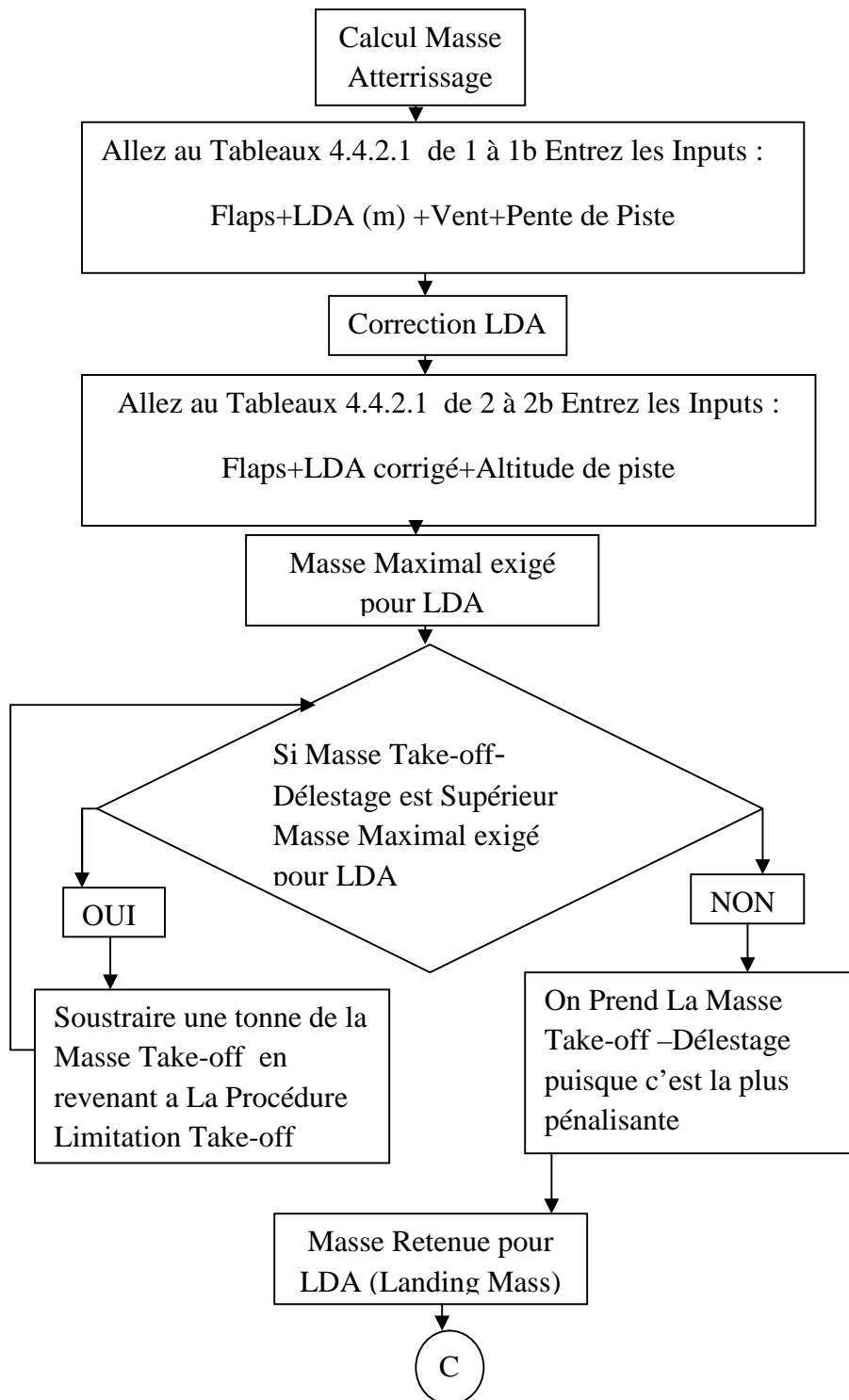


Schéma 5.8 : Logigramme de la Procédures d'Approche

## 4. Procédures D'Atterrissage :



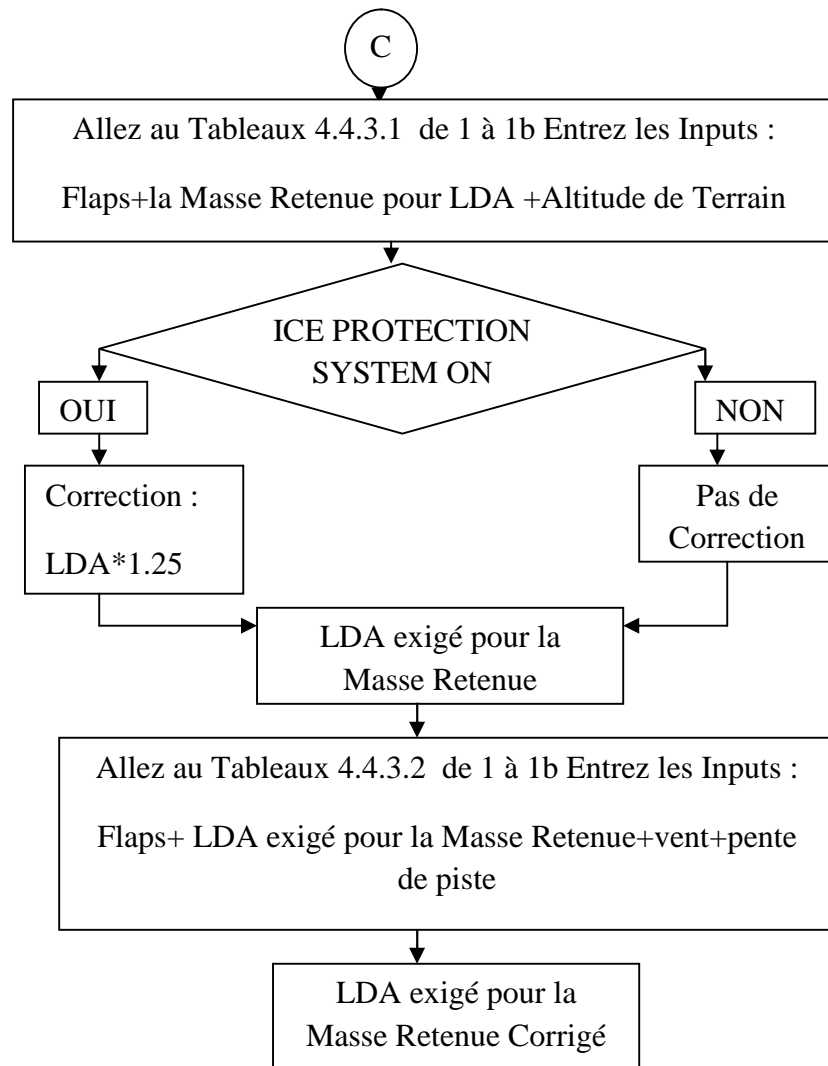
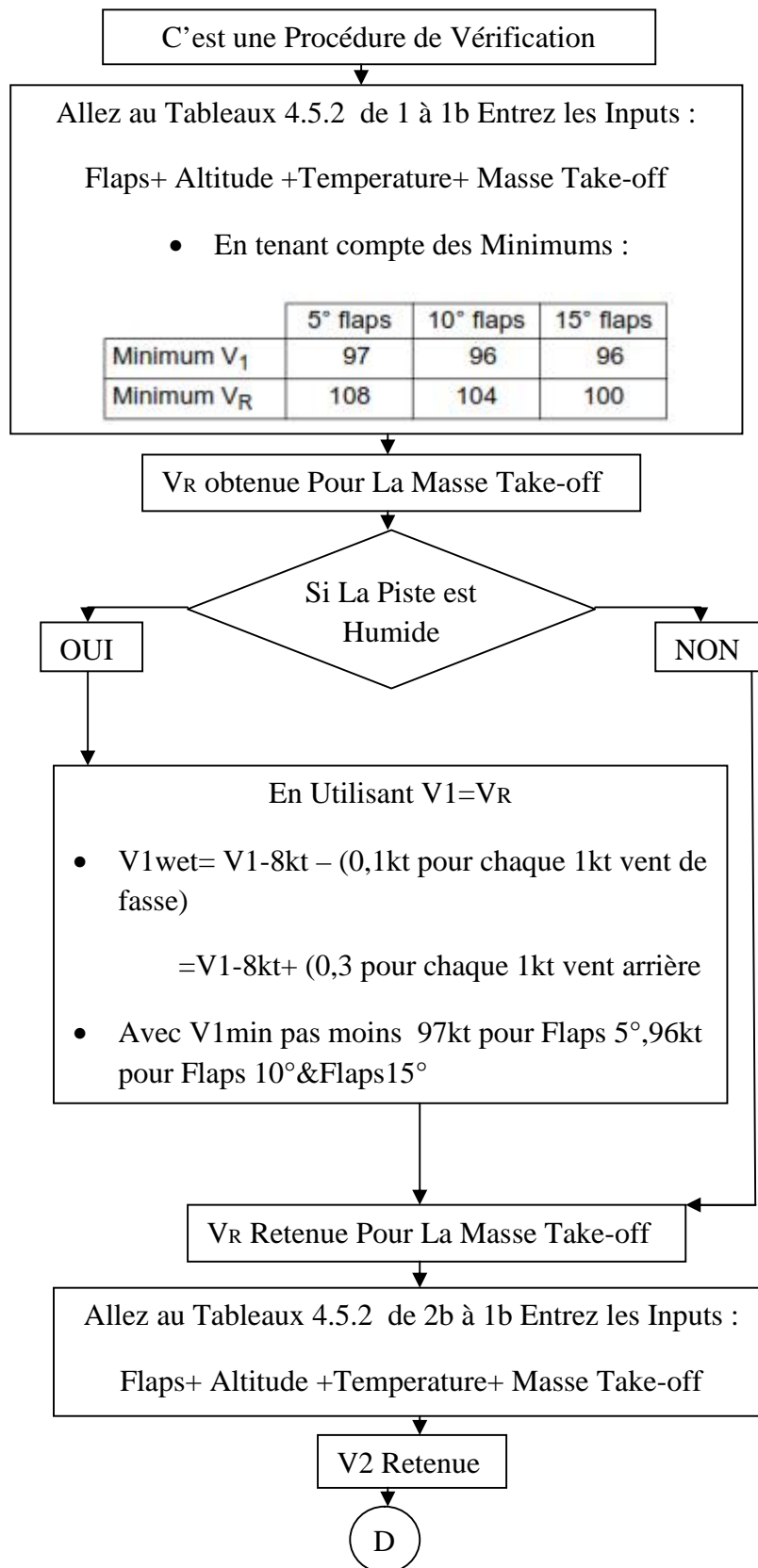
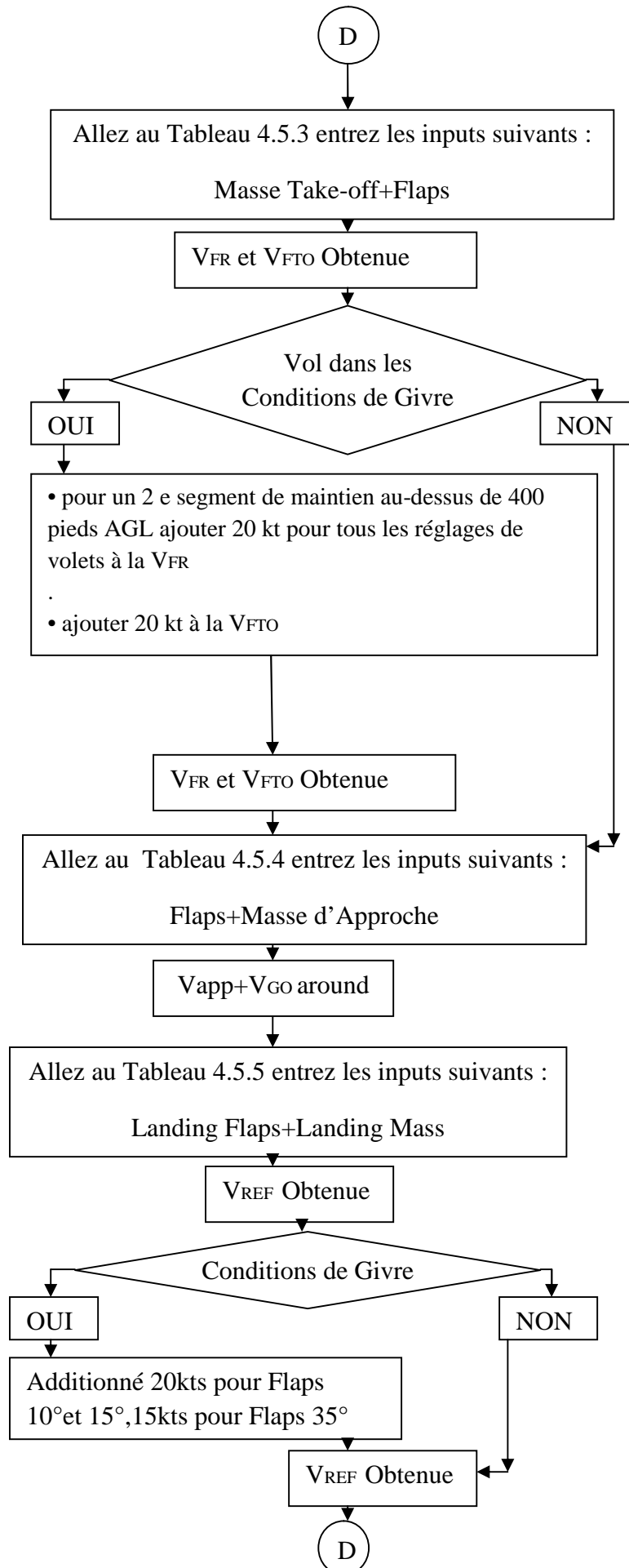


