



# WYVERN



## THE WINGMAN STANDARD

Original Reissue

1.0

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## Preamble

In 1994 **WYVERN CONSULTING**, with little fanfare, released the first edition of The Wyvern Standard (renamed **THE WINGMAN STANDARD** as of the Original Reissue 2014), a collection of aviation industry best practice audit standards conceived by a group of highly respected flight department managers and aviation industry experts that would comprise **WYVERN**'s first Customer Advisory Board (CAB). This Customer Advisory Board continues to evolve the direction and content of the standard by considering enhancements in aircraft technology and automation, changes in industry best practices, and many other areas which affect safety and risk management in business and commercial aviation.

After twenty-two years, **THE WINGMAN STANDARD** continues to be recognized as the industry's gold standard in aviation safety. For those charter operators choosing to commit to the **WINGMAN** program this is also an affirmation of their commitment to industry best practices and a high level of safety culture as measured through the **WYVERN** audit process. In addition to a very demanding audit, which measures all operational sides of the charter operation, an ongoing commitment to provide **WYVERN** important safety data is required. This includes very specific data that validates pilot recency experience, continual training of pilots and maintenance technicians, and updates to critical programs such as Safety Management Systems (SMS).

For most of the discerning charter buyers in the marketplace it is no longer enough just to say that an operator is safe. Validation of safe operating practices and commitment to safety culture as measured by **THE WINGMAN STANDARD** will result in increased business, safer flying, and the knowledge that your company is among the elite.

Safe flying!



Art Dawley, Managing Director  
**WYVERN CONSULTING, LTD.**



# Table of Contents

Preamble .....	2
Record of Amendments .....	3
Table of Contents .....	4
Introduction.....	7
1 Organizational Requirements .....	8
1.1 Organization Management.....	8
1.2 Operational Control .....	8
1.3 Brokering .....	9
1.4 Safety Management System (SMS) .....	9
1.5 Administrative .....	10
1.5.1 Insurance Criteria .....	10
1.5.2 Drug & Alcohol Program .....	10
1.5.3 Notification Protocol.....	10
1.5.4 Audit Program .....	11
1.5.5 Reporting Deviations .....	11
1.5.6 Data Management .....	11
1.5.7 Aircraft .....	12
1.6 Aircraft Security .....	12
1.6.1 Overnight Parking .....	12
1.6.2 Baggage .....	12
1.6.3 Hijack Procedures.....	13
1.7 Personnel Security.....	13
1.7.1 Privacy.....	13
1.7.2 Flight Plan / Load Manifest.....	13
1.7.3 Identification.....	13
1.7.4 Unauthorized Persons.....	13
1.7.5 Unidentified Persons .....	13
2 Operational Requirements .....	14
2.1 Pilots.....	14
2.2 Standard Operating Procedures (SOPs).....	14
2.3 Flight Following.....	14
2.4 Refueling .....	15

2.5	Duty Limits .....	15
3	Maintenance Program .....	16
3.1	General Program .....	16
3.1.1	Third Party Maintenance Providers .....	16
3.2	Facilities & Equipment .....	16
3.3	Maintenance Away from Home Base .....	16
3.4	Qualifications and Training .....	17
3.4.1	Technician Training Requirements - Option 1 .....	17
3.4.2	Technician Training Requirements - Option 2 .....	17
3.5	Vendor Audit Program .....	19
3.6	Pre-Flight & Post-Flight Inspections .....	19
3.7	Fuel .....	19
3.7.1	Fuel Storage (Ground or Vehicle) .....	19
3.7.2	Fuel Deliveries (Into Ground or Truck) .....	20
3.8	Minimum Equipment List (MEL) .....	20
3.9	Tool Control Program .....	20
3.10	Parts Storage and Segregation Program .....	20
4	Aircraft Requirements .....	21
4.1	Safety Documentation .....	21
4.1.1	Passenger Briefing Cards .....	21
4.1.2	First Aid Kits .....	21
4.1.3	Placarding .....	21
4.2	Emergency Equipment .....	21
4.2.1	Flotation Devices .....	21
4.2.2	Fire Extinguisher .....	21
4.2.3	Survival Kit .....	21
	Appendix A: Fixed-Wing Passenger Carrying Requirements .....	22
A.1	Organizational Requirements .....	22
A.1.1	Passenger Briefings .....	22
A.1.2	Passenger Relations .....	22
A.1.3	Insurance .....	22
A.2	Operational Requirements .....	22
A.2.1	Pilots .....	22
A.2.2	Flight Attendants / Cabin Servers .....	23
A.2.3	Training .....	24

A.2.4	Flight Plans .....	24
A.2.5	Specific Operating Limitations .....	24
A.3	Maintenance Program Requirements .....	26
A.4	Aircraft Requirements.....	26
A.4.1	Required Equipment .....	26
A.4.2	Life Rafts.....	26
A.4.3	Portable Oxygen Bottle and Protective Breathing Equipment (PBE) .....	26
Appendix B:	Rotary-Wing Passenger Carrying Requirements .....	27
B.1	Organizational Requirements .....	27
B.1.1	Passenger Briefings.....	27
B.1.2	Passenger Relations .....	27
B.1.3	Operating Policies .....	27
B.1.4	Insurance .....	28
B.2	Operational Requirements .....	28
B.2.1	Pilots.....	28
B.2.2	Training.....	28
B.2.3	Flight Following .....	29
B.2.4	Specific Operating Limitations.....	29
B.2.4.1	Performance Limitations .....	29
B.3	Maintenance Program Requirements .....	31
B.4	Aircraft Requirements .....	31
B.4.1	Required Equipment.....	31
B.4.2	Life Rafts.....	31
B.4.3	Floats .....	31
Appendix C:	Industry Best Practice Resources.....	32

# Introduction

## Purpose

The purpose of **THE WINGMAN STANDARD** is to reflect our customers' performance expectations when they purchase charter. **WYVERN** is not a regulatory authority; compliance with **THE WINGMAN STANDARD**, above and beyond the regulatory requirements of the Civil Aviation Authority (CAA), is voluntary.

## Policy Statement

In accordance with **WYVERN**'s policy, **WYVERN** reserves the right to remove an operator from The Wyvern Report (TWR) at any time due to significant operational changes, in the event of an incident or accident, or for any reason deemed detrimental to the intent and the integrity of the standard. **WYVERN** will not audit or re-audit a company with a fatal accident in the last five years unless the final National Aviation Accident Investigation Authority report has been issued. No exceptions shall be made without approval of the **WYVERN** Customer Advisory Board.