Schéma 5.9 : Logigramme Procédures D'Atterrissage



## 5. Procédures de Vitesse :





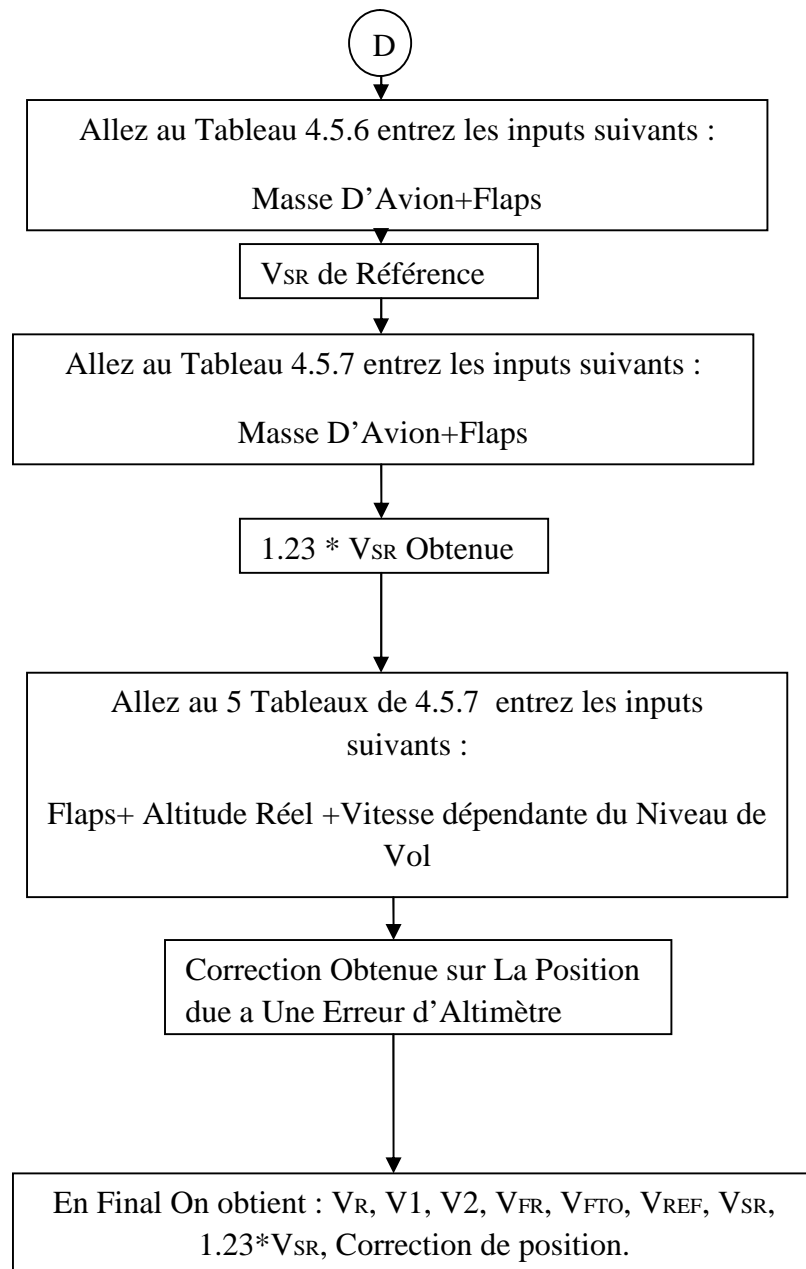


Schéma 5.10 : Logigramme Procédures de Vitesse

## 6. Procédures D'Energie de Freinage :

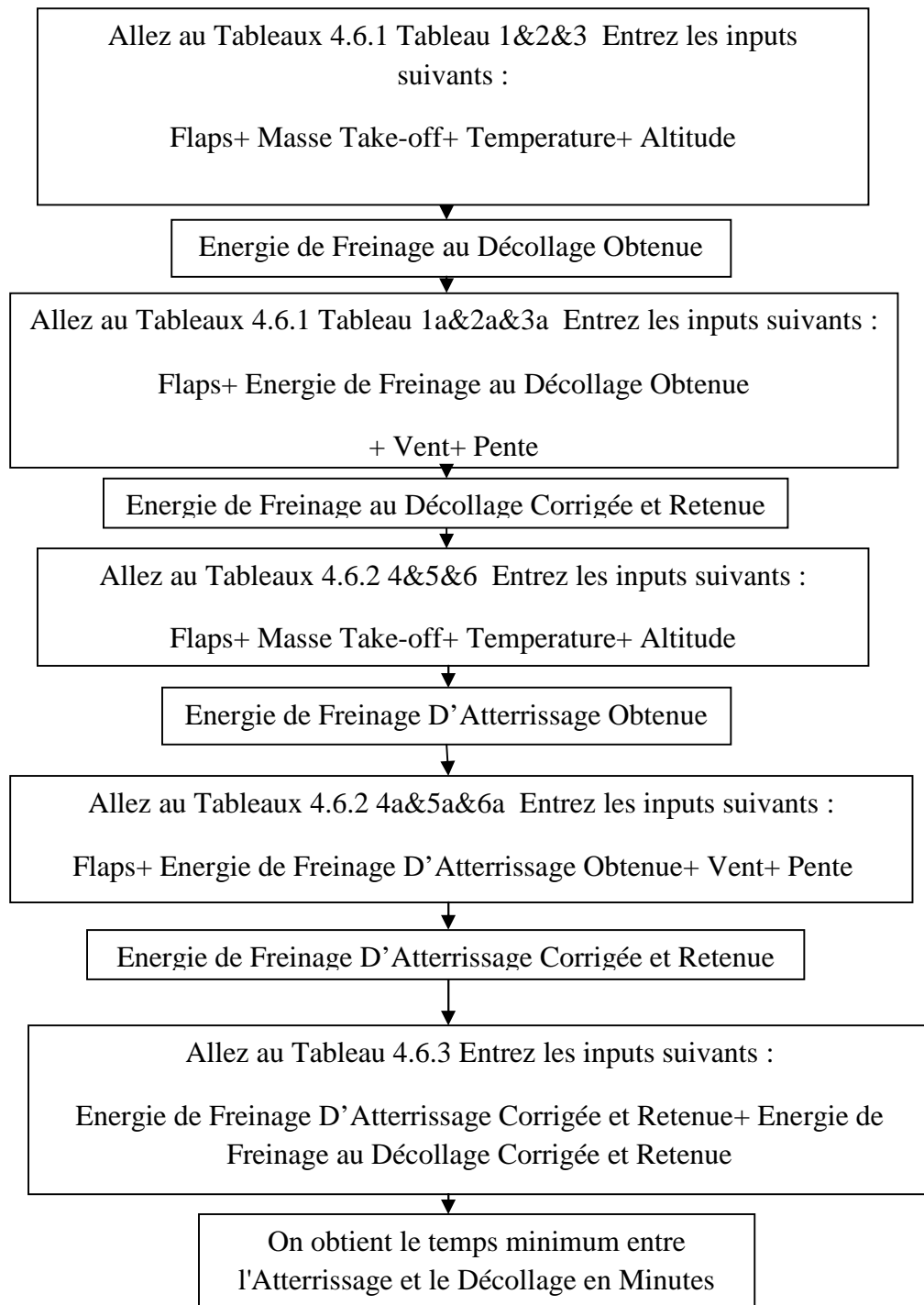


Schéma 5.11 : Logigramme Procédures D'Energie de Freinage

#### 5.4 Etablissement d'une Procédure pour le Drift Down :

- Destinataire : Service PVD (Préparation de Vols et Documentations)
- Objet de la Procédure : Définir la méthode de calcul et de vérifications des limitations Opérationnelles (Secteur DH8D Bombardier Q400).
- Domaine d'application : Centre des Opérations Aériennes
- Document de références : AOM « Vol2-Metric »
- Documents et équipements associe : Logiciel Jet Plan.
- Documents et équipements associe : Carte de reliefs ou Carte Jepssen .
- Logigramme:

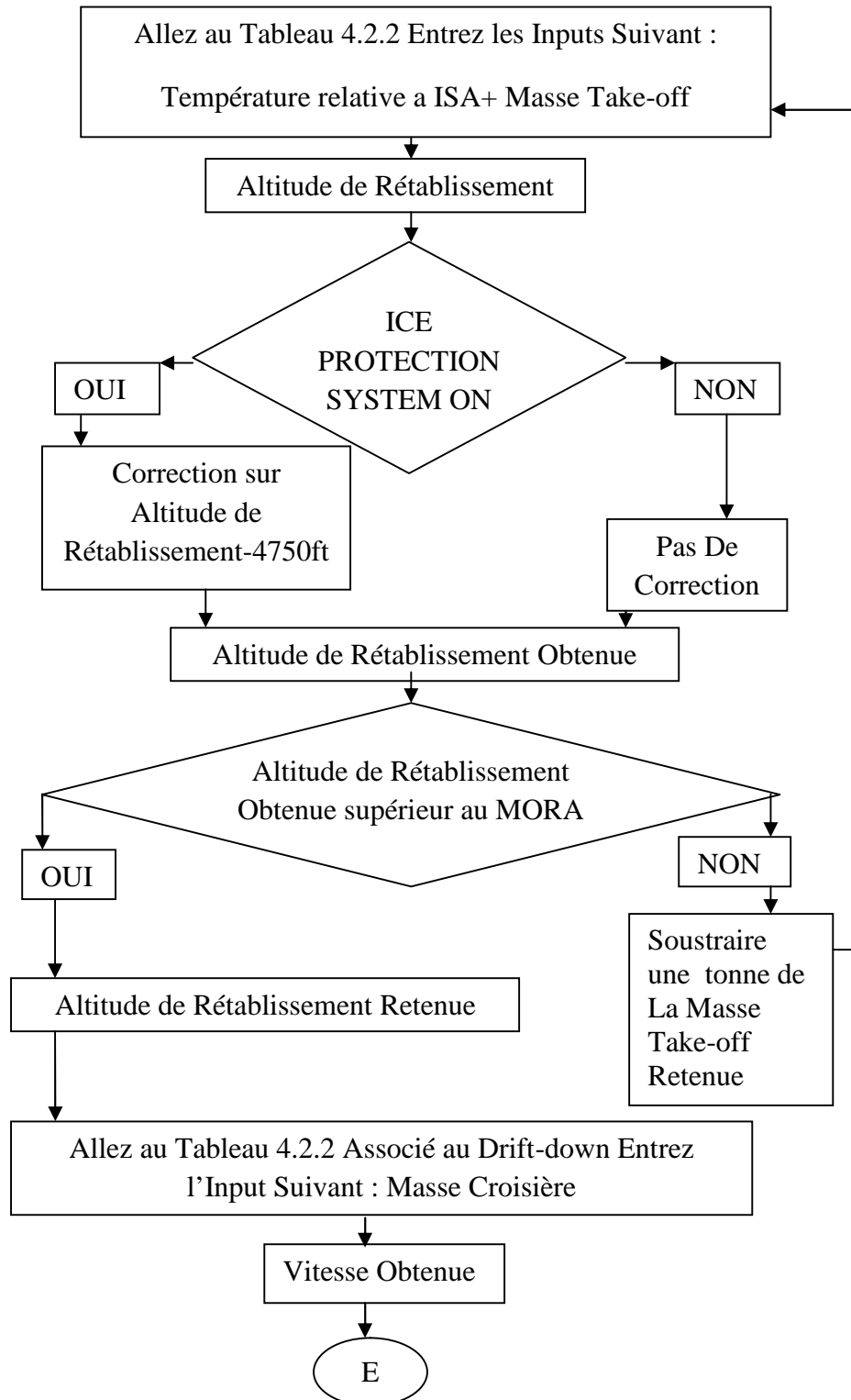
#### Processus du Drift Down

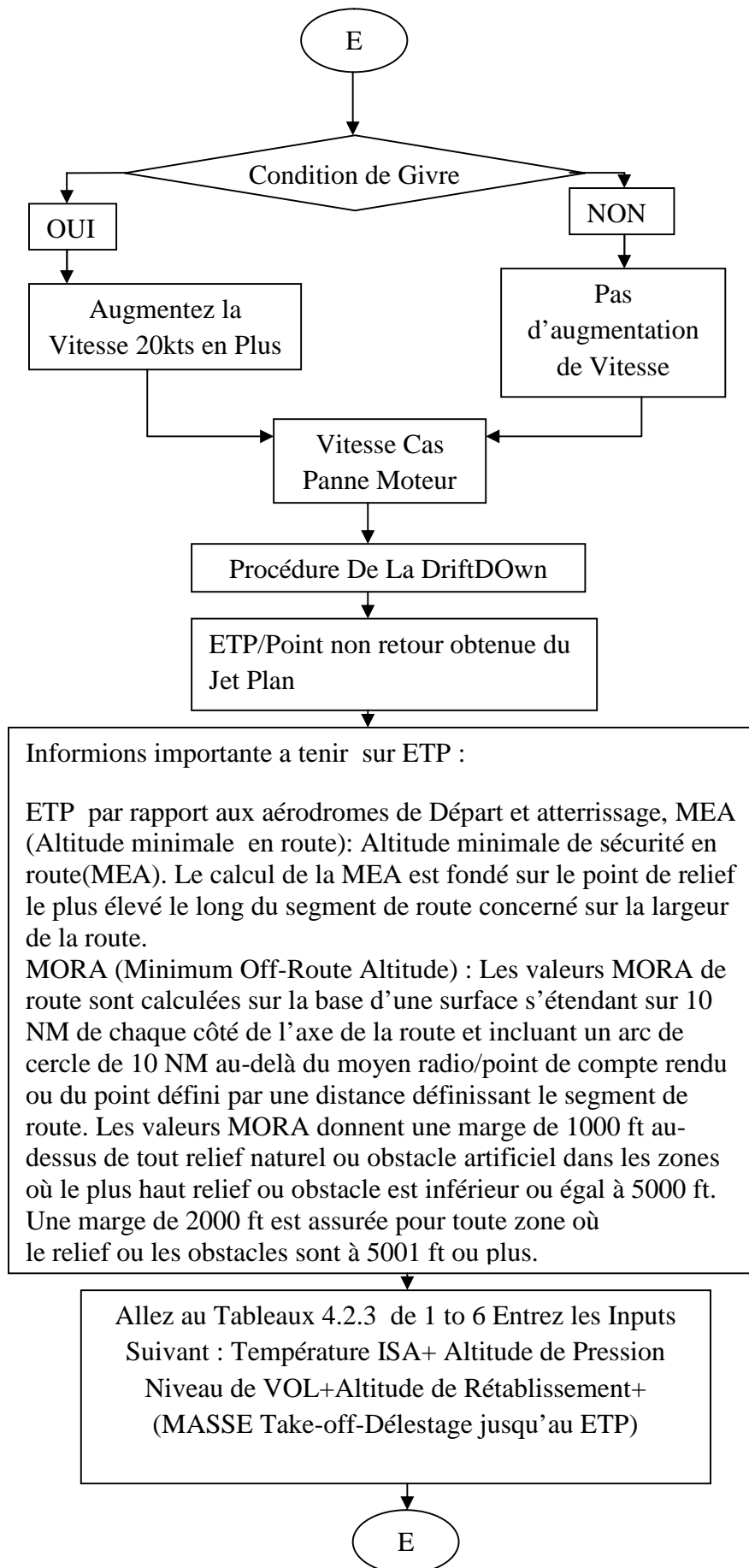


Schéma 5.12 : Processus du Drift Down

### Procédure du Drift Down

Les Tableaux utilisés se trouvent dans l'ANNEXE 2(BOMBARDIER VOLUME 2 CHAPITRE 4)





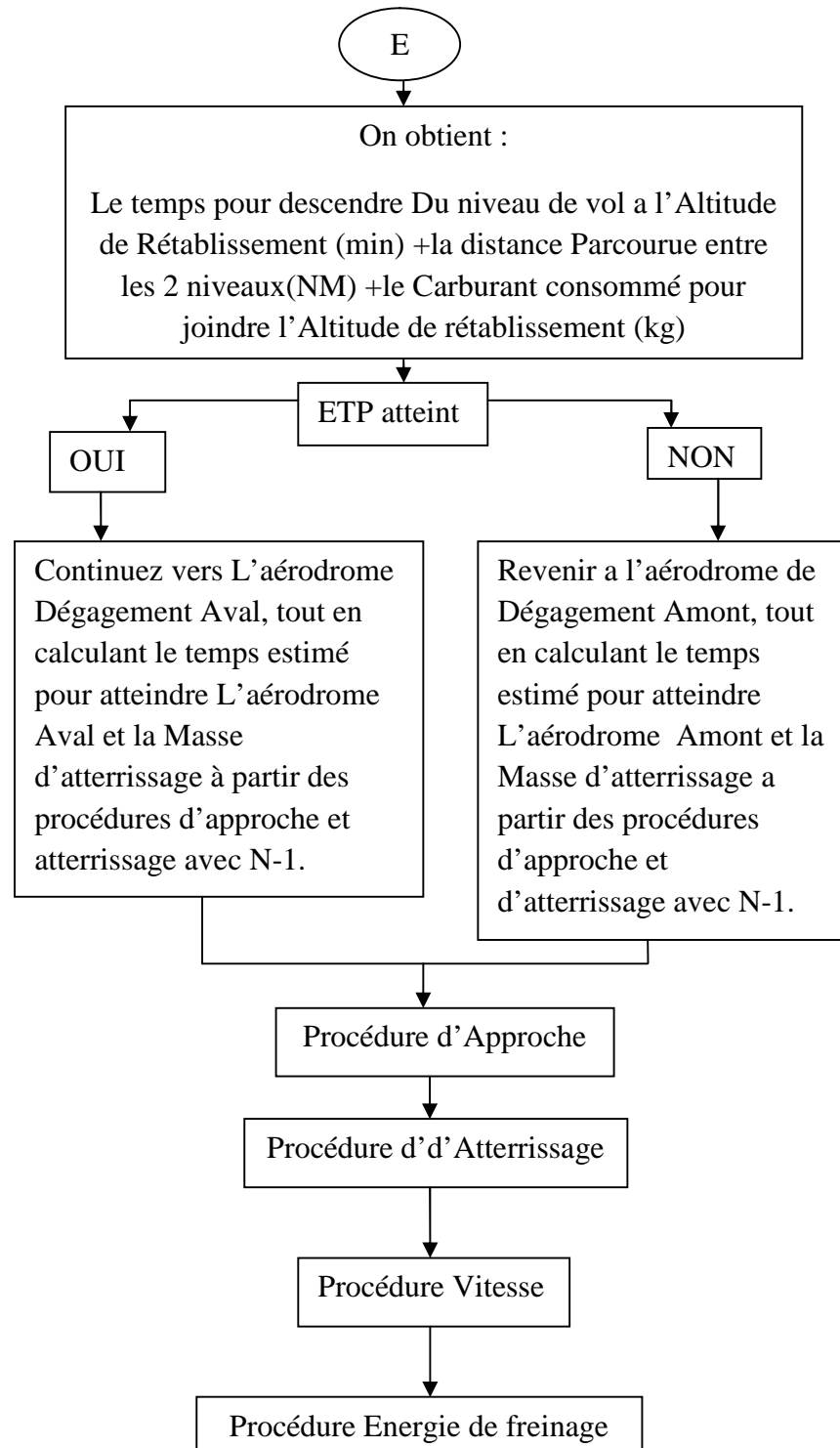


Schéma 5.13 : Logigramme Procédure du Drift Down



### **5.5 Conclusion :**

Ces procédures sont établies pour aider et assister les ATEs dans l'Exécution des tâches.  
Le respect de l'ordre chronologique des étapes de la procédure amène à des résultats fiables.

## **CONCLUSION GENERALE**

Ce travail nous a permis en premier lieu de suivre le déroulement de différentes étapes d'audit, puis procéder à la préparation et l'élaboration des réponses. Et par conséquent on a proposé des procédures (Etablissement JETPALN, Calcul Limitations, Drift Down) qui seront propre à la compagnie.