## Background

Some of the most sophisticated and efficiently run flight departments around the world share certain operational traits that govern their processes, procedures, systems and policies which are commonly referred to as Industry Best Practices. **THE WINGMAN STANDARD** is based on the operating practices of those departments and organizations. The following requirements, as set forth in **THE WINGMAN STANDARD**, reflect Industry Best Practices and operational oversight that are indicative of a safe, world-class aviation organization and are a reasonable and achievable program for those charter operators who commit to operate to a higher standard.

## Applicability

This document is **THE WINGMAN STANDARD**. Operators are evaluated against the criteria contained herein, the requirements of their internal policies and procedures, as well as against the regulatory requirements of the Civil Aviation Authority (CAA) of the country governing the Operator's Air Operator Certificate or Air Carrier Certificate. The scope of the evaluation includes a review of the company operational history and safety record, operational control, Safety Management System (SMS), administrative composition, security, company manuals, pilot and aircraft records, training requirements, and maintenance operations including technician training and experience. An Operator's adherence to **THE WINGMAN STANDARD** and successful audit conducted by **WYVERN** may result in a **WINGMAN** Certification.

## Organization

Sections 1 – 4, General Requirements, of **THE WINGMAN STANDARD** are applicable to all operators, regardless of aircraft type, base location, and functional mission. The appendices that follow further specify the requirements for functional missions and further clarify resources that are used as references in **THE WINGMAN STANDARD**. In sections where the Appendix differs from the General Requirements, the Appendix shall take precedence.

# 1 Organizational Requirements

## 1.1 Organization Management

The Operator shall have an individual assigned to each of the following positions and shall notify **WYVERN** in writing within 10 business days of any change in management personnel:

- a. Ownership
- b. President / CEO / Accountable Manager
- c. Director of Operations
- d. Director of Maintenance
- e. Chief Pilot
- f. Quality Manager
- g. Safety Manager

## 1.2 Operational Control

All **WYVERN** clients have a right to know, specifically, who is operating the aircraft they have chartered. The Operator shall make available to **WYVERN** and its clients information for all flights to include the certificate holder's authorized business name (including all DBA or Trading As names) and information regarding the crew assigned. Basic crewmember information such as names, certificate numbers and experience will be provided for all flights and compliance with all requirements of the **WYVERN** Passenger and Aircraft Safety Survey (PASS) shall be ensured prior to any **WINGMAN**-compliant flight.

- a. The Operator, to be considered for evaluation, must possess a valid Air Carrier Certificate or Air Operator Certificate issued by the Civil Aviation Authority (CAA) of the country governing the certificate. When performing services for **WYVERN** clientele, the Operator shall adhere to all national aviation regulations as well as the terms and conditions specified herein.
- b. All aircraft used by the Operator for **WYVERN** clientele must be:
  - i. owned by the Operator; or
  - ii. leased by the Operator under a lease agreement for a period of not less than one year.
- c. Operational control over flight operations and maintenance must be covered by a management contract for a period of not less than one year in accordance with the Operator's approved Operations Specifications.
- d. Chartered aircraft must be listed in the Operator's applicable Operations Specifications paragraph or authorized registration marks, and all assigned crewmembers must be trained in accordance with provisions of the Operator's approved Training Program.
- e. The Director of Operations shall all be full time employee of the company and exclusively employed by one Operator.



### 1.3 Brokering

Service to **WYVERN** clientele shall not be brokered or subcontracted to another operator without prior permission from an authorized **WYVERN** representative. Additionally, the Operator to which the trip is brokered or subcontracted must be on file with **WYVERN** showing a recent satisfactory audit in which it too met all applicable national regulatory requirements and **WINGMAN STANDARDS**.

Services provided to **WYVERN** clientele shall only include that which the clientele requests. The Operator shall only provide services specifically outlined in the service engagement contract. **WYVERN** or its clients cannot and will not be held liable for any services provided without an agreed upon, signed and valid service request.

### 1.4 Safety Management System (SMS)

The Operator shall have a well-documented and implemented Safety Management System in compliance with [ICAO Document 9859, 3<sup>rd</sup> Edition, dated May 2013](#) or the most recent revision. The SMS System shall be under the direction and control of a designated Safety Manager (or equivalent title). The SMS shall include systematic procedures, practices and policies for the management of risk including a comprehensive Emergency Response Plan (ERP) as outlined in Chapter 5, Appendix 3 of the same ICAO document as referenced in this section.

- a. The Safety Manager will be shown in the Operator's Table of Organization as having direct access to the most senior management person in the company.
- b. The system shall include an established Safety Committee whose membership is comprised of representatives from each department within the company, e.g., flight operations, maintenance, scheduling, administration, etc. The Chair of the Safety Committee will report directly to the President of the company and may be the designated Safety Manager. The committee will meet at least quarterly.
- c. All company employees must have direct access to the Safety Manager and the Safety Committee regarding safety issues and all reported issues must be free from the threat of reprisal.
- d. The responsibilities and authority of the Safety Committee and Safety Manager must be documented with all pertinent information in the Operations Manual or a standalone Safety Manual that has been approved by senior management.
- e. The Operator shall continually improve the effectiveness of the SMS through the use of the safety policy, safety objectives, audit results (internal and external), data collection and analysis, corrective/preventive actions and management review.
- f. The Operator shall develop a policy in the company SMS that would require that a Flight Risk Assessment Tool (FRAT) be used prior to each flight departure that would identify potential hazards and weigh the risk associated with each hazard. This FRAT should allow for mitigation of potential hazards that would allow for the reduction of risk to an acceptable level.

NOTE: **WYVERN** recommends that the Operator collect and track all unplanned events (e.g., weather diversions, engine malfunctions, cancelled dispatches due to maintenance or weather, etc.) and pre-departure risk assessment for trend analysis and risk mitigation as a component of the SMS.

## 1.5 Administrative

### 1.5.1 Insurance Criteria

The Operator agrees to the following insurance requirements and guidelines.

- a. Obtain from the Operator's insurer a waiver of any right of subrogation the insurer may have against **WYVERN** by reason of any payment under the policy/policies for physical damage to the aircraft that might arise in connection with the Operator's use of the aircraft.
- b. Submit a copy of all certificates of insurance to **WYVERN**. The recommended minimum coverage is listed in Appendixes A & B corresponding to each aircraft or operation type.