Après avoir mené l'audit et clôturer le mémoire, ce travail laisse les portes ouvertes à ceux qui veulent prendre le relai en réalisant une application qui déroulera le processus des procédures de calcul de limitations opérationnelles sous forme d'un logiciel informatisé.

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[10] IATA, Adresse URL <http://www.web-libre.org/dossiers/iata,6782.html> (Consulter le 15 Mars 2013)

[11] AESA, Adresse URL <http://www.easa.europa.eu/language/fr/home.php> (Consulter le 16 MARS 2013)

# ANNEXE 1

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## SECTION 3 – OPERATIONAL CONTROL AND FLIGHT DISPATCH (DSP)

### Applicability

Section 3 addresses the requirements for operational control of multi-engine turbine, turbo-propeller or piston-propeller powered flights, and is applicable to an operator that conducts such flights whether operational control functions are conducted by the operator or conducted for the operator by an external organization (outsourced). Specific provisions of this section are applicable to an operator based on the system of operational control utilized by that operator, and the functions, duties or tasks of the personnel involved.

**Table 3.1** categorizes personnel that are delegated by the authority to exercise operational control, assigned the overall responsibility for operational control or assigned the individual responsibility to carry out specific functions, duties or tasks related to the operational control of each flight. All personnel utilized in operational control functions as specified in **Table 3.1**, *or that act in a manner consistent with the functional categories specified Table 3.1*, irrespective of management or post holder title, are subject to specified training and qualification provisions in this section relevant to the operational control function performed.

Where operational control functions, duties or tasks are outsourced to external service providers, an operator retains overall responsibility for operational control and will have processes to monitor applicable external service providers in accordance with **DSP 1.11.2** to ensure requirements that affect operational control are being fulfilled.

Individual provisions or sub-specifications within a provision that:

Begin with a conditional phrase (“If the Operator...”) are applicable if the operator meets the condition(s) stated in the phrase. The conditional phrase serves to define or limit the applicability of the provision (e.g., “If the operator utilizes...” or “If an FOO or FOA is utilized...”).

Do not begin with a conditional phrase are applicable to all operators unless determined otherwise by the Auditor.

Individual provisions:

That are applicable to all systems of operational control, but with differences in application to each system, will have those differences explained in the associated Guidance Material (GM).

Containing the phrase “personnel responsible for operational control” or “personnel with responsibility for operational control” refer to any suitably qualified personnel with responsibility for operational control as designated by the operator, to include the pilot-in-command (PIC) unless otherwise annotated.

Containing training and qualification requirements are applicable to personnel, other than the PIC, with responsibility for the operational control of flights. PIC training and qualification requirements for all systems of operational control are specified in ISM Section 2 (FLT).

### General Guidance

#### **Authority and Responsibility**

For the purposes of this section *authority* is defined as the delegated power or right to command or direct, to make specific decisions, to grant permission and/or provide approval, and to control or modify a process.

For the purposes of this section *responsibility* is defined as the duty or obligation to perform an assigned function, duty, task or action. An assignment of responsibility typically also requires the delegation of an appropriate level of authority.

## **Operational Control**

Operational control is defined as the exercise of authority to initiate, continue, divert or terminate a flight in the interest of the safety and security of the aircraft and its occupants. An operator may delegate the authority for a specific flight to qualified individual(s), but always retains overall responsibility for operational control. An operator may also assign the responsibility to carry out functions, duties, or tasks related to the operational control of each flight to identifiable, qualified and knowledgeable individual(s).

Individuals delegated the authority to make decisions regarding operational control would also be responsible (and accountable) for those decisions. Individuals assigned the responsibility to carry out specific functions, duties, or tasks related to the operational control of each flight are responsible (and accountable) for the proper execution of those functions, duties, or tasks as assigned by the operator.

## **Authority for Operational Control**

In order to practically exercise operational control of flight operations an operator delegates the authority for the initiation, continuation, diversion or termination of each flight in the interest of the safety and security of the aircraft to competent individual(s). Such authority is typically delegated to individuals in conjunction with an operator's system of operational control, to include, as applicable:

- Shared systems, wherein operational control authority is shared between the pilot-in-command (PIC) **and** a flight operations officer/flight dispatcher (FOO) **or** designated member of management, such as the Director of Flight Operations (or other designated post holder);

**For example:** *The FOO (or designated member of management, as applicable) has the authority to divert, delay or terminate a flight if in the judgment of the FOO, a designated member of management or the PIC, the flight cannot operate or continue to operate safely as planned or released.*

- Non-shared systems, wherein operational control authority is assigned **only** to the PIC.

**For example:** *Only the PIC has the authority to terminate, delay, or divert a flight if in the judgment of the PIC the flight cannot operate or continue to operate safely as planned.*

## **Overall Responsibility for Operational Control**

An operator always retains full responsibility (and accountability) for the overall operational control of each flight. As such, an operator may assign or outsource the responsibility to accomplish functions, duties or tasks related to the operational control of each flight, but never the operator's responsibility to exercise operational control over flight operations.

**For example:** *When an operator assigns functions, duties or tasks related to the initiation, continuation, diversion and termination of a flight to employees or external service provider, such operator retains full responsibility and accountability for the proper execution of those functions, duties or tasks by ensuring:*

- *The training and qualification of such personnel meets any regulatory or operator requirements;*
- *Personnel are performing their duties diligently;*
- *The provisions of the Operations Manual are being complied with;*
- *An effective means of oversight is maintained to monitor the actions and/or inactions of such personnel for the purpose of ensuring operator guidance and policy is complied with.*

## **Responsibility for Operational Control of Each Flight**

In order to practically exercise operational control of flight operations, an operator also assigns the responsibility for the initiation, continuation, diversion or termination of each flight (in the interest of the safety of the aircraft) to competent individuals. Such responsibility related to the operational control of each flight is assigned in conjunction with a system of operational control, to include, as applicable:

- Shared systems, wherein operational control responsibility for each flight **is shared** between the PIC **and** an FOO **or** designated member of management, such as the Director of Flight Operations (or other designated post holder);

*For example: The FOO (or designated member of management) and the PIC are jointly responsible (and accountable) for the decisions, functions, duties or tasks associated with the operational control of a flight, such as pre-flight planning, load planning, weight and balance, delay, dispatch release, diversion, termination, etc.*

- Non-shared systems, wherein the PIC is **solely** responsible for all decisions, functions, duties or tasks regarding operational control of each flight. The PIC, however, may act unassisted to carry out such functions, duties or tasks **or** be assisted by others, such as an FOO, flight operations assistant (FOA) or a member of management assigned the individual responsibility (by the Operator) to carry out specific functions, duties or tasks.

*For example: The PIC is solely responsible (and accountable) for the decisions, functions, duties or tasks associated with the operational control of a flight, and the PIC:*

- *Acts unassisted to carry out functions, duties or tasks such as preflight planning, load planning, weight and balance, delay, dispatch release, diversion, termination, etc., **or***
- *Is assisted by qualified personnel assigned the individual responsibility (by the operator) to carry out specific operational control functions, duties or tasks.*

### **Individual Responsibility for Operational Control Functions, Duties, or Tasks**

An operator typically assigns the individual responsibility to carry out specific functions, duties or tasks related to the operational control of each flight to identifiable, qualified and knowledgeable individuals. This responsibility is typically assigned to, in addition to the PIC (and FOO in a shared system), FOA personnel who support, brief and/or assist the PIC (and/or FOO in a shared system) in the safe conduct of each flight. Examples of operational control functions relevant to the safe conduct of a flight include Weather Analysts, Navigation Analysts/Flight Planning Specialists, Load Agents/Planners, Operations Coordinators/Planners, Maintenance controllers and Air Traffic Specialists.

FOA personnel are not to be confused with administrative personnel that lack operational control authority, have very limited responsibility, and who simply provide, collect or assemble operational documents or data on behalf of the PIC or the operator.

Administrative personnel may be present in any system of operational control, are excluded from the initial and recurrent training and qualification provisions of this section, and may be qualified as competent through on-the-job training (OJT), meeting criteria as specified in a job description, or through the mandatory use of written instruments such as task cards, guidelines, or checklists.

**Table 3.1** categorizes operational control personnel, defines their authority, identifies their responsibilities and illustrates the relationship of such responsibilities to the operation as a whole.

**Table 3.5** defines the competencies of individuals assigned the responsibility for operational control and/or the responsibility to carry out individual operational control functions, duties or tasks.

### **Definitions, Abbreviations, Acronyms**

Definitions of technical terms used in this ISM Section 3, as well as the meaning of abbreviations and acronyms, are found in the IATA Reference Manual for Audit Programs (IRM).

## **1 Management and Control**

### **1.1 Management System**

**DSP1.1.1** The Operator shall have a management system that ensures:

- i) Management of safety and security in flight operations;
- ii) Supervision and control of all flights, operational control functions and other associated activities;
- iii) Compliance with standards of the Operator and requirements of the State and other applicable authorities. **(GM) ◀**



## Guidance

Refer to the IRM for the definitions of *Operational Control*, *Operator* and *State*.

Refer to Guidance associated with **ORG 1.1.1** located in ISM Section 1.

The specification in item i) ensures the management system addresses the elements of operational safety and security specifically related to the operational control of flights. Safety and security management at this operational level typically occurs within the greater context of the operator's overall or corporate safety and/or security management plan. For example, the overall requirements for the dissemination of security information would typically be specified in an operator's security plan, but the actual dissemination of such information to operational control personnel would occur under the supervision of those individuals with assigned responsibilities related to the operational control of flights (e.g., the transmission of security alerts to aircraft).

Applicable authorities as specified in item iii) refer to authorities that have jurisdiction over international operations conducted by an operator over the high seas or the territory of a state that is other than the State of the Operator.

## 1.2 State Requirements

**DSP 1.2.1** If required by the Authority, the Operator shall have a procedure to ensure the Operations Manual (OM), to include amendments and/or revisions, is submitted to the Authority for acceptance or approval. **(GM)**

### Guidance

Refer to the IRM for the definitions of *Operations Manual*, *State Acceptance* and *State Approval*.

## 1.3 Authorities and Responsibilities

**DSP 1.3.1** The Operator shall ensure authorities and responsibilities for the operational control of flights are defined and communicated throughout the organization, to include the authorities and responsibilities of:

- i) The pilot-in-command (PIC);
- ii) If applicable, the flight operations officer (FOO), designated member of management and/or flight operations assistant (FOA) who supports, briefs and/or assists the PIC or FOO in the safe conduct of each flight. **(GM) ◀**

### Guidance

Refer to the IRM for definitions of *Flight Operations Officer (FOO)*, *Flight Operations Assistant (FOA)* and *Post Holder*.

The specification in item ii) refers to a designated member of management in a shared system of operational control (e.g. director of flight operations or other designated post holder) that shares authority and responsibility for the operational control of a flight with the PIC.

Refer to Guidance associated with **ORG 1.3.1** located in ISM Section 1.

The authorities and responsibilities for operational control are communicated throughout the organization(s), as are responsibilities related to the operational control of flights. The entities that receive such information are dependent upon the system of operational control but always include the flight operations organization.

Refer to **Table 3.1** for the definitions, duties and responsibilities of operational control personnel.

PIC roles and responsibilities are specified in ISM Section 2 (FLT).

Duties and responsibilities of FOO and/or FOA personnel, and a designated member of management, include a definition of the working relationship with the PIC (e.g., the joint responsibility of the PIC, FOO and, if applicable, designated member of management in a shared system of operational control).

Refer to Guidance associated with **ORG 1.4.1** located in ISM Section 1 regarding the need for internal communication.

Refer to the legend of **Table 3.1** for examples of operational control personnel who support or assist the FOO and/or PIC.

**DSP 1.3.2** The Operator shall have a process and/or procedure for the delegation of duties within the management system for operational control that ensures managerial continuity is maintained when managers responsible for operational control are absent from the workplace. **(GM)** ◀

#### Guidance

Refer to Guidance associated with **ORG 1.3.2** located in ISM Section 1.

The operational managers subject to the specifications of this provision include, as a minimum:

- Managerial personnel, as defined by the operator, required to ensure the operational control of each flight;
- If applicable, nominated post holders as required by the Authority.

**DSP 1.3.3** The Operator shall ensure a delegation of authority and assignment of responsibility within the management system for liaison with regulatory authorities, original equipment manufacturers and other external entities relevant to operational control. ◀

**DSP 1.3.4** The Operator shall delegate the authority for operational control of each flight only to suitably qualified individuals, to include any of the following, as applicable to the Operator's system of operational control:

- i) The PIC and FOO in a shared system of operational control that requires the use of FOO personnel, or
- ii) The PIC and a designated member of management in a shared system of operational control that requires the use such management personnel, or
- iii) The PIC in a non-shared system of operational control. **(GM)**

#### Guidance

Refer to General Guidance in the beginning this section for the definition of *Authority*, as well as the explanation of *Authority for Operational Control*.

The intent of this provision is to ensure an operator delegates the authority to initiate, continue, divert or terminate a flight in the interest of the safety and security of the aircraft and its occupants (operational control) only to appropriately qualified individuals.

The following examples of operational control systems are provided as a means to identify how authority is typically delegated by an operator in conjunction with a system of operational control:

- Shared system in which operational control **authority** is shared between the PIC and a flight operations officer/flight dispatcher (FOO) or designated member of management, for example:
  - **PIC-FOO Full Shared System:** The PIC and FOO have **joint authority** over the decisions functions, duties or tasks associated with the operational control of a flight. Such systems employ flight monitoring and a dedicated communications system (voice or electronic) separate from the ATC system in order to maintain shared authority;
  - **PIC-FOO Partial Shared System:** the PIC and FOO have **joint authority** over all preflight decisions functions, duties or tasks associated with the operational control of a flight, but during flight the PIC has sole authority. Such systems employ flight monitoring if required by the Authority or desired by the Operator;

- **PIC-Management Shared System:** The PIC and a designated member of management, often the Director of Flight Operations or any suitably qualified and knowledgeable member of management designated by the operator have **Joint authority** over the decisions functions, duties or tasks associated with the operational control of a flight.
- Non-shared systems in which operational control **authority** is delegated only to the PIC who may or may not be assisted by other support personnel, for example;
  - **PIC-only System:** The PIC has **sole authority** over any and all decisions and completes all tasks (unassisted) related to the operational control of each flight. This does not preclude administrative personnel from providing, collecting or assembling operational documents or data related to each flight on behalf of the PIC and as defined in **Table 3.1**. Such systems may employ flight monitoring if required by the Authority or desired by the Operator;
  - **PIC-assisted System:** The PIC has **sole authority** over any and all decisions regarding operational control. However, the PIC is assisted by others, such as an FOO, FOA or a member of management assigned the responsibility to carry out specific functions, duties or tasks, such as flight planning, flight support, briefing and in-flight monitoring. Such systems employ flight monitoring if required by the Authority or desired by the Operator.

The system of operational control is approved or accepted by the State.

**Table 3.1** categorizes operational control personnel, defines their authority, identifies their responsibilities and illustrates the relationship of such responsibilities to the operation as a whole.

**DSP 1.3.5** The Operator shall retain the overall responsibility for operational control of each flight and assign the responsibility to carry out functions, duties or tasks related to the operational control of each flight only to suitably qualified personnel as defined in **Table 3.1**, to include:

- i) If the Operator has a shared system of operational control responsibility, either of the following:
  - a) The PIC and an FOO, who share overall operational control responsibility with the PIC and/or supports, briefs and/or assists the PIC in the safe conduct of each flight, or
  - b) The PIC and a designated member of management who shares overall operational control responsibility with the PIC and/or supports, briefs and/or assists the PIC or FOO in the safe conduct of each flight.
- ii) If the Operator has a non-shared system of operational control responsibility, one of the following:
  - a) The PIC and an FOO who supports, briefs and/or assists the PIC in the safe conduct of each flight, or
  - b) The PIC and a designated member of management who briefs and/or assists the PIC or FOO in the safe conduct of each flight, or
  - c) The PIC and FOA personnel who support, brief and/or assist the PIC or FOO in the safe conduct of each flight, or
  - d) The PIC and administrative personnel who do not support, brief and/or assist the PIC or FOO, but provide, collect or assemble operational documents or data relevant to the conduct of each flight, or
  - e) The PIC alone, who has sole responsibility over all functions, duties or tasks regarding the operational control of each flight. **(GM)**

## Guidance

Refer to General Guidance in the beginning this section for the definition of *Responsibility*, as well as the explanations of *Overall Responsibility for Operational Control*, *Responsibility for Operational Control of Each Flight*, and *Individual Responsibility for Operational Control Functions, Duties or Tasks*.

The intent of this provision is to specify the various ways operational control responsibilities can be assigned by an operator and to ensure only suitably trained and qualified individuals, in addition to the PIC, are assigned overall responsibility for operational control or the responsibility to carry out functions, duties or tasks related to the operational control of each flight.

The specifications of this provision apply irrespective of post holder titles or whether personnel positions are described in the OM. If personnel are assigned the responsibility to carry out operational control functions, duties or tasks, and act in a manner consistent with the specifications of this provision or the descriptions found in **Table 3.1**, the specifications of this provision are applicable, as well as the specifications of ensuing provisions that require such personnel to be trained and qualified for the operational control responsibilities, functions, duties or tasks that they are performing.

Examples of operational control systems are provided as a means to identify how responsibility is typically assigned by an operator.

- Shared system in which operational control **responsibility** is shared between the PIC and an FOO or designated member of management, for example:
  - **PIC-FOO Full Shared System:** The PIC and FOO are **jointly responsible** for the decisions, functions, duties or tasks associated with the operational control of a flight. Such systems employ flight monitoring and a dedicated communications system (voice or electronic) separate from the ATC system in order to maintain joint responsibility.
  - **PIC-FOO Partial Shared System:** the PIC and FOO are **jointly responsible** for all preflight decisions, functions, duties or tasks associated with the operational control of a flight, but during flight the PIC has sole responsibility. Such systems employ flight monitoring if required by the Authority or desired by the Operator.
  - **PIC-Management Shared System:** The PIC and a designated member of management, often the Director of Flight Operations or any suitably qualified and knowledgeable member of management designated by the operator are **jointly responsible** for the functions, duties or tasks associated with the operational control of a flight. The responsibility to carry out actual functions, duties or tasks such as flight planning, supporting/briefing the crew or flight monitoring is typically assigned to other non-management personnel such as FOOs or FOAs. Such systems employ flight monitoring if required by the Authority or desired by the Operator.
- Non-shared systems in which operational control **responsibility** is assigned only to the PIC who may or may not be assisted by other support personnel, for example;
  - **PIC-only System:** The PIC is **solely responsible** for completing all tasks (unassisted) related to the operational control of each flight. This does not preclude administrative personnel from providing, collecting or assembling operational documents or data related to each flight on behalf of the PIC as defined in **Table 3.1**. Such systems employ flight monitoring if required by the Authority or desired by the Operator.
  - **PIC-assisted System:** The PIC is **solely responsible** for all decisions regarding operational control. However, the PIC may be assisted by others, such as an FOO, FOA or a member of management assigned the responsibility to carry out specific functions, duties or tasks, such as flight planning, support, briefing and

in-flight monitoring. Such systems employ flight monitoring if required by the Authority or desired by the Operator.

When operational control functions are outsourced to external service providers, an operator retains overall responsibility for operational control and would ensure such service providers are subjected to contractual and monitoring processes as specified in **DSP 1.11.1** and **1.11.2**.

**Table 3.1** categorizes operational control personnel, defines their authority, identifies their responsibilities and illustrates the relationship of such responsibilities to the operation as a whole.

**Table 3.5** defines the competencies of individuals assigned the responsibility for operational control and/or the responsibility to carry out individual operational control functions, duties or tasks.

FOO and/or FOA responsibilities for operational control typically begin when assigned a flight during flight preparation and end after flight termination.

FOA personnel may be assigned specific flight responsibilities depending on area of expertise or general (non-flight specific) responsibilities in support of other operational control personnel or functions.

The responsibilities of administrative personnel utilized in operational control functions are limited to the provision or collection of operational data.

**DSP 1.3.6** If an FOO is utilized in the system of operational control, the Operator shall assign responsibility to such personnel for:

- i) Assisting the PIC in flight preparation and providing required information;
- ii) Assisting the PIC in preparing the operational and ATS flight plans;
- iii) When applicable, signing the operational and ATS flight plans;
- iv) Filing the ATS flight plan with the appropriate ATS unit;
- v) Furnishing the PIC, while in flight, with appropriate information that may be necessary for the safe conduct of the flight;
- vi) In the event of an emergency, initiating relevant procedures as specified in the OM. **(GM)**

### Guidance

The specifications of this provision apply to FOO personnel employed in operational control functions.

The authority and responsibilities of an FOO are defined in **Table 3.1**.

One or more of these responsibilities may be delegated to an FOA.

The specification in item iv) may be satisfied by the PIC.

The specification in item v) may be satisfied by the PIC, if access to such information is available from other sources.

**DSP 1.3.7** The Operator shall ensure, in the event of an emergency situation that endangers the safety of the aircraft or persons, and which becomes known first to the Operator, the FOO, FOA or other delegated person is assigned responsibility for implementation of action in accordance with **DSP 1.3.8**, to include, where necessary:

- i) Initiation of emergency procedures, as outlined in the OM;
- ii) Notification to the appropriate authorities, without delay, of the nature of the situation;
- iii) A request for assistance, if required. **(GM)**

### Guidance

The specification in item i) refers to notification to the appropriate authorities without delay and/or within a period(s) specified by each applicable authority.

Applicable authorities include those authorities that have jurisdiction over international operations conducted by an operator over the high seas or the territory of a state that is other than the State of the Operator.

**DSP 1.3.8** The Operator shall have a process to ensure, in the event of an emergency, the FOO, FOA or other delegated person:

- i) Initiates procedures as outlined in the OM, while avoiding taking any action that would conflict with ATC procedures;
- ii) Conveys, by any available means, safety-related information to the PIC that may be necessary for the safe conduct of the flight, including information related to any amendments to the flight plan that become necessary in the course of the flight. **(GM)**

### Guidance

Processes used for operational control of flights in the event of an emergency would be compatible with any operating procedures that have been established by the agencies providing system services for air traffic control. Such compatibility is necessary to avoid conflict and ensure an effective exchange of information between the operator and any of the service agencies.

During an operational emergency, the procedures specified in item i) would be designed to not conflict with ATC procedures, such as separation standards, controller instructions, minimum flight altitude assignments or any other restrictions imposed by ATC. During an emergency, however, the PIC may exercise emergency authority and take any action necessary in the interest of the safety of the passengers and aircraft. This would not preclude the PIC, in accordance with requirements of the applicable authorities, from taking any action necessary during an emergency in the interest of the safety of the passengers and aircraft.

Also, it would be important for the PIC to convey relevant information to the FOO, FOA or other delegated person during the course of the flight, particularly in the context of emergency situations.

## 1.4 Communication and Coordination

**DSP 1.4.1** The Operator shall have a communication system that enables an exchange of information relevant to operational control throughout the management system and in areas where operations are conducted. **(GM)** ◀

### Guidance

Refer to Guidance associated with **ORG 1.4.1** located in ISM Section 1.

The specifications of this provision may be satisfied by the flight operations organization and/or other organization(s) with responsibilities related to the operational control of flights.

This specification also applies to coordination among appropriate managerial personnel associated with supervision of operational control.

**DSP 1.4.2** The Operator shall have a system that ensures operational control personnel have access to information relevant to the safe conduct of each flight, to include information associated with:

- i) The aircraft (MEL, maintenance);
- ii) Meteorology;
- iii) Safety (current accident and incident notification procedures);
- iv) Routes, including over water and critical terrain (NOTAMs, facilities, outages);
- v) Air Traffic Services (ATS). **(GM)**

## Guidance

The specifications of this provision apply to the PIC, FOO and FOA, whose job functions require access to information in one or more of the areas specified.

**DSP 1.4.3** The Operator shall have a communication system that ensures the FOO, FOA and/or other person delegated responsibilities in accordance with **DSP 1.3.7** and **1.3.8** are provided with current accident and incident notification procedures.

## 1.5 Provision of Resources

**DSP 1.5.1** The Operator shall have the necessary facilities, workspace, equipment and supporting services, as well as work environment, to satisfy operational control safety and security requirements. **(GM)** ◀

### Guidance

Refer to Guidance associated with **ORG 1.6.1** located in ISM Section 1.

The specifications of this provision refer only to the infrastructure and resource requirements that would be necessary to deliver safe and secure flight operations, to include operational control and support facilities, services and equipment.

The specifications of this provision may be satisfied by the flight operations organization and/or other organization(s) with responsibilities related to the operational control of flights.

**DSP 1.5.2** The Operator shall ensure management and non-management operational control positions within the organization that require the performance of functions relevant to the safety of flights are filled by personnel on the basis of knowledge, skills, training and experience appropriate for the position. **(GM)** ◀

### Guidance

Refer to Guidance associated with **ORG 1.6.2** located in ISM Section 1.

The operational control positions subject to the specifications of this provision include, as a minimum:

- Managerial personnel, as defined by the operator, required to ensure control and supervision of flight operations in accordance with **DSP 1.1.1**;
- Nominated post holders as required by the Authority if applicable;

FOO knowledge, skill and experience requirements are in accordance with **DSP 1.5.5, 1.5.6** and, **1.5.8**.

FOA knowledge, skill and experience requirements are in accordance with **DSP 1.5.7** and **1.5.8**.

FOO and FOA training requirements are in accordance with the applicable provisions of Subsection 2, Training and Qualification.

PIC knowledge, skill, experience and training requirements are in accordance with the applicable provisions of ISM Section 2 (FLT), Subsection 2, Training and Qualification.

**DSP 1.5.3** The Operator shall have a process to ensure applicants hired in operational control functions are required to demonstrate the capability of speaking and reading in a language that will permit communication with other areas within the organization relevant to operational control.

**DSP 1.5.4** If a licensed FOO is utilized in the system of operational control, the Operator shall ensure each FOO, prior to being assigned to operational control duties, holds a valid Flight Operations Officer or Flight Dispatcher license issued or recognized by the State. **(GM)**

## Guidance

The specifications of this provision apply only to FOO personnel who require licensing or certification by the State in order to participate in an approved or accepted system of operational control.

**DSP 1.5.5** If an FOO is utilized in the system of operational control, the Operator shall ensure such personnel, prior to being assigned to operational control duties:

- i) As applicable, meet minimum age, knowledge, experience and skill requirements of the State;
- ii) Have demonstrated knowledge and/or proficiency in *all* competencies of operational control, as specified in **Table 3.5**;
- iii) Have demonstrated the ability to analyze weather, create accurate flight plans and provide assistance to flights;
- iv) Complete an observation flight or simulator observation in accordance with **DSP 2.3.4. (GM)**

## Guidance

The specifications of this provision apply to each FOO, whether licensed or not, that participates in an approved or accepted system of operational control.

**DSP 1.5.6** If an FOO is utilized in the system of operational control, the Operator *should* ensure personnel hired to perform the FOO functions are not less than 21 years of age and meet one or more of the following criteria:

- i) Have, as a minimum, one year of experience as an assistant in the operational control of air transport flights, or
- ii) Have satisfactorily completed a formal training course as a flight operations officer or flight dispatcher, or
- iii) Have, as a minimum, a total of two years service in any one or combination of the following:
  - a) Flight crew member in air transport operations;
  - b) Meteorologist in an organization dispatching aircraft;
  - c) Air traffic controller;
  - d) Technical supervisor of FOO personnel;
  - e) Technical supervisor of air transportation systems. **(GM)**

## Guidance

The specifications of this provision apply to each FOO, whether licensed or not, who participates in an approved or accepted system of operational control.

**DSP 1.5.7** If an FOA is utilized in the system of operational control to support or assist the PIC or FOO in specific areas of competency, the Operator shall ensure such personnel, prior to being assigned duties in an operational control function, have received training for their specific area of competency and:

- i) As applicable, meet minimum age, knowledge, experience and skill requirements of the Authority;
- ii) Have demonstrated knowledge and/or proficiency in the competencies of operational control appropriate to any assignment of duties, as specified in **Table 3.5**;
- iii) Have demonstrated the ability to provide assistance, in their specific area of competency, to the PIC and/or FOO, as applicable. **(GM)**



## Guidance

The specifications of this provision apply only to FOA personnel who support or assist the PIC or FOO.

FOA personnel need only demonstrate knowledge and ability to assist flights in their area(s) of competence.

**DSP 1.5.8** If an FOO or FOA is utilized in the system of operational control, the Operator shall have a process to ensure such personnel, as applicable, prior to being assigned duties in an operational control function;

- i) Are trained to a minimum experience level acceptable to the Operator and/or State;
- ii) Have demonstrated proficiency in the performance of the applicable operational control function(s) under the supervision of qualified operational control personnel. **(GM)**

## Guidance

Newly hired operational control personnel may include individuals who already work for the operator in another area, that have worked in an operational control position or function for another operator, or that are newly trained and newly hired, having never worked in an operational control function.

The minimum amount of time needed to demonstrate proficiency under the supervision of qualified operational control personnel will depend on the operational control function being provided and the requirements of the operator and/or State.

The operator may use an evaluation or check to determine that knowledge competencies of applicable areas are attained by each individual assigned to an operational control function.

Results of any evaluations are documented and retained in accordance with **DSP 1.8.1**.

**DSP 1.5.9** If an FOO, FOA, or other personnel that support or assist in the operational control of flights are utilized in the system of operational control, the Operator shall have a policy regarding the use of psychoactive substances by such personnel, as applicable, which, as a minimum:

- i) Prohibits the exercise of duties while under the influence of psychoactive substances;
- ii) Prohibits the problematic use psychoactive substances;
- iii) Requires that all personnel who are identified as engaging in any kind of problematic use of psychoactive substances are removed from safety-critical functions;
- iv) Conforms to the requirements of the Authority. **(GM)**

## Guidance

Refer to the IRM for the definitions of *Biochemical Testing*, *Psychoactive Substance* and *Problematic Use of Substances*.

Operators subject to laws or regulations of the State that preclude the publication of a psychoactive substance prohibition policy as specified in this provision may demonstrate an equivalent method of ensuring that personnel engaging in any kind of problematic use of psychoactive substance abuse do not exercise their duties and 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.

Examples of other subjects that might be addressed in a comprehensive and proactive policy include:

- Education regarding the use of psychoactive substances;
- Identification, treatment and rehabilitation;
- Employment consequences of problematic use of psychoactive substances;

- Biochemical testing;
- Requirements of ICAO and the Authority. **(GM)**

Additional guidance may be found in the *ICAO Manual on Prevention of Problematic use of Substances in the Aviation Workplace* (Doc 9654-AN/945).

## 1.6 Documentation System

**DSP 1.6.1** The Operator shall have a system for the management and control of documentation and/or data used directly in the conduct or support of operational control, to include processes for:

- i) Identifying the version of operational documents;
- ii) Distribution that ensures the availability of the current version of the OM:
  - a) To appropriate operational control personnel.
  - b) If the operator outsources operational control functions, to external service providers.
- iii) Review and revision as necessary, to maintain the currency of information contained in documents;
- iv) Document retention that permits reference and accessibility;
- v) Identification and control of obsolete and/or reproduced documents;
- vi) Retention and dissemination of documentation received from external sources, to include manuals and documents from regulatory authorities and original equipment manufacturers. **(GM)** ◀

### Guidance

Refer to Guidance associated with **ORG 2.1.1** located in ISM Section 1.

The specifications of this provision may be satisfied by the flight operations organization documentation management and control system, if such system is used in conjunction with the operator's system of operational control.

Internal documents are subject to management and control.

Refer to **DSP 1.6.2** and **DSP 1.6.3** for a description of the documents subject to management and/or control.

The specifications in item vi):

- Are managed by the operator and controlled by the issuing entity.
- Include applicable regulations and associated documents, original manufacturer's manuals and documents and/or data produced externally for the operator.
- Typically include dangerous goods documents, route and airports charts, FMS databases, airport analysis data, weight/mass and balance data and performance data.

This provision refers to the library, which may be any organized system for documentation retention, and which contains current manuals, regulatory publications and other essential documents associated with operational control.

**DSP 1.6.2** The Operator shall ensure the management and control system for operational control documentation specified in **DSP 1.6.1** addresses, as a minimum:

- i) The OM;
- ii) Other documents that are referenced in the OM and contain information and/or guidance relevant to operational control personnel. **(GM)**

## Guidance

The specifications of this provision may be satisfied by the flight operations organization documentation management and control system, if used in conjunction with an operator's system of operational control.

Internal documents are subject to management and control.

**DSP 1.6.3** The Operator shall ensure the management and control system for operational control documentation specified in **DSP 1.6.1** addresses, as a minimum, the following documents from external sources:

- i) As applicable, regulations of the State of the Operator and of other states or authorities relevant to operations;
- ii) As applicable, ICAO International Standards and Recommended Practices;
- iii) Airworthiness Directives;
- iv) Aeronautical Information Publications, including NOTAMS;
- v) State-approved or -accepted Aircraft Flight Manuals (AFM);
- vi) Manufacturer's aircraft operating manuals, including performance data, weight and balance data/manuals, checklists and MEL\CDL;
- vii) As applicable, other manufacturer's operational communications. **(GM)**

## Guidance

Refer to the IRM for the definitions of *Aeronautical Information Publication (AIP)*, *Approved Flight Manual*, *Airworthiness Directive (AD)*, *Configuration Deviation List (CDL)*, *Minimum Equipment List (MEL)*, *State Acceptance* and *State Approval*.