NOTE: *Such certificates shall provide that the insurer give **WYVERN** at least 30 days prior written notice of any change or cancellation of the policy.*

- c. **WYVERN** shall be named as Additional Insured under each policy

### 1.5.2 Drug & Alcohol Program

The Operator must participate in the nationally authorized or mandated Anti-Drug and Alcohol Testing, Monitoring and Education program applicable in the country where the operating certificate was issued. They may administer their own program or be part of one that is administered by a consortium. All employees in safety-sensitive positions participate in the Operator's Drug and Alcohol Program.

### 1.5.3 Notification Protocol

The Operator shall add **WYVERN** to the notification list in the company Emergency Response Plan. In the event of an accident or incident, **WYVERN** shall be provided with an initial or preliminary report within 48 hours. Additionally, the Operator agrees to submit a final written report of any of the following events involving the Operator or any of its approved pilots or technicians (if applicable):

- a. Accidents
- b. Incidents
- c. Sanctions
- d. Letters of Correction
- e. Warning Letters
- f. Enforcement actions and resulting sanctions
- g. Deviations from national aviation regulations authorized by the CAA
- h. Personnel/Management changes

NOTE: *Failure to comply with these notification requirements may result in the immediate revocation of **WINGMAN** Certification and subsequent removal from The Wyvern Report (TWR).*

## 1.5.4 Audit Program

The Operator agrees to submit to an audit conducted by representatives of **WYVERN** prior to commencing service for **WYVERN** clientele. During the course of the initial and subsequent audits the Operator shall provide access to all personnel, equipment, documentation, records, reports, facilities and any other information deemed appropriate and necessary by **WYVERN**.

- a. An initial response plan for each nonconformity identified during an audit is due in writing within 5 business days of the end of the audit.
- b. Documented evidence that each nonconformity identified during an audit has been corrected must be provided to **WYVERN** within 30 business days after the initial response plan was due.

After the completion of a satisfactory initial audit, the Operator agrees to submit to periodic reviews or as requested by **WYVERN** clientele. The audit cycle (including audit and all nonconformities cleared) must be completed within 24 calendar months for a continued certification.

In the period between regular audits, the Operator agrees to submit to additional on-site audits if **WYVERN** determines that there have been other developments (e.g., management personnel changes, management re-structuring, significant fleet changes, mergers or acquisitions) that may significantly impact the operations or maintenance practices of the Operator. The Operator agrees to incur the costs associated with any intervening on-site evaluations.

## 1.5.5 Reporting Deviations

Specifications for all flights conducted for **WYVERN** clientele are contained in the regulations of the CAA governing the Operator's certificate and **THE WINGMAN STANDARD**. Except when a deviation is necessary for the safety of flight, the Operator and its employees shall conform to all **WINGMAN STANDARDS** and may not deviate from any of **THE WINGMAN STANDARDS** on any **WYVERN** customer flights. The Operator shall report any deviations to **WYVERN** within 48 hours of the occurrence by the most expedient means available.

## 1.5.6 Data Management

- a. The Operator shall provide **WYVERN** with the following information no less than 14 days prior to a scheduled audit and is responsible for maintaining the currency and accuracy of this information on The Wyvern Report (TWR) throughout their **WINGMAN** Certification:
  - i. pilot information, including:
    1. certificate numbers;
    2. medical certificates;
    3. training summary records;
    4. flight evaluation (check ride) dates; and
    5. flight hours (total flight hours must be updated at least every 90 days thereafter).
  - ii. aircraft information, to be reviewed and updated at least annually;
  - iii. company information including main office and all base locations; and
  - iv. Operating Certificates and Operations Specifications changes.
- b. Failure to maintain accurate and current data may result in a revocation of **WINGMAN** Certification and removal from The Wyvern Report (TWR).

- c. **WYVERN**'s risk assessment tool, PASS, is considered on a per-flight basis. In order for a flight to be **WINGMAN**-compliant, a successful PASS report must be run to **THE WINGMAN STANDARD** for the specific flight.

## 1.5.7 Aircraft

Only aircraft specifically approved by **WYVERN** shall be used in the service of **WYVERN** clients. These aircraft shall be listed on The Wyvern Report (TWR). Use of aircraft other than those listed on The Wyvern Report (TWR) will result in a violation of the service agreement and subsequent non-payment by the **WYVERN** client. If the Operator is uncertain whether or not an aircraft is **WINGMAN**-compliant, the Operator should contact **WYVERN** to determine its status.

## 1.6 Aircraft Security

- a. When in the service of a **WYVERN** customer, the entrance door(s) of the chartered aircraft shall be closed and locked whenever the crew or maintenance personnel are not in attendance, including times when the aircraft is parked in a hangar other than the Operator's secure base locations.
- b. No sightseers or visitors shall be allowed in the immediate vicinity of or onboard the aircraft unless accompanied by a crewmember. Any person(s) loitering in the vicinity of the aircraft will be considered suspicious and the proper authorities shall be notified.
- c. While away from home station, a crewmember will accompany and monitor the activities of all maintenance and other personnel who work around or onboard the aircraft to include all fueling activities.
- d. The pilot-in-command shall query the FBO or handling agent regarding aircraft and personnel security. At the discretion of the PIC, additional security precautions may be utilized, such as, the application of frangible door seals, the hiring of security guards, and the repositioning of the aircraft to a more secure location. Authority for these actions shall be obtained from the individual responsible for engaging the aircraft. If the individual responsible for engaging the aircraft is not available, authorization may be obtained from the lead passenger.
- e. Pre-flight inspections must be conducted following overnight stops in accordance with the appropriate manufacturer's Aircraft Flight Manual (AFM), Quick Reference Handbook (QRH) or other approved document. The flight crewmembers are responsible for taking extra precautions to ensure the aircraft has not been tampered with in any manner.

### 1.6.1 Overnight Parking

Overnight parking shall be in a well-lighted, patrolled area when available. The crew will ensure the aircraft is properly secured and locked, including the installation of the emergency window locks (if applicable) and the placement of one emergency exit access cover on the cockpit pedestal as a reminder of the lock installation.