The specifications in item i) and ii) refer to applicable regulations imposed on the operator by other states or authorities (e.g., FAR 129). Applicable authorities include those authorities that have jurisdiction over international operations conducted by an operator over the high seas or the territory of a state that is other than the State of the Operator.

The specifications of this provision may be satisfied by the flight operations organization documentation management and control system, if used in conjunction with the operator's system of operational control.

External documents are managed by the operator in accordance with specifications vi) and vii) of **DSP 1.6.1** and controlled by the issuing entity.

The specification in item vii) refers to bulletins or directives distributed by the manufacturer for the purposes of amending aircraft technical specifications and/or operating procedures.

**DSP 1.6.4** The Operator shall ensure documentation used in the conduct or support of operational control:

- i) Is identifiable and accessible to operational control personnel;
- ii) Contains legible and accurate information;
- iii) Is written in language(s) understood by operational personnel;
- iv) Is presented in a format that meets the needs of operational control personnel;
- v) Is accepted or approved by the Authority. **(GM)** ◀

## Guidance

The intent of this provision is for an operator to provide operational documentation in a form that is acceptable to the Authority and useable by all relevant personnel.

Documentation used in the support of operations control may:

- Exist in electronic form;

- Be issued in more than one language.

**DSP 1.6.5** If the Operator utilizes an electronic system for the management and control of any documentation and/or data used directly in the operational control of flights, the Operator shall ensure the system provides for a scheduled generation of back-up files for such documentation or data. **(GM)** →

#### **Guidance**

Refer to Guidance associated with **ORG 2.1.2** located in ISM Section 1.

## **1.7 Operations Manual**

**DSP 1.7.1** The Operator shall have an Operations Manual (OM) for the use of operational control personnel, which may be issued in separate parts, and which contains the policies, procedures and other guidance or information necessary for compliance with applicable regulations, laws, rules and Operator standards. As a minimum, the content of the OM shall be in accordance with the specifications in **DSP 1.6.4** and **Table 3.2**. **(GM)**

#### **Guidance**

Refer to the **FLT 1.7.3** and associated guidance for human factors principles observed in the design of the OM.

**DSP 1.7.2** The Operator shall have a description of the Operational Flight Plan (OFP) or equivalent document that is published in the OM and includes:

- i) Guidance for use by operational control personnel;
- ii) An outline of the content in accordance with specifications in **Table 3.3**. **(GM)**

#### **Guidance**

Items readily available in other documentation, obtained from another acceptable source or irrelevant to the type of operation may be omitted from the OFP.

**DSP 1.7.3** The Operator shall ensure those parts of the OM relevant to operational control personnel are clearly identified and defined.

**DSP 1.7.4** If an FOO or FOA is utilized in the system of operational control, the Operator shall have guidance and procedures to enable such personnel, as applicable, to comply with the conditions and limitations specified in the AOC. **(GM)**

#### **Guidance**

Refer to Guidance associated with **FLT 1.2.1** for information on the content of the AOC, to include conditions and limitations.

The conditions and limitations of the AOC are to be available in documentation available to flight operations officers/flight dispatchers (FOO) and/or flight operations assistant (FOA) if the operator's system of operational control requires their use.

## **1.8 Records System**

**DSP 1.8.1** The Operator shall have a system for the management and control of operational control records to ensure the content and retention of such records is in accordance with requirements of the Authority, as applicable, and to ensure operational records are subjected to standardized processes for:

- i) Identification;
- ii) Legibility;
- iii) Maintenance;
- iv) Retention and retrieval;

- v) Protection and security;
- vi) Disposal, deletion (electronic records) and archiving. **(GM)** ◀

## Guidance

Refer to guidance associated with **ORG2.2.1** located in ISM Section 1.

**DSP 1.8.2** The Operator shall ensure the system for the management and control of operational control records as specified in **DSP 1.8.1** addresses, as a minimum, records that document or include:

- i) Operational information and data for each flight specified in **DSP 1.8.4** and **Table 3.4**;
- ii) Operational control communication records specified in **DSP 1.8.5**;
- iii) The fulfillment of FOO and/or FOA qualification requirements specified in **DSP 1.8.6, 1.8.7, 1.8.8** and **1.8.9**, as applicable;
- iv) A signed copy of the OFP, as specified in **DSP 3.2.5**.

## Guidance

The specifications in items i) and iv) may be satisfied by the flight operations organization records system, if used in conjunction with the operator's system of operational control.

**DSP 1.8.3** If the Operator utilizes an electronic system for the management and control of operational control records, the Operator shall ensure the system provides for a scheduled generation of back-up record files. **(GM)** ◀

## Guidance

Refer to Guidance associated with **ORG2.2.2** located in ISM Section 1.

**DSP 1.8.4** The Operator shall have a process or procedures to record and retain, for a period of time determined by the Operator or the Authority, operational information and data for each flight, and, as a minimum, such retained flight information and data shall be in accordance with the specifications in **Table 3.4**. **(GM)**

## Guidance

Operational information and data may be retained by different means (e.g. ACARS logs, paper logs, manually, computer systems).

**DSP 1.8.5** The Operator shall have a process or procedures to ensure copies of communications records associated with operational control are retained for a period of time determined by the Operator or the Authority. **(GM)**

## Guidance

The communications typically subject to the record keeping specifications of this provision include operational voice, text, or data communications to/from:

- Flights from the period beginning at the originating station when flight crew begins their duties on the flight deck until the flight crew finishes their duties on the flight deck at the terminating station;
- If applicable, the operations control center.

**DSP 1.8.6** If an FOO or FOA is utilized in the system of operational control, the Operator shall ensure training records for such personnel, as applicable, are managed in accordance with **DSP 1.8.1**, to include records that document completion of:

- i) Initial qualification;
- ii) Continuing qualification. **(GM)**

## Guidance

Initial qualification training records are retained permanently while an individual is employed by an operator, unless required otherwise by the Authority.

Continuing qualification (recurrent) training records are retained for three years to ensure that the subjects required in **DSP 2.2.2** have been covered during that time period.

PIC training records are addressed in ISM Section 2 (FLT).

**DSP 1.8.7** If an FOO or FOA is utilized in the system of operational control, the Operator shall have a process to maintain records that document completion of an annual competency evaluation by such personnel, as applicable, for a period in accordance with requirements of the Authority, but not less than one year.

**DSP 1.8.8** If the Operator has a flight deck familiarization program for FOO personnel in accordance with **DSP 2.3.4**, the Operator *should* have a procedure to retain a record of the operational flight deck familiarization activities completed by each FOO for a period of time in accordance with requirements of the Operator and/or Authority.

**DSP 1.8.9** If a licensed FOO is utilized in the system of operational control, the Operator shall have a procedure to retain a copy of the license of each FOO for a period of time, in accordance with the requirements of the Operator and/or Authority. **(GM)**

## Guidance

This provision is only applicable to operators that have a state requirement for licensing of FOO personnel in conjunction with an approved system of operational control.

**1.9** (Intentionally open)

## **1.10 Quality Assurance Program**

**DSP 1.10.1** The Operator shall have a quality assurance program that provides for the auditing and evaluation of the management system and operational control functions at planned intervals to ensure the organization(s) with responsibility for operational control is(are):

- i) Complying with applicable regulations and standards of the Operator;
- ii) Satisfying stated operational control needs;
- iii) Identifying areas requiring improvement;
- iv) Identifying hazards to operations. **[SMS] (GM) ◀**

## Guidance

Refer to the IRM for the definition of *Quality Assurance*.

Refer to Guidance associated with **ORG 3.4.1** located in ISM Section 1 for typical audit program requirements.

Refer to Table 3.1 for examples of operational control functions that could be subjected to audit and evaluation as part of an operator's quality assurance program.

Previous audit results could be made available by the operator as evidence of program implementation.

Audit records generated by the quality assurance program would be managed and controlled in accordance with **DSP 1.8.1**

The management systems responsible for operational control might vary according to the operator and/or State.

If operational control is under the flight operations management system, refer to ISM Section 2 (FLT), Subsection 1.10.

**DSP 1.10.2** The Operator shall have an audit planning process and sufficient resources to ensure audits of operational control functions are:

- i) Scheduled at intervals that meet management system requirements;
- ii) Completed within a specified time period. **(GM)** ◀

**Guidance**

Refer to Guidance associated with **ORG 3.4.10** located in ISM Section 1. Intervals of surveillance activities might vary depending on the operator. Previous outcomes would typically be considered in determining audit intervals.

**DSP 1.10.3** The Operator shall have a process to ensure significant issues arising from quality assurance audits of operational control functions are subject to management review in accordance with **ORG 1.5.1** and, as applicable, **ORG 1.5.2 [SMS] (GM)** ◀

**Guidance**

Refer to **ORG 1.5.1, 1.5.2, 3.4.4** and associated Guidance located in ISM Section 1.

Significant issues would be defined by the operator, but are typically regarded as those issues that could affect the safety and/or quality of operations.

**DSP 1.10.4** The Operator shall have a process for addressing findings that result from audits of operational control functions, which ensures:

- i) Identification of root cause(s);
- ii) Development of corrective action as appropriate to address the finding(s);
- iii) Implementation of corrective action in appropriate operational areas;
- iv) Evaluation of corrective action to determine effectiveness. ◀

## 1.11 Outsourcing and Product Quality Control

**DSP 1.11.1** If the Operator has external service providers conduct outsourced functions associated with the operational control of flights, the Operator shall have a process to ensure a contract or agreement is executed with such external service providers. Such contract(s) or agreement(s) shall identify measurable specifications that can be monitored by the Operator, to ensure requirements that affect the safety of flight operations are being fulfilled by the service provider. **(GM)** ◀

**Guidance**

Refer to Guidance associated with **ORG 3.5.1** located in ISM Section 1.

Examples of functions that might be outsourced typically include flight planning, flight monitoring, weather provider and/or weight and balance provider.

**DSP 1.11.2** If the Operator has external service providers conduct operational functions associated with the operational control of flights, the Operator shall have a process to monitor such external service providers, to ensure requirements that affect the safety of flight operations are being fulfilled. **(GM)** ◀

**Guidance**

Refer to Guidance associated with **ORG 3.5.2** located in ISM Section 1.

An operator would typically use external auditing as the preferred process for the monitoring and control of external organizations.

**DSP 1.11.3** The Operator *should* have a process to ensure data or products relevant to the safety of aircraft operations that are purchased or otherwise acquired from an external vendor or supplier (other than electronic navigation data products as specified in **DSP 1.11.4**) meet the

product technical requirements specified by the Operator prior to being used in the operational control of flights. **(GM) ◀**

## Guidance

Refer to guidance associated with **ORG 3.6.1** located in ISM Section 1.

Conformity with this provision ensures databases and other internal and external sources of operational data provided for operational control are current, accurate and complete.

Examples of acquired operational control products typically include performance data, weight and balance data and NOTAMs.

**DSP 1.11.4** If the Operator utilizes electronic navigation data products for application in operational control, the Operator shall have processes, approved or accepted by the State, if required, which ensure such electronic navigation data products acquired from suppliers, prior to being used in operations:

- i) Are assessed for a level of data integrity commensurate with the intended application;
- ii) Are compatible with the intended function of equipment in which it is installed. **(GM)**

## Guidance

Refer to the IRM for the definition of *Navigation Data Integrity*.

The responsibility of ensuring electronic navigation data is assessed for integrity and is compatible with the intended application rests with the operator.

Navigation database integrity can be assured by obtaining data from a supplier accredited in accordance with approved or accepted standards of data integrity and quality. Such standards include but are not limited to:

- RTCA/DO-200A, Standards for Processing Aeronautical Data;
- RTCA/DO-201A, Standards for Aeronautical Information (area navigation and RNP Operations);
- Advisory Circular (AC) 20-153, Acceptance of Data Processes and Associated Navigation Databases in the United States;

The specifications in items i) and ii) may be satisfied by an operator, in accordance with State-approved or -accepted methods for assuring data integrity and compatibility, such as:

- Obtaining a letter of acceptance from an applicable authority stating the data supplier conforms to a recognized standard for data integrity and compatibility that provides an assurance level of navigation data integrity and quality sufficient to support the intended application **or**
- The existence of operator validation processes to determine navigation data compatibility and accuracy that provide an assurance level of navigation data integrity and quality sufficient to support the intended application.

Monitoring and control of electronic navigation data products acquired from suppliers are also in accordance with **DSP 1.11.3**.

**DSP 1.11.5** If the Operator has external service providers conduct operational functions associated with the operational control of flights, the Operator *should* include auditing as a process for the monitoring of external service providers in accordance with **DSP 1.11.2. (GM) ◀**

## Guidance

Monitoring and control of external organizations by an operator might include random samplings, product audits, supplier audits, or other similar methods.



## 1.12 Safety Management

### *Risk Management*

**DSP 1.121** The Operator *should* have processes implemented in the organization responsible for the operational control of flights that include a combination of reactive and proactive methods for safety data collection and analysis to identify hazards that present existing or potential risks to aircraft operations. **[SMS] (GM) ◀**

#### **Guidance**

Refer to the IRM for the definitions of *Hazard (Aircraft Operations)* and *Safety Risk*.

Hazard identification is an element of the Safety Risk Management component of the SMS framework.

Refer to Guidance associated with **ORG 3.1.1** located in ISM Section 1.

**DSP 1.122** The Operator *should* have a safety risk assessment and mitigation program implemented in the organization responsible for the operational control of flights that specifies processes to ensure:

- i) Hazards are analyzed to determine the existing and potential safety risks to aircraft operations;
- ii) Safety risks are assessed to determine the requirement for risk control action(s);
- iii) When required, risk mitigation actions are developed and implemented in operational control. **[SMS] (GM) ◀**

#### **Guidance**

Refer to the IRM for the definition of *Rescue and Fire Fighting Services (RFFS)*.

Risk assessment and mitigation is an element of the Safety Risk Management component of the SMS framework.

Refer to Guidance associated with **ORG 3.1.2** located in ISM Section 1.

Hazards relevant to the conduct of aircraft operations may include:

- Weather (e.g. adverse, extreme and space);
- Geophysical events (e.g. volcanic ash, earthquakes, tsunamis);
- ATM congestion;
- Mechanical failure;
- Geography (e.g. adverse terrain, large bodies of water, polar);
- Aerodrome constraints (e.g. isolated, runway closure, rescue and RFFS capability);
- Any other applicable hazard that would pose a safety risk to aircraft operations (e.g. radiation).

### *Operational Reporting*

**DSP 1.123** The Operator shall have an operational reporting system implemented in the organization responsible for the operational control of flights that:

- i) Encourages and facilitates operational control personnel to submit reports that identify safety hazards, expose safety deficiencies and raise safety concerns;
- ii) Ensures mandatory reporting in accordance with applicable regulations;
- iii) Includes analysis and operational control management action as necessary to address safety issues identified through the reporting system. **[SMS] (GM) ◀**

#### **Guidance**

Operational reporting is considered a *proactive* hazard identification activity in an SMS.

Refer to Guidance associated with **ORG3.1.3** located in ISM Section 1.

**DSP 1.124** The Operator *should* have a confidential safety reporting system implemented within the organization responsible for the operational control of flights in a manner that encourages and facilitates the reporting of events, hazards and/or concerns resulting from or associated with human performance in operations. **[SMS] (GM) ◀**

**Guidance**

A confidential safety reporting system is considered a *proactive* hazard identification activity in an SMS.

Refer to Guidance associated with **ORG3.1.4** located in ISM Section 1.

**Safety Performance Monitoring and Management**

**DSP 1.125** The Operator *should* have processes implemented in the organization responsible for the operational control of flights for setting performance measures as a means to monitor the safety performance of the organization and to validate the effectiveness of risk controls. **[SMS] (GM) ◀**

**Guidance**

Refer to the IRM for the definition of *Safety Assurance*.

Setting measurable safety objectives is included in the safety performance monitoring and measurement element of the Safety Assurance component of the SMS framework.

By setting performance measures, an operator is able to track and compare its operational performance against a target (i.e. the performance objective, typically expressed as a rate or number reduction) over a period of time (e.g. one year). Achievement of the target (or objective) would represent an improvement in the operational performance. The use of performance measures is an effective method to determine if desired safety outcomes are being achieved, and to focus attention on the performance of the organization in managing operational risks and maintaining compliance with relevant regulatory requirements.

Refer to Guidance associated with **ORG3.2.1** located in ISM Section 1.

## 2 Training and Qualification

### 2.1 Training and Evaluation Program

#### **General**

**DSP 2.1.1** The Operator shall have a training program, approved or accepted by the Authority, to ensure the operational control personnel specified in **Table 3.1**, as applicable, are competent to perform any assigned duties relevant to operational control. Such program shall, as a minimum, address:

- i) Initial qualification;
- ii) Continuing qualification. **(GM)**

#### **Guidance**

Refer to the IRM for the definition of *State Acceptance*.

Not all states require the approval or acceptance of a training program for operational control personnel. In such cases, state acceptance is considered implicit.

A training program for operational control personnel includes, as a minimum:

- Initial and recurrent training in accordance with the specifications of **Table 3.1** and **Table 3.5**;
- Recurrent human factors training for FOO personnel;
- A method of qualification through written, oral and/or practical evaluation.

**DSP 2.1.2** If an FOO or FOA is utilized in the system of operational control, the Operator shall ensure the training program specifies minimum training hours for such personnel, as applicable, in accordance with requirements of the Operator and/or State. **(GM)**

#### **Guidance**

The training curriculum specifies minimum training hours for each subject area and also indicates whether it has been mandated by the Authority or operator.

**DSP 2.1.3** The Operator shall have a process to ensure course materials used in training programs for personnel responsible for operational control are periodically evaluated to ensure compliance with the qualification and performance standards of the Operator and/or Authority. **(GM)**

#### **Guidance**

Such process provides for:

- Continual improvement and effectiveness;
- Incorporation of the latest regulatory and operational changes in a timely manner.

**DSP 2.1.4–2.1.6** (Intentionally Open)

#### **Instructors and Evaluators**

**DSP 2.1.7** If an FOO or FOA is utilized in the system of operational control, the Operator shall have a process to ensure those individuals designated to evaluate the competency of such personnel, as applicable, are current and qualified to conduct such evaluations. **(GM)**

#### **Guidance**

Personnel delegated to evaluate FOO personnel are current and qualified as a FOO in accordance with requirements of the State and/or operator.

Personnel delegated to evaluate FOA personnel are current and qualified in the applicable competencies of operational control in accordance with requirements of the State and/or operator.

The specifications of this provision refer to personnel delegated to evaluate the competency of operational control personnel only. The qualifications for individuals delegated to train operational control personnel are in accordance with requirements of the State and/or operator.

## 2.2 Training Elements

**DSP 2.2.1** If an FOO or FOA is utilized in the system of operational control, the Operator shall ensure such personnel, prior to being assigned to operational control duties, receive initial training and demonstrate appropriate knowledge and/or proficiency in the applicable competencies of operational control as specified in **Table 3.5**. **(GM)**

### Guidance

FOO personnel who have completed training programs conducted in accordance with ICAO 7192 D-3 meet the specifications of this provision.

FOO initial training programs contain all of the competencies in **Table 3.5** that are relevant to the operations of the operator.

FOA initial training programs contain the competencies in **Table 3.5** that are relevant to their job function as determined by the operator.

**DSP 2.2.2** If an FOO or FOA is utilized in the system of operational control, the Operator shall ensure such personnel receive recurrent training in the applicable competencies of operational control, as specified in **Table 3.5**. Recurrent training shall be completed on a frequency in accordance with requirements of the Authority, if applicable, but not less than *once during every 36-month period plus or minus one calendar month from the original qualification anniversary date or base month*. **(GM)**

### Guidance

Human factors training is accomplished in accordance with **DSP 2.2.3**.

Dangerous goods training is accomplished in accordance with **DSP 2.2.4**.

The recurrent training program for FOO personnel addresses all of the competencies that are relevant to the operations of the operator as specified in **Table 3.5**.

The recurrent training program for FOA personnel addresses each of the competencies relevant to their specific job function and to the operations of the operator as specified in **Table 3.5**.

Different methods of conducting recurrent training are acceptable, including formal classroom study, home study, computer-based training, seminars and meetings. All recurrent training, regardless of method, is documented and retained in accordance with **DSP 1.8.1**.

**DSP 2.2.3** If an FOO is utilized in the system of operational control, the Operator shall ensure such personnel receive training in human factors on a frequency in accordance with requirements of the Authority, if applicable, but not less than *once during every 36-month period plus or minus one calendar month from the original qualification anniversary date or base month*. **(GM)**

### Guidance

Refer to the IRM for the definition of *Human Factors*.

**DSP 2.2.4** If an FOO or FOA is utilized in the system of operational control and has duties or responsibilities related to the carriage of dangerous goods, the Operator shall ensure such personnel receive training in the operational procedures for the carriage of dangerous goods on a frequency in accordance with requirements of the Authority, if applicable, but not less than *once during every 24-month period plus or minus one calendar month from the original qualification anniversary date or base month*.

## 2.3 Line Qualification

**DSP 2.3.1** If an FOO or FOA is utilized in the system of operational control, the Operator shall have a line qualification program to ensure such personnel, prior to being assigned to operational control duties, have demonstrated proficiency in the applicable competencies of operational control, as specified in **Table 3.5**. **(GM)**

### Guidance

Proficiency is demonstrated annually and recorded in accordance with **DSP 1.8.1**.

Competencies of operational control are contained in **Table 3.5** and addressed based on the assigned area(s) of responsibility, to include:

- A proficiency review of an FOO that addresses all competencies relevant to the operations of the operator;
- A proficiency review of an FOA that is customized and addresses competencies specific to the assigned area(s) of responsibility and the operations of the operator.

**DSP 2.3.2** If an FOO, FOA or designated member of management is utilized in the system of operational control, the Operator shall have a line qualification program to ensure such personnel, prior to being assigned to operational control duties, have demonstrated the ability, as applicable, to:

- i) Assist the PIC in flight preparation and provide the relevant information required;
- ii) File a flight plan with the appropriate ATS unit;
- iii) Furnish the PIC in flight, by appropriate means, with information that may be necessary for the safe conduct of the flight;
- iv) Initiate, in the event of an emergency, applicable procedures as outlined in the OM. **(GM)**

### Guidance

FOO personnel are to demonstrate the ability to perform all duty functions.

FOA personnel are to demonstrate the ability to perform specific duty functions associated with assigned area(s) of responsibility.

A designated member of management that is directly involved with or performs the functions specified in this provision would have to meet the same demonstrated functional ability as specified for an FOO or FOA. Where the performance of the functions specified in this provision are delegated to others (i.e. to FOOs or FOAs), a designated member of management would have to demonstrate the knowledge necessary to accept the responsibilities and to understand the functions associated with the operational control of flights.

Item ii) refers to planning activities that involve ATS (e.g. flight plan filing, re-routes during flight, traffic flow management and/or slot controls).

**DSP 2.3.3** If an FOO is utilized in the system of operational control, the Operator shall ensure such personnel who have not performed duties as an FOO for a period of 12 consecutive months are not assigned to perform FOO duties until re-qualified, by demonstrating knowledge and/or proficiency in accordance with **DSP 2.2.1**.

**DSP 2.3.4** If an FOO is utilized in the system of operational control, the Operator shall ensure such personnel are not assigned to FOO duties unless, within the preceding 12 months *plus or minus one calendar month from the original qualification anniversary date or base month*, they have **either**:

- i) Observed one familiarization flight from the flight deck of an aircraft over any area or route segment where responsibility for operational control will be exercised, **or**
- ii) If approved by the State and/or if access to the aircraft flight deck is restricted by the Authority, observed a Line Operational Simulation (LOS) profile accomplished in a

representative flight simulator approved for the purpose by the State, and such profile addresses the areas or route segments where responsibility for operational control will be exercised. **(GM)**

## Guidance

Operators subject to laws or regulations of the State that prohibit the application of specification i) of this provision, and that cannot comply with specification ii) of this provision due to the non-existence of an representative flight training device, may demonstrate an equivalent method of ensuring the specifications of this provision are satisfied.

The familiarization flight or LOS is typically representative of the operational environment within which the FOO will be working. Examples of a representative environment include ultra long haul, long haul, short haul, over water, mountainous terrain, ETOPS, areas of special navigational requirements, or passenger versus cargo flights.

Familiarization flights typically include at least one takeoff and landing as well as a minimum of 2.5 to 5 hours on the flight deck. If a flight is operating a long-haul segment of more than 5 hours, the FOO is typically permitted to take a break during the cruise portion of the flight.

An operator, in accordance with the requirements of the State and other applicable authorities, may adjust the frequency of evaluations specified in this provision to minimize overlap, preserve the original qualification date and to ensure evaluations are completed within the annual cycle and any constraints set forth by the operator, State and/or applicable authorities.

## 2.4 Special Qualification

**DSP 2.4.1** If the Operator utilizes FOO personnel and the Operator's method of Operational Control requires shared responsibility between an FOO and the PIC, the Operator *should* ensure FOO personnel participate in joint resource management training activities with flight crew members for the purpose of enhancing coordination and a mutual understanding of the human factors involved in joint operational control. **(GM)**

## Guidance

The intent of this provision is to ensure that resource management issues of mutual concern to FOO personnel and flight crew members are addressed during initial and recurrent training. Such training may be achieved through the use of common learning objectives contained in the respective training curricula and does not necessarily require the physical presence of FOO personnel and flight crew members at a common training location.

## 3 Line Operations

### 3.1 General

**DSP3.1.1** If an FOO or FOA is utilized in the system of operational control, the Operator shall have a system that ensures MEL information is accessible to such personnel that have a need for such information. **(GM)**

#### Guidance

An effective system ensures operational control personnel are in receipt of relevant and current MEL information, as necessary, to complete operational control functions, duties or tasks.

**DSP3.1.2** The Operator shall have a process or procedures to ensure the PIC is provided with all documents, information and data necessary for the safe conduct of the flight.

**DSP3.1.3** If an FOO or FOA is utilized in the system of operational control, the Operator shall have procedures for succession to ensure, if necessary in the case of absence of such personnel, the responsibility for operational control functions is assumed by qualified personnel. **(GM)**

#### Guidance

Succession of responsibility refers to FOO personnel, if applicable, or other personnel with assigned responsibilities for operational control that support or assist the PIC during flight.

### 3.2 Flight Preparation and Planning

**DSP3.2.1** If an FOO or FOA is utilized in the system of operational control, the Operator shall have guidance and procedures to ensure such personnel, as applicable, assist the PIC in flight preparation and, as necessary, furnish required operational information.

**DSP3.2.2** If an FOO or FOA is utilized in the system of operational control, the Operator shall have a process or procedures to ensure such personnel, as applicable, and the PIC utilize a common set of flight documents for each planned flight. **(GM)**

#### Guidance

Refer to **Table 2.2** found in ISM Section 2 (FLT) for OM documentation requirements.

**DSP3.2.3** The Operator shall have a procedure to ensure an Operational Flight Plan (OFP) and Air Traffic Services (ATS) Flight Plan is generated for every intended flight.

**DSP3.2.4** If an FOO or FOA is utilized in the system of operational control, the Operator shall have guidance and procedures to ensure such personnel, as applicable, **either**:

- i) Prepare the OFP and ATS flight plan, **or**
- ii) Assist the PIC in the preparation of the OFP and ATS flight plan. **(GM)**

#### Guidance

In a non-shared system of operational control, the ATS flight plan may be prepared by the PIC.

**DSP3.2.5** The Operator shall have guidance and procedures that ensure the original OFP or equivalent document is accepted and signed by the following personnel, using either manuscript or an approved electronic method:

- i) The PIC for all systems of operational control;
- ii) The FOO for a shared system of operational control. **(GM)**

#### Guidance

In a shared system of operational control, the signatures of both the PIC and the FOO are required on the OFP.

**DSP 3.2.6** If an FOO is utilized in a shared system of operational control, the Operator shall have guidance and procedures to ensure en route amendments to the OFP are coordinated and verified through:

- i) A signature (manuscript or approved electronic method) by the FOO or other person responsible for operational control;
- ii) A recorded agreement of the PIC.

**DSP 3.2.7** If an FOO or FOA is utilized in the system of operational control, the Operator shall have a process or procedures to ensure Operator changes in an ATS flight plan that occur prior to departure are coordinated with the appropriate ATS unit before transmission to the aircraft by the FOO, FOA or other delegated person.

**DSP 3.2.8** The Operator shall have guidance and procedures to ensure a flight will not be commenced unless it has been ascertained, by every reasonable means available, that conditions and ground facilities required for the flight are adequate for the type of operation. **(GM)**

#### **Guidance**

Areas of operations to be reviewed for adequacy include, as applicable:

- Navigation aids;
- Runways, taxiways, ramp areas;
- Curfews;
- PPR (prior permission required);
- Field conditions;
- Lighting;
- ARFF/RFFS (airport rescue and fire fighting/rescue and firefighting services);
- Applicable operating minima.

**DSP 3.2.9** The Operator shall have guidance and procedures to ensure a flight is planned to depart only when current meteorological reports or a combination of reports and forecasts indicate that conditions at the airport of intended landing, or where a destination alternate is required, at least one destination alternate airport will, at the estimated arrival time, be at or above operating minima.

**DSP 3.2.10** The Operator shall have guidance and procedures to ensure, before a flight is commenced, meteorological conditions and expected delays are taken into account, and:

- i) The aircraft carries sufficient required fuel and oil to ensure it can safely complete the flight;
- ii) Reserve fuel is carried to provide for contingencies. **(GM)**

#### **Guidance**

The designation of a minimum oil quantity is typically provided by the manufacturer while the determination, monitoring and replenishment of oil supply are the responsibilities of engineering and maintenance and/or the flight crew.

**DSP 3.2.11** The Operator shall have guidance and procedures to ensure the following factors are considered when computing the fuel and oil required for a flight:

- i) Meteorological conditions;
- ii) Expected air traffic control routing and delays;
- iii) For IFR flights, one instrument approach at destination including a missed approach;
- iv) Procedures prescribed for en route loss of pressurization or failure of one or more engines, as applicable;



- v) Any other conditions that might cause increased fuel and/or oil consumption. **(GM)**

## Guidance

The designation of a minimum oil quantity is typically provided by the manufacturer while the determination, monitoring and replenishment of oil supply are the responsibilities of engineering and maintenance and/or the flight crew.

### 3.3 Aircraft Performance and Load Planning

**DSP 3.3.1** The Operator shall have guidance and procedures to ensure a planned flight does not exceed:

- i) The maximum performance takeoff and landing weight limits, based upon environmental conditions expected at the times of departure and arrival;
- ii) The aircraft structural takeoff, en route and landing weight limits.

**DSP 3.3.2** (Intentionally open)

**DSP 3.3.3** The Operator shall ensure qualified personnel perform weight and balance calculations. **(GM)**

## Guidance

Weight and balance calculations may be delegated to a FOO or an appropriately qualified FOA. The PIC may complete weight and balance calculations, if qualified in accordance with ISM Section 2 (FLT), Subsection 2.1, Training and Evaluation Program.

### 3.4 Icing Conditions

**DSP 3.4.1** The Operator shall have guidance and procedures to ensure a flight to be operated in known or expected icing conditions shall not be commenced unless the aircraft is certificated and equipped to be operated in such conditions.

**DSP 3.4.2** (Intentionally open)

**DSP 3.4.3** If the Operator has a De-/Anti-icing Program in accordance with **GRH 4.2.1**, the Operator shall have guidance and procedures to ensure a flight planned to operate in known or suspected ground icing conditions is subjected to the following:

- i) The aircraft has been inspected for ice accretion;
- ii) If necessary, the aircraft has been given appropriate de/anti-icing treatment. **(GM)**

## Guidance

Refer to Guidance associated with **GRH 4.2.1** located in Section 6.

### 3.5 Alternate and Diversion Planning

**DSP 3.5.1** The Operator shall have guidance and procedures to ensure a suitable takeoff alternate airport is selected and specified in the OFP whenever **either**:

- i) The weather conditions at the airport of departure are at or below the applicable airport operating landing minima, **or**
- ii) Other operational conditions exist that would preclude a return to the departure airport. **(GM)**

## Guidance

Takeoff alternates may also be designated via radio, ACARS, or other means to/by the FOO. Airport suitability includes acceptable weather and operational conditions (i.e., approaches, runway configuration, terrain, distance, etc.).

**DSP 3.5.2** The Operator shall have guidance and procedures to ensure conditions at the specified alternate airport for takeoff are at or above operating minima for the intended operation.

**DSP 3.5.3** If the Operator is required to identify en route alternate airports due to driftdown terrain clearance or operations under ETOPS, the Operator shall have guidance and procedures to ensure such en route alternate airports are:

- i) Selected and specified on the operational flight plan;
- ii) Specified on the ATS flight plan (ETOPS) where required by the State or the ATS system in use. **(GM)**

### Guidance

The intent of the specification in item i) is to ensure en route alternates, when required, are selected and subsequently specified on the OFP or other operational document available to the PIC in flight.

The intent of the specification in item ii) is to ensure en route alternates, when required for ETOPS, are specified on the ATS flight when required by the State or other applicable authority.

**DSP 3.5.4** If the Operator selects and specifies en route alternate airports on the OFP, the Operator shall have guidance and procedures to ensure en route alternate airports selected and specified on the OFP are available for approach and landing and the forecast at those airports is for conditions to be at or above the operating minima approved for the operation.

**DSP 3.5.5** The Operator shall have guidance and procedures to ensure a flight is not continued towards the airport of intended landing unless the latest available information indicates, at the expected time of arrival, a landing can be made at that airport or at least one destination alternate airport. **(GM)**

### Guidance

Personnel with responsibilities for operational control need to have current and accurate information available, to allow informed decision-making on completing the mission.