### 1.6.2 Baggage

All baggage and packages must be identified and properly tagged prior to loading onboard the aircraft. If any doubt exists as to the ownership, the articles will not be loaded until they are properly identified

and tagged. If ownership cannot be properly established, the articles shall remain at the point of origin. No unaccompanied baggage or packages shall be allowed on the aircraft, unless authorized by the lead passenger and inspected by the crew prior to being placed aboard.

### **1.6.3 Hijack Procedures**

The Operator will incorporate policies and procedures in its flight training program to respond to hijacking events. Hijack training drills will be conducted during ground training.

NOTE: **WYVERN** recommends that the Operator develop a security code that can be disseminated to the passenger(s) for every flight. This code should be provided by the passenger(s) to the flight crew for positive identification and should also be developed so the passenger(s) can indicate whether they are boarding under duress.

## **1.7 Personnel Security**

### **1.7.1 Privacy**

The Operator will ensure that **WYVERN** customer privacy is maintained throughout the entire engagement. This includes minimum public exposure of the aircraft, all flight operations, passenger contacts, and manifests. The passenger names will not be posted or displayed on any medium that can be viewed by the public. Unless specifically authorized by the **WYVERN** client, there will be no disclosures that connect **WYVERN** clientele to any facility, schedule, flight or travel pattern.

### **1.7.2 Flight Plan / Load Manifest**

The following shall not be revealed by the Operator or any employee including the flight crew without the prior written consent of **WYVERN** customers: destination or purpose of the flight, identity or company affiliation of any passenger or support personnel such as limousine drivers. A fixed base operator (FBO) or handling agent shall not be permitted to post the name of the company chartering the aircraft or the names of the passengers and/or company affiliation.

### **1.7.3 Identification**

The crew shall require proper identification in the form of a current and valid government-issued photo identification for all passengers prior to boarding the aircraft. The crew will not allow any passengers to board the aircraft unless they are properly approved and manifested. If there is any doubt as to an individual's status, the Operator will inform the lead passenger and/or the engaging party to determine the disposition of the passenger in question. All of the Operator's employees will wear company identification badges in plain view at all times.

### **1.7.4 Unauthorized Persons**

No unauthorized person shall be allowed onboard the aircraft. Crewmembers are not authorized to allow any persons onboard without the express consent of the lead passenger. Airport authorities will be notified immediately about any persons loitering in the vicinity of the aircraft.

### **1.7.5 Unidentified Persons**

A flight crewmember shall always embark the aircraft last prior to take-off and disembark first on arrival to ensure unidentified persons do not approach the aircraft.

## 2 Operational Requirements

### 2.1 Pilots

All flights conducted on behalf of **WYVERN** and their clients shall consist of a minimum crew of two pilots. One pilot shall be designated pilot-in-command and shall have the final authority as to the safe operation of that flight. The pilots must be at the flight controls during all normal air and ground operations while passengers are onboard.

- a. All pilots shall:
  - i. be full-time employees or dedicated contractors of the Operator;
  - ii. be current and qualified under national aviation regulations;
  - iii. be assigned to fly no more than two types of aircraft; and
  - iv. meet or exceed the **WYVERN** pilot requirements listed in the applicable Appendix of this Standard, as determined by functional mission.
- b. In the event that one of the pilots assigned to a **WYVERN** flight is 60 years of age or older, the other pilot assigned to the flight crew must be under the age of 60.

NOTE: For the purpose of **THE WINGMAN STANDARD** a “dedicated contractor” is defined as a pilot who works solely for one specific Air Carrier/Operator and as such must be working under a written contract or agreement.

### 2.2 Standard Operating Procedures (SOPs)

The Operator shall have documented Standard Operating Procedures for each aircraft type and phase of flight and shall include at least the following:

- a. Pilot Flying (PF) and Pilot Monitoring (PM) crew coordination philosophy for normal and emergency checklist operation;
- b. PF and PM crew duties, actions, and responsibilities;
- c. PF and PM call-outs and responses;
- d. Flight Attendant duties, actions and responsibilities during normal and emergency operations (where applicable); and
- e. additional Operator provided personnel duties, actions and responsibilities during normal and emergency operations.

### 2.3 Flight Following

Each Operator shall have flight following that:

- a. Has adequate personnel and facilities to provide for the initiation and safe conduct of each **WINGMAN**-compliant flight to the flight crew and ground personnel designated by the Operator who has operational control of the aircraft.

- b. Provides means of public or private communication to monitor the progress of each flight with respect to its departure at the point of origin, intermediate stops of more than one hour and arrival at its destinations including any diversions and/or deviations.
- c. Communicates the progress of each flight directly to its **WYVERN** clients. This communication shall include at a minimum the following: anticipated OOOI (Out, Off, On, and In) times, delays, and updated location of the aircraft and flight crew.

## 2.4 Refueling

- a. During the refueling process at home station, the pilot-in-command (PIC), second-in-command (SIC), or authorized company representative will assure the correct fuel type and quantity as ordered is loaded onto the aircraft and will remain present for the duration. If there is any doubt as to the fuel quality, the individual overseeing the aircraft fueling will sample fuel from the truck prior to commencing the fueling operations. The PIC is responsible for ensuring that the fuel is loaded in accordance with the CAA-approved Aircraft Flight Manual (AFM).
- b. At bases other than home station, the PIC or the designated SIC will be present to supervise all refueling operations. The crewmember will assure the correct fuel type and quantity as ordered is loaded onto the aircraft and will remain present for the duration. If there is any doubt as to the fuel quality, the crewmember overseeing the aircraft fueling will require the provider to conduct testing prior to commencing fueling operations. The crewmember should also review the results of the fuel provider's daily testing and be familiar with the methods used to conduct the tests.

## 2.5 Duty Limits

- a. The Operator shall at all times comply with the flight /duty time requirements of the CAA of the country which governs the Operator's Air Operator / Carrier Certificate.
- b. The Operator shall ensure flight and duty time records for all flight crewmembers are accurately maintained whether the crewmembers are full-time or dedicated contractors.

NOTE: **WYVERN** recommends that the Operator not assign any flight crewmember to a duty period exceeding 14 hours and/or 10 flight hours in any 24-hour period unless an uninterrupted rest period of 10 hours in adequate crew rest facilities is provided.