Items that are monitored would include at least:

- Weather information, both en route and at the airport of intended landing, to include hazardous phenomena such as thunderstorms, turbulence, icing and restrictions to visibility.
- Field conditions, such as runway condition and availability and status of navigation aids.
- En route navigation systems and facilities where possible failures might occur that could affect the safe continuation or completion of the flight.
- Fuel supply, including actual en route consumption compared to planned consumption, as well as the impact of any changes of alternate airport or additional en route delays.
- Aircraft equipment that becomes inoperative, which results in an increased fuel consumption or a performance or operational decrement, is to be considered and planned for, to ensure the aircraft makes a safe landing at an approved airport.
- Air traffic management issues, such as re-routes, altitude or speed restrictions and facilities or system failures or delays.
- Security issues that could affect the routing of the flight or its airport of intended landing.

Refer to **Table 2.2** found in ISM Section 2 (FLT) for OM documentation requirements.

## 3.6 Flight Monitoring Procedures

**DSP 3.6.1** If an FOO or FOA is utilized in a shared system of operational control, the Operator shall have procedures and equipment that ensure effective communication between the:

- i) FOO and the PIC;
- ii) If applicable, FOA and the PIC;
- iii) FOO, PIC and maintenance. **(GM)**

## Guidance

Refer to the IRM for the definition of *Operational Control – Shared Responsibility*.

The communications system can be direct voice or electronic, but would be reliable, clear and understandable over the entire route of the flight. An effective system would perform adequately and appropriate personnel would be knowledgeable in its use.

**DSP 3.6.2** If required by the State, the Operator shall have a system of operational control that includes flight monitoring for the duration of a flight and ensures timely notification to the Operator by the PIC of en route flight movement and/or significant deviation from the operational flight plan.

**DSP 3.6.3** The Operator *should* have a system of operational control that includes flight monitoring for the duration of a flight and ensures timely notification to the Operator by the PIC of en route flight movement and/or significant deviation from the operational flight plan.

**DSP 3.6.4** If the Operator has a system of operational control that includes an automated flight monitoring system, the Operator *should* have an adequate back-up method of flight monitoring in case of failure of the automated system.

**DSP 3.6.5** The Operator shall have procedures to ensure that the inadequacy of any facilities observed during the course of flight operations is reported to the responsible authority without undue delay, and to further ensure that information relevant to any such inadequacy is immediately disseminated to applicable operating areas within the Operator's organization. **(GM)**

## Guidance

The specifications of this provision address situations when operational control personnel learn of the inadequacy of facilities (e.g. navigation aid outages, runway closures) from flight crew reports, ATS, airport authorities or other credible sources. Operational control personnel would be expected to convey any safety-critical outages to applicable authorities and relevant operational areas within the organization.

Applicable authorities include those authorities that have jurisdiction over international operations conducted by an operator over the high seas or the territory of a state that is other than the State of the Operator.

**DSP 3.6.6** The Operator shall have guidance and procedures to ensure notification to the Operator when a flight has been completed. **(GM)**

## Guidance

Refer to the IRM for the definitions associated with *Flight Time (Aircraft)*.

## 3.7 Emergency Response

**DSP 3.7.1** If the Operator conducts international flights with aircraft that have emergency and survival equipment on board, the Operator shall ensure the availability of information for immediate communication to rescue coordination centers that describes such equipment, to include, as applicable:

- i) The number, color and type of lifesaving rafts and pyrotechnics;
- ii) Details of emergency medical and water supplies;
- iii) Type and frequencies of the emergency portable radio equipment. **(GM)**

## Guidance

The intent of this provision is for an operator to have published information that describes the emergency and survival equipment carried on board aircraft engaged in international operations, and to have such information readily available when necessary for immediate communication to search and rescue facilities.

Refer to **FLT 4.3.35 <AC>**, **FLT 4.3.36 <AC>**, **CAB 4.2.10** and **CAB 4.2.18** for emergency and survival equipment that is specified for certain types of flight operations.

**DSP 3.7.2** If an FOO and/or FOA is utilized in the system of operational control, the Operator shall have guidance and procedures to ensure an FOO, FOA or other delegated person notifies the appropriate authority in the quickest manner of any accident involving an aircraft that results in a fatal or serious injury to any person or substantial damage to the aircraft or property.

## 4 Operational Control Requirements and Specifications

### 4.1 Alternate Airports

**DSP 4.1.1** The Operator shall have guidance and procedures to ensure a takeoff alternate airport, as required in accordance with **DSP 3.5.1**, is specified on the OFP and is located within the following distance from the airport of departure:

- i) Aircraft with two engines: not more than one hour flying time at single engine cruise speed;
- ii) Aircraft with three or more engines: not more than two hours flying time at one engine inoperative cruise speed, **or**
- iii) If approved or accepted by the State, for aircraft with two engines operated in accordance with ETOPS and in remote areas of the world without takeoff alternates available for use within one hour flying time at single engine cruise speed, a flight may be planned to the closest takeoff alternate that is within the ETOPS threshold flying time limit in still air. **(GM)**

*(Note: Item iii) is a Parallel Conformity Option in effect until 31 December 2014.)*

#### Guidance

Refer to the IRM for the definition of *ETOPS*.

**DSP 4.1.2** The Operator shall have guidance and procedures that ensure a minimum of one destination alternate is specified on the OFP unless any of the following conditions exist:

- i) The duration of the flight and the meteorological conditions prevailing are such that there is reasonable certainty that, at the estimated time of arrival at the airport of intended landing, and for a reasonable period not less than specified by the State before and after such time, the approach and landing may be made under visual meteorological conditions, or
- ii) The airport of intended landing is isolated and there is no suitable destination alternate airport, or
- iii) The State-approved fuel policy requires a designated (critical or decision) point in flight where the meteorological conditions at the estimated time of arrival at the airport of intended landing and, for a reasonable period before and after the ETA, shall be above the conditions specified for a destination alternate. **(GM)**

#### Guidance

The critical or decision point is defined as the point in the flight beyond which the only remaining suitable airport for landing is the destination.

**DSP 4.1.3** If the Operator conducts planned flight re-dispatch operations, the Operator shall have guidance and procedures to ensure, when planning a flight with a re-dispatch point, conditions at the re-dispatch airport and alternate, if required, as well as conditions at the destination airport and alternate, if required, will be at or above operating minima.

**DSP 4.1.4** The Operator shall have guidance and procedures to ensure provision of an OFP such that, if the most critical engine on an aircraft with two engines become inoperative at any point along the planned route of flight, the aircraft can continue to an airport and land safely without flying below the minimum flight altitude(s) at any points along the route. **(GM)**

#### Guidance

Operational flight planning includes a review of the route of the flight in conjunction with published aeronautical and terrain data to ensure compliance with the minimum flight altitudes defined by the operator and/or applicable authorities. The specifications of this provision typically require a

minimum amount of terrain clearance, specified by the operator and/or applicable authorities along the route of flight to assure continued safe flight and landing.

Applicable authorities include those authorities that have jurisdiction over international operations conducted by an operator over the high seas or the territory of a state that is other than the State of the Operator.

**DSP 4.1.5** If the Operator conducts operations in accordance with ETOPS, the Operator shall have guidance and procedures to ensure, when planning such operations, the route is planned to remain within the threshold flying time limit, in still air, with respect to all specified suitable en route alternates.

**DSP 4.1.6** If the Operator utilizes aircraft with three or more engines, the Operator shall have guidance and procedures to ensure provision of an OFP such that aircraft having three or more engines can **either**:

- i) If a second engine becomes inoperative on any portion of a route, continue from the point where two engines are assumed to fail simultaneously to an en route alternate airport at which the landing distance specification for alternate airports is complied with and where it is expected that a safe landing can be made, **or**
- ii) If a single engine becomes inoperative **and** for operations conducted in areas of the world with limited diversion options, a flight may be planned with a more distant alternate than specified in item i) in order to provide for a diversion for any en route contingency that may limit the planned operation. Such diversion planning shall be conducted in accordance with the specifications of a program approved or accepted by the State that requires the Operator to actively manage the risk of subsequent engine failures or other flight limiting occurrences **and**:
  - a) Contains special considerations for extended range flights conducted over remote areas designed to prevent the need for a diversion and protect the diversion to an alternate airport when it cannot be prevented;
  - b) Utilizes aircraft designed and manufactured for the intended operation and maintained to ensure original reliability;
  - c) Requires the Operator to implement and maintain a problem reporting, tracking and resolution system that contains a means for the prompt reporting, tracking and resolution of those problems, as designated by the Operator or State, that could affect the safety of the operation;
  - d) Requires a prescribed level of engine reliability, as measured by an inflight shutdown rate (IFSD) determined by the Operator or State, where the risk of independent failures leading to a loss of thrust from two simultaneous engine failures ceases to limit the operation and other limiting factors come into play;
  - e) Designates a maximum diversion distance in cases where a diversion is necessary for any reason, including limiting airframe systems and reasons that do not have anything to do with aircraft reliability, such as passenger illness;
  - f) Requires the Operator to demonstrate to the applicable authorities that when considering the impact of increasing diversion time, the operation can be conducted at a level of reliability which maintains an acceptable level of risk.

**(GM)**

*(Note: Item ii) is a Parallel Conformity Option in effect until 31 December 2014.)*

## Guidance

Operational flight planning includes a review of the route of flight along with published aeronautical information to ensure the designation of adequate en route alternates.

Applicable authorities as specified in item f) includes those authorities that have jurisdiction over international operations conducted by an operator over the high seas or the territory of a state that is other than the State of the Operator.

## 4.2 Minimum Flight Altitudes

**DSP 4.2.1** The Operator shall have guidance and procedures to ensure planned minimum flight altitudes are within the limits established by the applicable authorities. **(GM)**

### Guidance

Operational flight planning includes a review of the route of flight, in conjunction with published aeronautical information, to ensure compliance with minimum flight altitudes. Such review could include:

- Minimum Safety Altitude (MSA);
- Minimum Descent Altitude/Height (MDA/H);
- Minimum En route Altitude (MEA);
- Minimum Obstruction Clearance Altitude (MOCA);
- Minimum Off-Route Altitude (MORA);
- Minimum Vectoring Altitude (MVA);
- Any other minimum altitudes prescribed by the Authority.

Applicable authorities include those authorities that have jurisdiction over international operations conducted by an operator over the high seas or the territory of a state that is other than the State of the Operator.

## 4.3 Fuel and Oil

**DSP 4.3.1** The Operator shall have guidance and procedures to ensure, for turbojet and turbo-fan aircraft operations, when a destination alternate airport is required, fuel and oil carried for a flight is sufficient:

- i) To fly to and execute an approach and a missed approach at the airport of intended landing, and thereafter to fly to the alternate airport and then to fly for 30 minutes at holding speed at 1,500 feet above the alternate airport, conduct an approach and land, and to have an additional amount of fuel sufficient to provide for the increased consumption on the occurrence of other operational contingencies, **or**
- ii) To fly to the alternate airport from any predetermined point and thereafter to fly for 30 minutes at holding speed at 1,500 feet above the alternate airport, with due provision to have an additional amount of fuel sufficient to provide for the increased consumption on the occurrence of other operational contingencies provided that fuel shall not be less than the amount of fuel required to fly to the airport to which the flight is planned and thereafter for two hours at normal cruise consumption. **(GM)**

### Guidance

Refer to the IRM for the definition of *Fuel (Flight Planning)*, which identifies fuel categories that may be used when itemizing regulatory and/or operational fuel requirements during flight planning and for inclusion in the OFP.

The fuel specifications of this provision apply to turbo-jet and turbo-fan aircraft operations. Refer to **DSP 4.3.2** for turbo-propeller and non-turbine aircraft operations.

An operator may satisfy the fuel reserve requirements specified in items i) and ii), as applicable, by defining time, speed, altitude, and/or engine power conditions in accordance with requirements of the Authority that yield an equivalent or greater amount of fuel reserves.

The designation of a minimum oil quantity is typically provided by the manufacturer while the determination, monitoring and replenishment of oil supply are the responsibilities of Engineering and Maintenance and/or the flight crew.

The specification in item i) refers to operational contingencies, defined by the operator and/or the state, which may further limit the planned operation, if not considered during preflight planning.

**DSP 4.3.2** The Operator shall have guidance and procedures to ensure, for propeller-driven aircraft operations, when a destination alternate airport is required, fuel and oil carried for a flight is sufficient:

- i) To fly to and execute an approach and a missed approach at the airport of intended landing, and thereafter to fly to the alternate airport and then to fly for 45 minutes, **or**
- ii) To fly to the alternate airport from any predetermined point and thereafter to fly for 45 minutes provided that this shall not be less than the amount of fuel required to fly to the airport to which the flight is planned and thereafter for the lesser of 2 hours or 45 minutes plus 15 percent of the flight time planned to be spent at the cruising levels used, **or**
- iii) For propeller-driven aircraft that are operated in accordance with the requirements of the Authority and in conjunction with over-water or remote airport operations as defined by the State and/or the Operator, sufficient fuel:
  - a) To fly to and execute an approach and a missed approach at the airport of intended landing and thereafter to fly to and land at the most distant alternate airport, and
  - b) Thereafter, to fly for 30 minutes plus 15 percent of the total time required to fly at normal cruising fuel consumption to the airports specified in (a) or to fly for 90 minutes at normal cruising fuel consumption, whichever is less, **or**

*(Note: Item iii) is a Parallel Conformity Option in effect until 31 December 2014.)*

- iv) For turbo-propeller aircraft that are operated in accordance with the requirements of the Authority and in conjunction with a comprehensive fuel policy defined by the State and/or the Operator, sufficient fuel:
  - a) To fly to and execute an approach and a missed approach at the airport of intended landing and thereafter to fly to and land at the most distant alternate airport and;
  - b) Thereafter, to have the equivalent of not less than 5% of the planned trip fuel or, in the event of in-flight re-dispatch, 5% of the trip fuel for the remainder of the flight, and
  - c) To fly for an additional period of 30 minutes. **(GM)**

*(Note: Item iv) is a Parallel Conformity Option in effect until 31 December 2014.)*

## Guidance

Refer to the IRM for the definition of *Fuel (Flight Planning)*, which identifies fuel categories that may be used when itemizing regulatory and/or operational fuel requirements during flight planning and for inclusion in the OFP.

The fuel specifications in items i), ii), and iii) refer to propeller-driven aircraft operations including turbo-propeller aircraft. The fuel specifications in items iv), however, refer only to turbo-propeller aircraft operations. Refer to **DSP 4.3.1** for turbo-jet and turbo-fan aircraft operations.

An operator may satisfy the fuel reserve requirements specified in items i), ii), iii) and iv), as applicable, by defining time, speed, altitude, and/or engine power conditions in accordance with requirements of the Authority that yield an equivalent or greater amount of fuel reserves.



The designation of a minimum oil quantity is typically provided by the manufacturer while the determination, monitoring and replenishment of oil supply are the responsibilities of Engineering and Maintenance and/or the flight crew.

**DSP 4.3.3** The Operator shall have guidance and procedures to ensure, for turbojet, turbo-fan and turbo-propeller aircraft operations, when a destination alternate airport is not required, fuel and oil carried for a flight is sufficient:

- i) To fly to the destination and additionally to fly for 30 minutes at holding speed at 1,500 feet above the planned destination airport, and to have an additional amount of fuel sufficient to provide for the increased consumption on the occurrence of other operational contingencies;
- ii) If the destination airport is isolated, as defined by the State and/or the Operator, to fly to the destination and thereafter for a period of two hours at normal cruise consumption.

**(GM)**

### Guidance

Refer to the IRM for the definition of *Fuel (Flight Planning)*, which identifies fuel categories that may be used when itemizing regulatory and/or operational fuel requirements during flight planning and for inclusion in the OFP.

The fuel specifications of this provision apply to turbo-jet, turbo-fan and turbo-propeller aircraft operations. Refer to **DSP 4.3.4** for propeller-driven reciprocating engine aircraft operations.

The intent of this provision is to define the minimum amount of (final) reserve fuel in excess of taxi fuel and the fuel required to fly to the destination. For item i) this minimum amount of reserve fuel cannot be less than the fuel required to fly for 30 minutes under conditions specified and any additional amount required to provide for increased consumption due to the occurrence of operational contingencies (e.g. contingency fuel, reduced contingency fuel, additional fuel, extra fuel as defined in the IRM glossary)

An operator may satisfy the fuel reserve requirements specified in items i) and ii), as applicable, by defining time, speed, altitude, and/or engine power conditions in accordance with requirements of the Authority that yield an equivalent or greater amount of fuel reserves.

The specification in item i) refers to operational contingencies, defined by the operator and/or the State, which may further limit the planned operation, if not considered during pre-flight planning.