## 3 Maintenance Program

### 3.1 General Program

- a. The Operator's maintenance program oversight and administration shall be the responsibility of the Director of Maintenance, who shall be a full-time employee of the company.
- b. This program will also contain guidance for the completion of inspections, maintenance, preventive maintenance and alterations.
- c. The program will include procedures that ensure the applicable activity is performed in accordance with the Certificate Holder's Manual and all applicable national regulations.
- d. The maintenance program will comply with the manufacturer's recommended program or other program (e.g., Approved Aircraft Inspection Program in accordance with national regulations for aircraft with nine or less passengers or a Continuous Aircraft Maintenance Program for those aircraft carrying ten passengers or more) approved by the national Civil Aviation Authority (CAA).

#### 3.1.1 Third Party Maintenance Providers

If the Operator engages any third-party maintenance providers, the Operator will notify **WYVERN** and the provider that they may be subject to inspection on behalf of **WYVERN** clients. **WYVERN** shall be provided all information about the third party maintenance provider to include certificate information, technician information and services performed.

### 3.2 Facilities & Equipment

The Operator shall provide facilities and equipment that will allow the Operator's maintenance personnel to perform all in-house maintenance in a competent manner. The Operator will ensure that its facilities comply with all national safety and health requirements. Records of facility inspections shall be available for review by **WYVERN**.

### 3.3 Maintenance Away from Home Base

- a. When aircraft are away from home base, the Operator must have procedures in place to ensure all maintenance actions conform to national regulations, internal policies and observed maintenance programs. Technicians assigned to work on the aircraft must be appropriately certified and trained to work on the specific type of aircraft. These requirements shall also apply to "floating fleets" which are defined as those aircraft not based at either the home base or a designated satellite base.
- b. The maintenance program must include procedures to be used for aircraft located at satellite or "out bases". A "satellite" or "out base" is defined as an airport or heliport other than the Operator/Management Company's main base at which one or more aircraft and personnel are based and managed by the Operator/Management Company. These procedures shall detail responsible persons, the process used to ensure complete oversight of maintenance activities and knowledge of aircraft airworthiness status.



## 3.4 Qualifications and Training

The focus of the **WYVERN** Qualifications and Training section is to ensure that **WINGMAN**-compliant aircraft are maintained to **WYVERN** safety standards. **WYVERN**'s goal is to encourage a proactive maintenance training approach and ensure the highest level of safety possible by the Operator without creating undue financial burden on the operation.

At least one technician performing maintenance on **WINGMAN**-compliant aircraft must be properly certificated by the national Civil Aviation Authority (CAA) of the country in which they operate. Also, at least one technician for each aircraft type in an Operator's fleet shall be trained in accordance with either Section 3.4.1 or Section 3.4.2 below.

In order for Operators who conduct in-house maintenance to meet the aircraft maintenance ongoing training requirements of **THE WINGMAN STANDARD** for **WINGMAN**-compliant flight operations, the following conditions must be met by the lead technician for each of the Operator's aircraft types:

### 3.4.1 Technician Training Requirements - Option 1

- a. The Operator must show evidence of proper certification by the national Civil Aviation Authority (CAA) of the country in which they operate for the technician who performs maintenance on **WINGMAN**-compliant aircraft;
- b. the Operator must provide to **WYVERN** documented evidence of successful completion by the technician of a manufacturer's approved Initial Training Program or provide documented evidence of at least five years of experience specific to the particular aircraft type represented; and
- c. the Operator must provide to **WYVERN** Certificates of Completion for the technician for at least 40 hours of manufacturer approved recurrent training for that particular aircraft type represented within the past 24 months.

### 3.4.2 Technician Training Requirements - Option 2

- a. The Operator must show evidence of proper certification by the national Civil Aviation Authority (CAA) of the country in which they operate for the technician who performs maintenance on **WINGMAN**-compliant aircraft.
- b. The Operator must provide to **WYVERN** documented evidence of successful completion by the technician of a manufacturer's approved Initial Training Program or provide documented evidence of at least five years of experience specific to the particular aircraft type worked on.
- c. The Operator must provide evidence of a formal documented and implemented Maintenance Training Program that consists of at least 40 hours of training within the past 24 months:
  - i. For less experienced technicians with fewer than five years of operational experience in a certified maintenance facility, the training shall be broken down as such:
    1. 25% internal company training (minimum 10 hours) consisting of:
      - Company policies and procedures
      - Drug and Alcohol Prevention Program
      - Maintenance policies and procedures
      - Vendor requirements and audits
      - Operational Control

- Hazardous Materials/Dangerous Goods
  - MEL company procedures
  - SMS Program/Safety Risk Management/Emergency Response Plan
  - CAA Regulations
  - Computer and software systems used within the organization
2. 50% Continuing Professional Development courses through an industry recognized training firm or a Subject Matter Expert (SME), (minimum 20 hours) consisting of courses such as:
- Essential of Troubleshooting
  - Avionics - Basic and Advanced for Line Techs
  - Aircraft Electronics Technician Training
  - Maintenance Start/Taxi & Engine Run
  - Maintenance Resource Management
  - Practical Aircraft Wiring and connectors
  - Manufacturer specific training Engine, APU & Avionics
  - Maintenance Safety Risk Management
  - Human Factors & Fatigue Analysis
  - Online Maintenance Refresher Programs (E-Learning or Distant Learning)
  - CAA Sponsored Training (RII, IA and FAA Part 145 or equivalent courses)
  - Interpersonal Skills, Leadership and Teamwork courses
3. 25% On-The-Job (OTJ) training (minimum 10 hours):
- Is given to less experienced technicians (fewer than five years of experience) by technicians or Inspectors designated by management.
    - To be an OJT instructor, the technician or Inspector must have attended an aircraft manufacturer's approved Initial Training Program on the particular aircraft type which he is instructing and have accomplished at least 40 hours of ongoing training within the past 24 months.
    - The OJT instructor shall have at least 24 months of experience on the particular type of aircraft represented and have been qualified as an instructor through the approved Maintenance Training Program.
  - Curriculum in the training program is the responsibility of the maintenance department management. The OJT shall be tracked and documented as per the Operator's approved training manual.
- ii. For more experienced technicians with 5 or more years of operational experience in a certified maintenance facility, the training shall be broken down as such:
1. 25% Internal company training (minimum 10 hours)
  2. 75% Continuing Professional Development courses (minimum 30 hours) consisting of courses completed through an industry recognized training firm that are specific to the core competencies of the organization for whom the technician works, such as:
    - FlightSafety International
    - CAE SimuFlite
    - Global Jet Services
    - Other CAA approved training vendor

The Operator shall submit to **WYVERN** for acceptance the Continuing Professional Development (CPD) curriculum as documented in their Maintenance Training Manual and the Instructor Training Curriculum as documented in their approved training program.

### **3.5 Vendor Audit Program**

The Operator shall document a vendor audit program based upon regulatory requirements for all vendors providing maintenance and support services to the Operator. In addition, the Operator shall develop, implement, and maintain minimum performance specifications for their vendors. Records of these audits shall be filed and readily available for review by **WYVERN**.

### **3.6 Pre-Flight & Post-Flight Inspections**

Prior to each departure from the aircraft home base, a certified technician shall accomplish a pre-flight inspection in accordance with the requirements in the Aircraft Maintenance Manual (AMM). Likewise, a post-flight inspection shall be accomplished in accordance with the manufacturer's recommended post-flight inspection, as referenced in the Aircraft Flight Manual (AFM), after each flight day. When the aircraft is away from home base, stationed at a Satellite Base or at any location where a certified technician is not available, the inspections are the responsibility of the Pilot-In-Command and will be performed in accordance with the Operator's documented procedures. Whenever an aircraft is away from home base for an extended period of time, and at a minimum every 10 days, a pre-flight or post-flight inspection shall be accomplished by a certified maintenance technician or flight crewmember who has received documented training to accomplish the requirements as referenced in the aircraft maintenance manual. Records of the inspections should be filed and readily available for review for a period of 12 months.

### **3.7 Fuel**

At the Operator's bases of operation, the Operator is responsible to ensure that the quality control procedures meet those set forth in the National Air Transportation Association (NATA) publication, "Refueling and Quality Control Procedures for Airport Services and Support Operations", the Air Transport Association (ATA) Specification 103, or an equivalent CAA recognized program. A manual documenting these procedures, along with the necessary documentation to verify compliance should be readily available. These procedures should include, but are not limited to, the following:

#### **3.7.1 Fuel Storage (Ground or Vehicle)**

- a. Daily
  - i. sumping and reconciliation of the fuel storage unit (ground or truck storage)
  - ii. visual check of sumped product for contaminants;
  - iii. Sump of filter/separator, visual check for contaminants; and
  - iv. differential pressure from filter/separator checked against the previous day's reading.
- b. Weekly
  - i. water paste check of storage unit; and
  - ii. check floating suction (if applicable).
- c. Monthly
  - i. millipore of filter/separator to verify cleanliness of fuel being delivered to the aircraft; and

- ii. check in-line screens for contaminants.
- d. Annually
  - i. replace coalescer elements in filter/separators (the previous date of replacement should be clearly marked on filter housing).

### **3.7.2 Fuel Deliveries (Into Ground or Truck)**

- a. Review Bill of Lading to verify that the product was delivered.
- b. Sump all compartments for contaminants.
- c. Remove a one-gallon sample, label and store until next delivery.
- d. Conduct a Millipore test on fuel being delivered.

## **3.8 Minimum Equipment List (MEL)**

The Operator shall maintain an approved Minimum Equipment List (MEL) for each aircraft recommended for use by **WYVERN** clients. In addition, all MELs will be kept current in respect to the manufacturer's latest version of the Master Minimum Equipment List. If the aircraft is to be operated with inoperative equipment in accordance with the approved MEL, all inoperative equipment must be appropriately placarded and/or secured and the information must be readily available in the aircraft forms for review by a **WYVERN** representative.

## **3.9 Tool Control Program**

- a. The Operator will have a fully documented tool calibration program, listing all tools and include calibration expiration dates and frequency of calibration.
- b. The Operator will include procedures for tracking and assuring calibration of any tools that are used by any technician that is not owned and controlled by the Operator.
- c. The Operator should have a tool tracking system.

## **3.10 Parts Storage and Segregation Program**

The Operator shall have a fully documented and effective parts storage and segregation program that will preclude the comingling of serviceable and unserviceable items and manage life-limited and/or consumable parts from cradle to grave. The program shall dictate inspection intervals and policy whereby items having a defined shelf-life and nearing expiration will be purged from their system. The program shall include a documented process of accounting for the disposition of all company owned and inventoried life-limited and scrapped parts to preclude those parts from re-entering the market illegally.

## 4 Aircraft Requirements

All flights conducted on behalf of **WYVERN** and their clients shall be flown in an aircraft with at least two turboprop or turbojet engines.

### 4.1 Safety Documentation

#### 4.1.1 Passenger Briefing Cards

Passenger briefing and safety cards must be in each aircraft and shall apply to the specific aircraft. Generic briefing cards are not authorized and shall not be used. Cards shall contain at least the following: the location and operation of personal flotation devices, rafts, fire extinguishers, first aid kits, oxygen mask, AED, PBE, flashlights, smoke hoods, crash ax, and emergency exits.

#### 4.1.2 First Aid Kits

The aircraft shall contain at least one first aid kit. The kit and its contents shall be sealed and in good condition. The kit shall have an inspection sticker or tag that indicates when the contents were most recently inspected.

#### 4.1.3 Placarding

All safety and emergency equipment shall be conspicuously marked and stowage locations shall be unlocked and easily accessible to all aircraft occupants.

### 4.2 Emergency Equipment

#### 4.2.1 Flotation Devices

An approved personal flotation device that meets Technical Standard Order specifications, and is equipped with an approved survivor locator light for each occupant of the aircraft shall be carried on all **WYVERN** client flights that operate in extended over-water missions. The locations shall be depicted on the passenger briefing cards for the specific aircraft.

#### 4.2.2 Fire Extinguisher

There shall be at least two fully functional and certified fire extinguishers (or as required by the aircraft's certification standards) accessible to the flight crew and the passengers on any aircraft chartered by **WYVERN** clients. They shall be Halon-type and meet the requirements outlined for hand fire extinguishers for use in aircraft, as prescribed by national regulations.

#### 4.2.3 Survival Kit

If requested by the client, a survival kit shall be available onboard the aircraft. The contents of the kit(s) shall be appropriate to the geographic area covered by the flight. **WYVERN** clients reserve the right to specify the contents of any survival kit.