The designation of a minimum oil quantity is typically provided by the manufacturer while the determination, monitoring and replenishment of oil supply are the responsibilities of Engineering and Maintenance and/or the flight crew.

**DSP 4.3.4** The Operator shall have guidance and procedures to ensure, for propeller-driven reciprocating engine aircraft operations, when a destination alternate airport is not required, fuel and oil carried for a flight is sufficient to **either**:

- i) Fly to the destination and additionally fly for 45 minutes, **or**
- ii) If the destination airport is isolated, as defined by the State and/or the Operator, fly to the airport to which the flight is planned and thereafter for the lesser of 2 hours or 45 minutes plus 15 percent of the flight time planned to be spent at the cruising levels used. **(GM)**

### Guidance

Refer to the IRM for *Fuel (Flight Planning)*, which provides definitions of fuel categories that may be used when defining regulatory and/or requirements for operational flight planning and inclusion in the OFP.

The specifications of this provision apply to propeller-driven reciprocating engine aircraft operations. Refer to **DSP 4.3.3** for turbo-jet, turbo-fan and turbo-propeller aircraft operations.

The intent of this provision is to define the minimum amount of (final) reserve fuel in excess of taxi fuel and the fuel required to fly to the destination.

An operator may satisfy the fuel reserve requirements specified in items i), ii) and iii) by defining time, speed, altitude, and/or engine power conditions in accordance with the requirements of the Authority that yield an equivalent or greater amount of fuel reserves.

The designation of a minimum oil quantity is typically provided by the manufacturer while the determination, monitoring and replenishment of oil supply are the responsibilities of Engineering and Maintenance and/or the flight crew.

**DSP 4.3.5** If the Operator conducts planned flight re-dispatch operations, the Operator shall have guidance and procedures to ensure, when operating under planned flight re-dispatch procedures, fuel and oil requirements from the origin to the planned re-dispatch airport and from the re-dispatch point to the airport of intended destination are satisfied. **(GM)**

#### **Guidance**

The designation of a minimum oil quantity is typically provided by the aircraft manufacturer while the determination, monitoring and replenishment of oil supply are the responsibilities of Engineering and Maintenance and/or the flight crew.

## **4.4 Oxygen**

**DSP 4.4.1** The Operator shall have guidance and procedures to ensure a flight in a pressurized or unpressurized aircraft is not commenced unless a sufficient amount of stored breathing oxygen is carried to supply crew members and passengers in accordance with **FLT 4.3.4** and **FLT 4.3.5**. **(GM)**

#### **Guidance**

The intent of this provision is to ensure operational control personnel with responsibilities related to flight planning or aircraft scheduling are provided with the necessary information regarding oxygen carriage requirements in order to appropriately match an aircraft to a planned route.

Refer to Guidance associated with **FLT 4.3.4** and **FLT 4.3.5** located in ISM Section 2.

**Table 3.1 – Operational Control Personnel**

This table categorizes operational control personnel, defines their authority, identifies their responsibilities and illustrates the relationship of such responsibilities to the operation as a whole. It shall be used for the purposes of applying relevant Section 3 provisions and is provided to ensure suitably qualified persons are designated, where applicable, to support, brief and/or assist the pilot-in-command (PIC) or FOO in the safe conduct of each flight. The terms used in the table to identify operational control personnel are generic and might vary. Personnel, however, employed in operational control functions that are delegated the authority and/or assigned the responsibility to carry out functions, duties or tasks, as outlined in the table, are subject to the training and qualification requirements commensurate with their position.

<b>Operational Control</b> → ↓	<b>Authority</b> (DSP 1.3.4)	<b>Responsibilities, Including the Assignment of Functions, Duties or Tasks.</b> (DSP 1.3.5 and 1.3.6)	<b>Training and Qualification</b> <i>Operator shall designate responsibilities and ensure personnel are competent to perform the job function.</i>
<b>Administrative Personnel<sup>1</sup></b> (e.g. gate agent)	<b>None</b> Do <b>not</b> make recommendations or decisions regarding the operational control of each flight.	Provide, collect or assemble operational documents or data only.	Not subject to initial and recurrent training in the competencies of operational control in <b>Table 3.5</b> and may be qualified via On the Job Training (OJT), job descriptions, task cards, guidelines, checklists, training materials or other written means to establish competence.
<b>Flight Operations Assistant (FOA)<sup>4</sup></b> (e.g. Weather Analysts, Navigation Analysts/Flight Planning Specialists, Load Agents/Planners, Operations Coordinators/Planners, Maintenance controllers, Air Traffic Specialists)	<b>None or limited to area(s) of expertise</b> May be authorized to make decisions or recommendations in area(s) of expertise. <sup>5</sup> (e.g., maintenance controller grounds aircraft.)	Support, brief and/or assist the PIC or FOO. Specializes in one or more of the elements of operational control. <sup>3</sup> Collects, provides filters, evaluates and applies operational documents or data relevant to <b>specific</b> elements of operational control. Makes recommendations or decisions in area(s) of expertise.	<b>For each area of expertise or specialization<sup>3</sup></b> Subject to initial and recurrent training in accordance with <b>DSP 2.2.1</b> and <b>2.2.2</b> and <b>specific</b> competencies of <b>Table 3.5</b> relevant to the job function and operations of the Operator.

**Table 3.1 – Operational Control Personnel (cont.)**

<p><b>Flight Dispatcher or Flight Operations Officer (FOO)<sup>4</sup></b> or <b>Designated Member of Management</b> (e.g. Director of Operations)</p>	<p><b>None or limited or shared<sup>2</sup></b> May share operational control authority with the PIC.<sup>2</sup> May be authorized to make recommendations or decisions.<sup>5</sup></p>	<p>May share operational control responsibility with the PIC.<sup>2</sup>  Support, brief, and/or assist the PIC.  Collects, provides, filters, evaluates and applies operational documents or data relevant to <b>all</b> elements of operational control.<sup>3</sup>  Makes recommendations or decisions.</p>	<p>Subject to initial and recurrent training in accordance with <b>DSP 2.2.1</b> and <b>2.2.2</b> and <b>all</b> competencies of <b>Table 3.5</b> relevant to the operations of the Operator.</p>
<p><b>Pilot in Command (PIC)</b></p>	<p><b>Full/shared<sup>2</sup></b> Has final authority to ensure the safe operation of the aircraft. May share authority and responsibility for operational control.</p>	<p><b>Full/shared<sup>2</sup></b> Responsible for safe conduct of the flight. Collect, provide, filter, evaluate and applies operational documents or data relevant to <b>all</b> competencies of operational control.<sup>3</sup></p>	<p>Subject to training and qualification requirements specified in ISM Section 2.</p>
<p><b>Legend</b></p>	<p><b>1-</b> Personnel lacking any authority or responsibility for operational control are identified in the table for the purposes of excluding them from the training and qualification provisions of this section.</p> <p><b>2-</b> FOO personnel used in conjunction with a shared system of operational share authority with the PIC.</p> <p><b>3-</b> Elements of operational control are contained in Table 3.5. FOA personnel may be referred to as: Weather Analysts, Navigation Analysts/Flight Planning Specialists, Load Agents, Operations Coordinators/Planners, Maintenance controllers, Air Traffic Specialists.</p> <p><b>4-</b> The terms used in this table to identify operational personnel are generic and may vary. Personnel utilized in operational control functions and delegated the responsibilities delineated in the table are subject to the relevant qualification and training provisions in this section.</p> <p><b>5-</b> Decision making limited in scope by authority and to area of expertise.</p>		

**Table 3.2 – Operations Manual (OM) Content Specifications**

This table contains the fundamental OM content specifications required to achieve conformity with **DSP 1.7.1**. It also specifies Section 2 (FLT) provisions that must be addressed in the sections of the OM relevant to personnel with responsibilities related to the operational control of flights.

**Note:** *Specific policies, guidance, data and/or procedures that must be addressed in the sections of the OM relevant to operational control personnel can be found in individual Section 3 provisions and are not duplicated in the table.*

<b>General Information</b>	<b>ISARP</b>
i) General Operations Manual (GOM), to include:	<b>DSP 1.7.1</b>
a) Non-aircraft type related and/or standard operating procedures for each phase of flight, policies, procedures, checklists, descriptions, guidelines, emergency procedures and other relevant information;	<b>DSP 1.7.1</b>
b) Authorities, duties and responsibilities associated with the operational control of flights;	<b>DSP 1.3.1, 1.3.4, 1.3.5</b>
c) The requirement for commercial flights to be conducted under an IFR flight plan.	<b>FLT 3.10.1</b>
<b>Aircraft Operating Information</b>	<b>ISARP</b>
ii) Aircraft Operating Manual (AOM), to include:	<b>DSP 1.7.1</b>
a) Normal, abnormal/non-normal and emergency procedures, instructions and checklists;	<b>DSP 1.7.1</b>
b) Aircraft systems descriptions, limitations and performance data.	<b>DSP 1.7.1</b>
iii) MEL and CDL, to include applicability and a description of the relationship between the Minimum Equipment List (MEL) and the Master Minimum Equipment List (MMEL);	<b>DSP 1.7.1</b>
iv) Aircraft specific weight and balance instructions/data;	<b>DSP 1.7.1</b>
v) Instructions for the conduct and control of ground de/anti-icing operations.	<b>FLT 3.9.6</b>
<b>Areas, Routes and Airport Information</b>	<b>ISARP</b>
vi) Route and airport instructions and information (departure, destination, en route and destination alternates, to include:	<b>DSP 1.7.1</b>
a) Airway manuals and charts, including information regarding communication facilities and navigation aids;	<b>DSP 1.7.1</b>
b) Airport charts, including the method for determining airport operating minima, operating minima values for destination and alternate airports and the increase of airport operating minima in case of degradation of approach or airport facilities;	<b>DSP 1.7.1</b>
c) Airport and runway analysis manual or documents;	<b>DSP 1.7.1</b>
d) If applicable, flight following requirements and instructions to ensure the PIC notifies the operator of en route flight movement or deviations from the OFP including procedures for loss of communication between the aircraft and the FOO;	<b>DSP 1.7.1</b>
e) Instructions for the conduct of precision and non-precision approaches, including approach minima;	<b>FLT 3.11.65, 3.11.67</b>
f) If applicable, procedures for the conduct of long-range navigation;	<b>FLT 3.11.11</b>

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g) Supplemental oxygen requirements and escape routes in case of decompression in an area of high terrain, if applicable;	FLT 4.3.4, FLT 4.3.5, DSP 4.1.1
h) Regional guidance necessary to comply with local regulations.	DSP 1.7.1
<b>Training Information</b>	
vii) Training Manual, to include:	DSP 1.7.1
a) Details of all relevant training programs, policies, directives and requirements, including curricula and syllabi, as applicable, for initial qualification, continuing qualification and other specialized training;	DSP 1.7.1
b) Curricula for: ground training, evaluation and certification;	DSP 1.7.1
c) Comprehensive syllabi to include lesson plans, procedures for training and conduct of evaluations;	DSP 1.7.1
d) The training program for the development of knowledge and skills related to human performance (Crew Resource Management/Dispatch Resource Management, CRM/DRM).	DSP 1.7.1
<b>Other Information</b>	
viii) Cabin safety and emergency procedures relevant to operational control personnel.	DSP 1.7.1
ix) Dangerous Goods manual or parts relevant to operational control personnel, to include information and instructions on the carriage of dangerous goods and action to be taken in the event of an emergency.	DSP 1.7.1
x) Security Manual or parts relevant to operational control personnel, including bomb search procedures.	DSP 1.7.1

**Table 3.3 – Operational Flight Plan (OFP) Specifications**

The OM contains a description and specifications for the content and use of the OFP or equivalent document. The content of the OFP shall consist of, as a minimum, the following elements:

- i) Aircraft registration;
- ii) Aircraft type and variant;
- iii) Date of flight and flight identification;
- iv) Departure airport, STD, STA, destination airport;
- v) Route and route segments with check points/waypoints, distances and time;
- vi) Assigned oceanic track and associated information, as applicable;
- vii) Types of operation (ETOPS, IFR, ferry-flight, etc.);
- viii) Planned cruising speed and flight times between waypoints/check points;
- ix) Planned altitude and flight levels;
- x) Fuel calculations;
- xi) Fuel on-board when starting engines;
- xii) Alternate(s) for destination and, when applicable, takeoff and en route;
- xiii) Relevant meteorological information.

**Table 3.4 – Flight Information**

The Operator shall record and retain the following information for each flight:

- i) Aircraft registration;
- ii) Date;
- iii) Flight number;
- iv) Flight crew names and duty assignment;
- v) Fuel on board at departure, en route and arrival;
- vi) Departure and arrival point;
- vii) Actual time of departure;
- viii) Actual time of arrival;
- ix) Flight time;
- x) Incidents and observations, if any;
- xi) Flight weather briefings;
- xii) Dispatch or flight releases;
- xiii) Load-sheet;
- xiv) NOTOC;
- xv) OFP;
- xvi) ATS flight plan;
- xvii) Fuel and oil records.



**Table 3.5 – Competencies of Operational Control**

The Operator shall ensure FOO or FOA personnel demonstrate knowledge and/or proficiency in the competencies of operational control appropriate to the assignment of responsibility to carry out operational control functions, duties, or tasks, to include, as applicable:

Competency	FOO	FOA
i) Contents of the Operations Manual relevant to the operational control of flights;	X <sup>3</sup>	X <sup>3B</sup>
ii) Radio equipment in the aircraft used;	X <sup>3</sup>	X <sup>3B</sup>
iii) Aviation indoctrination;	X <sup>3</sup>	X <sup>3B</sup>
iv) Navigation equipment in the aircraft used, including peculiarities and limitations of that equipment;	X <sup>3</sup>	X <sup>3B</sup>
v) Seasonal meteorological conditions and hazards;	X <sup>3</sup>	X <sup>3B</sup>
vi) Source of meteorological information;	X <sup>3</sup>	X <sup>3B</sup>
vii) Effects of meteorological conditions on radio reception on the aircraft used;	X <sup>3</sup>	X <sup>3B</sup>
viii) Aircraft mass (weight) balance and control;	X <sup>3</sup>	X <sup>3B</sup>
ix) Human performance relevant to operations or dispatch duties (CRM/DRM);	X <sup>3</sup>	
x) Operational procedures for the carriage dangerous goods;	X <sup>2</sup>	X <sup>2B</sup>
xi) Operational procedures for the carriage of cargo;	X <sup>3B</sup>	X <sup>3B</sup>
xii) Operational emergency and abnormal procedures;	X <sup>2B</sup>	X <sup>2B</sup>
xiii) Security procedures (emergency and abnormal situations);	X <sup>3</sup>	X <sup>3B</sup>
xiv) Civil Air Law and regulations;	X <sup>3</sup>	X <sup>3B</sup>
xv) Aircraft mass (weight) and performance;	X <sup>3</sup>	X <sup>3B</sup>
xvi) Navigation, special navigation;	X <sup>3</sup>	X <sup>3B</sup>
xvii) Special airports;	X <sup>3A</sup>	X <sup>3AB</sup>
xviii) Air traffic management;	X <sup>3</sup>	X <sup>3B</sup>
xix) Aircraft systems and MEL/CDL;	X <sup>3</sup>	X <sup>3B</sup>
xx) Flight planning;	X <sup>3</sup>	X <sup>3B</sup>
xxi) Flight monitoring;	X <sup>3</sup>	X <sup>3B</sup>
xxii) Communication;	X <sup>3</sup>	X <sup>3B</sup>
xxiii) Fuel supply (aircraft and fuel type requirements);	X <sup>3</sup>	X <sup>3B</sup>
xxiv) De-icing/anti-icing procedures;	X <sup>3A</sup>	X <sup>3AB</sup>
xxv) ETOPS procedures, if applicable.	X <sup>3A</sup>	X <sup>3AB</sup>



**Table 3.5 – Competencies of Operational Control (cont.)**

**Legend**

- X: Shall be completed during training and evaluation.
- 1: Shall be satisfactorily completed during initial training and once every calendar year plus or minus one calendar month from the original qualification anniversary date or base month.
- 2: Shall be satisfactorily completed during initial training and once every 24 months.
- 3: Shall be satisfactorily completed during initial training and once every three calendar years plus or minus one calendar month from the original qualification tri-annual anniversary date or base month.
- A: If relevant to the operations of the Operator.
- B: If relevant to area of expertise or job function (e.g. Flight Planning, Maintenance Control, Load Planning, etc.).

**Notes**

FOO personnel assigned overall operational control responsibility for specific flights or utilized in shared systems of operational control demonstrate knowledge and/or proficiency in all competencies of operational control. FOO or FOA personnel assigned the individual responsibility to carry out specific operational control functions, duties or tasks demonstrate knowledge and/or proficiency in competencies relevant to area of expertise or function as determined by the operator or State.

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# ANNEXE 2

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# **BOMBARDIER** *AEROSPACE*

## **AEROPLANE OPERATING MANUAL**

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### **VOLUME 2**

Chapter 4 - Performance

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