## Appendix A: Fixed-Wing Passenger Carrying Requirements

Throughout Appendix A, all references to the regulations should be interpreted as referring to the applicable national Civil Aviation Authority (CAA) of the country governing the Operator's Air Operator / Carrier Certificate. In the absence of corresponding national regulations, the operator shall comply with the intent of **THE WINGMAN STANDARD**.

### A.1 Organizational Requirements

#### A.1.1 Passenger Briefings

Passengers will be briefed at a minimum in accordance with the provisions of national regulations. This briefing will be completed by an authorized crewmember prior to each takeoff regardless of whether or not new passengers are boarded. An automated briefing system may be used, if the aircraft is so equipped, and the system is authorized by the CAA. There will be sufficient briefing cards on the aircraft to ensure one is available for each passenger seat.

#### A.1.2 Passenger Relations

- a. Crewmembers (including Flight Attendants) shall maintain a professional appearance and bearing at all times when in the service of **WYVERN** clientele. Dress will be conservative and hairstyles shall be neat and trim.
- b. Crewmembers shall not accept gratuities of any kind from passengers or any other sources when in the service of **WYVERN** clientele.
- c. Crewmembers shall make every reasonable effort to inform passengers of all matters pertaining to the flight (i.e. delays, changes, turbulence, safety issues).
- d. All disagreements between **WYVERN** clientele and crewmembers will be fully documented in writing and forwarded to the individual responsible for engaging the charter, the Operator and **WYVERN** for resolution.

#### A.1.3 Insurance

The recommended minimum Combined Single Limit (CSL) liability coverage is as follows:

- a. Light Jet: \$ 75 Million USD
- b. Medium Jet: \$ 150 Million USD
- c. Large Jet: \$ 300 Million USD
- d. Turboprop: \$ 50 Million USD

### A.2 Operational Requirements

#### A.2.1 Pilots

All pilots will be current and qualified per the appropriate national aviation regulations and will meet or exceed the following pilot experience requirements:

## a. Pilot-In-Command (PIC) Experience Requirements

	<b>Turbojet</b>	<b>Turboprop</b>
Airman Certificate	ATP	ATP
Type Rating	Appropriate type rating	Appropriate type rating
Medical Certificate	1st Class	1st Class
Total Time in All Aircraft	4,000 hrs with 3,000 hrs as PIC	4,000 hrs with 3,000 hrs as PIC
Total Time in Category	4,000 hrs with 3,000 hrs as PIC	4,000 hrs with 3,000 hrs as PIC
Total Multi-engine Time	3,000 hrs with 2,000 hrs as PIC	3,000 hrs with 2,000 hrs as PIC
Time in Type	200 hrs with 100 hrs as PIC	200 hrs with 100 hrs as PIC
Actual Instrument Time	250 hrs as PIC	250 hrs as PIC
Category and Class last 365 days	300 hrs	300 hrs
Category and Class last 90 days	75 hrs	75 hrs
NAA Sanctions last 5 years	None	None
Accidents/Incidents last 5 years <sup>1</sup>	None	None

## b. Second-In-Command (SIC) Experience Requirements

	<b>Turbojet</b>	<b>Turboprop &amp; Citation 500 Series</b>
Airman Certificate	Commercial Instrument	Commercial Instrument
Type Rating	Appropriate type rating (int'l flights)	Appropriate type rating (int'l flights)
Medical Certificate	1st Class	1st Class
Total Time in All Aircraft	2,000 hrs	1,500 hrs
Total Time in Category	1,500 hrs	1,000 hrs
Total Multi-engine Time	1,500 hrs*	1,000 hrs
Time in Type	50 hrs	50 hrs
Actual Instrument Time	75 hrs	75 hrs
Category and Class last 365 days	200 hrs	200 hrs
Category and Class last 90 days	50 hrs	50 hrs
NAA Sanctions last 5 years	None	None
Accidents/Incidents last 5 years <sup>1</sup>	None	None

NOTE: Once a co-pilot has achieved 50 hours in type, the required flight time of 1,500 hours may be reduced by one hour for each additional hour in type, up to a maximum of 500 hours. For example, a pilot with 550 hours in type is only required to have a total of 1,000 flight hours.

## A.2.2 Flight Attendants / Cabin Servers

The Operator may use a Flight Attendant as a crewmember provided that person has met the requirements of the applicable national aviation regulations and is authorized by the CAA.

In lieu of an approved Flight Attendant with operational safety training in accordance with national aviation regulations, the Operator may provide a Cabin Server. Cabin Servers are not crewmembers and must be manifested as passengers. It shall be made clear to the **WYVERN** client that the individual is not a qualified Flight Attendant and not authorized to perform certain activities pursuant to national aviation regulations.

<sup>1</sup> And noteworthy national CAA enforcement sanctions to include monetary fines and certificate actions.

### A.2.3 Training

- a. Each pilot assigned as a crewmember to an aircraft in the service of **WYVERN** clients shall have completed an initial or recurrent training program within the preceding 12 calendar months in the specific aircraft type that is being chartered. Training shall be completed using the Operator's CAA-approved training program. A grace provision is allowed in accordance with national aviation regulations, but not to exceed one month.
- b. Ground training shall consist of approximately 10 hours of instruction and include (but is not limited to) aircraft systems review, normal/abnormal/emergency procedures, Operator's Operations Manual/Operations Specifications, SMS, and formal Crew Resource Management (CRM) training.
- c. Flight training for each pilot assigned as a crewmember in the service of **WYVERN** clients shall be approximately 9 flight hours conducted at a CAA authorized simulator training facility in a CAA approved flight simulator<sup>2</sup> and shall emphasize all items covered during the ground training with special emphasis on crew-related activities. If the training is conducted single-pilot only, the Operator must ensure the provisions of the Operator's CAA approved training program are fully utilized.
- d. The Operator must ensure the certification and qualifications of the instructor.

### A.2.4 Flight Plans

- a. All flights for **WYVERN** clientele shall be conducted under Instrument Flight Rules (IFR) with a proper IFR flight plan filed with the appropriate authorities.
- b. Records of flight plans shall be retained for 30 days and be made available for **WYVERN** inspection during that period, if requested.

### A.2.5 Specific Operating Limitations

#### A.2.5.1 Specially-Designated Mountain Airports (*US Operators Only*)

As part of the SMS, the Operator shall have formal risk controls in place for approaches to, departures from and training designed to minimize the hazards of flying to Specially Designated Mountain Airports (SDMA). **WYVERN** recommends, at a minimum, that KASE, KEGE, KRIL, KTEX, KJAC, KSUN, and KTVL are designated SDMA's. **WYVERN** will, upon request, assist the Operator in developing and evaluating the SDMA risk control measures above and beyond the following chart.

*NOTE: Due to the dynamic nature of airport information, the SDMA chart contains recommendations only and may not account for the most current airport data or practices.*

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<sup>2</sup> The simulator training program is intended to be equivalent to FAR 142 type-training such as is provided by FlightSafety International or CAE.



### Specially-Designated Mountain Airport Operations Chart

SAMPLE ONLY

AIRPORT	DAY/VFR	DAY/IFR(2)	NIGHT VFR SS-SR	NIGHT IFR(2) SS-SR	WX REQUIRED FOR DEPARTURE IF CLIMB GRADIENT NOT MET
<b>KASE</b> Aspen, CO ELV 7815' Rnwy 7006'	All Categories	Category A/B/C	NONE	NONE	Runway 33 HARD ONE 200/3 Runway 15 N/A - Terrain
<b>KEGE</b> Eagle, CO ELV 6535' Rnwy 8000'	All Categories	All Categories	NONE		Runway 7 5100/3 Runway 25 5400/3
<b>KRIL</b> Rifle, CO ELV 5544' Rnwy 7000'	All Categories	Categories A/B/C	All Categories with ILS or VASI	All Categories with ILS or VASI	Runway 8 5400/3 Runway 26 SQUAT TWO Std min climb only (397' /NM)
<b>KTEX</b> Telluride, CO ELV 9078' Rnwy 6870'	All Categories	Category A & B	NONE	NONE	Runway 27 5300/3 Runway 09 N/A-Obstacles
<b>KJAC</b> Jackson Hole, WY ELV 6445' Rnwy 6300'	All Categories	Category A/B/C	All Categories with ILS or PAPI	All Categories with ILS or PAPI	Runway 19 TETON THREE 4400/3 Runway 1 GEYSER FOUR 4400/3
<b>KSUN</b> Hailey, ID ELV 5315' Rnwy 6952'	All Categories	Categories A/B/C	NONE	NONE	Runway 13 3600/3
<b>KTVL</b> South Lake Tahoe, CA ELV 6264' Rnwy 8544'	All Categories	All Categories	All Categories with LDA-DME 1 or 2 Rnwy 18 and PAPI	All Categories with LDA-DME 1 or 2 Rnwy 18 and PAPI	Runway 36 2700/3 Runway 18 4000/3

Notes:

1. All airports require weather reporting to conduct IFR operations.
2. For IFR approach minimums, refer to appropriate instrument approach chart. (IFR landing minimums may be lower than IFR departure minimums, allowing aircraft to land, but not depart.)
3. ASE, EGE, TEX, and SUN limited to day only.
4. Night departures permitted at RIL, JAC, and TVL. Performance must meet published IFR climb gradients, regardless of existing ceiling/visibility.

SS-SR = NOAA Official Sunset to Sunrise

### **A.2.5.2 Circling Weather Minimums**

The Operator shall neither commence nor execute a circle-to-land approach to a non-towered airport during daylight hours unless:

- a. the ceiling and visibility are, respectively, at least 100 feet higher and one-half mile greater than the published circle-to-land minimums for the applicable aircraft category; or
- b. the ceiling and visibility are, respectively, at least 1,200 feet and 3 miles.

*NOTE: Circling approaches are allowed at night, if the weather is VFR and the airport is within Class D Airspace with an operating CAA control tower.*

## **A.3 Maintenance Program Requirements**

The Operator shall have a maintenance program that at a minimum complies with the requirements of the national aviation regulations governing the Operator's AOC/ACC.

The program will include procedures that ensure all applicable activities are performed in accordance with the Certificate Holder's Manual as delineated in their Operations Specifications approved by the national Civil Aviation Authority (CAA) of the country governing the Operator's AOC/ACC regardless of aircraft seating configuration.

## **A.4 Aircraft Requirements**

### **A.4.1 Required Equipment**

All aircraft for use by **WYVERN** clients shall have at least the basic equipment as prescribed in national aviation regulations. All additional equipment installed is required to be in a condition conducive to safe operation and shall operate with regards to intended function.

### **A.4.2 Life Rafts**

Approved life rafts of sufficient capacity to accommodate all aircraft occupants shall be carried during all over-water operations in compliance with national aviation regulations or as requested by **WYVERN** clients.

### **A.4.3 Portable Oxygen Bottle and Protective Breathing Equipment (PBE)**

- a. For airplanes operated in the 10 or more passenger seating configuration: At least two portable oxygen bottles, regulators and masks, or two protective breathing equipment (PBE) units shall be carried and located within three feet of any hand fire extinguisher.
- b. For airplanes operated in the 9-or-less passenger seating configuration, if the aircraft has more than one food or beverage heating unit (e.g., hot beverage tank, warming oven, microwave, etc.) then at least one portable oxygen bottle, regulator and mask, or one protective breathing equipment (PBE) unit shall be carried and located within three feet of any hand fire extinguisher. If the aircraft has no more than one food or beverage heating unit, then the aircraft must be equipped with at least smoke goggles or smoke hoods and oxygen masks for the pilots and oxygen for the passengers.
- c. The Operator must provide documentation that all crewmembers have at least received initial hands-on training in the use of the oxygen bottle or PBE unit and hand fire extinguisher.

## Appendix B: Rotary-Wing Passenger Carrying Requirements

Throughout Appendix B, all references to the regulations should be interpreted as referring to the applicable national Civil Aviation Authority (CAA) of the country governing the Operator's Air Operator/Carrier Certificate. In the absence of corresponding national regulations, the Operator shall comply with the intent of **THE WINGMAN STANDARD**.

### B.1 Organizational Requirements

#### B.1.1 Passenger Briefings

Passengers will be briefed at a minimum in accordance with the provisions of national regulations. This briefing will be completed by an authorized crewmember prior to each takeoff regardless of whether or not new passengers are boarded. An automated briefing system may be used, if the aircraft is so equipped, and the system is authorized by the CAA. There will be sufficient briefing cards on the aircraft to ensure one is available for each passenger seat.

#### B.1.2 Passenger Relations

- a. Crewmembers (including Flight Attendants) shall maintain a professional appearance and bearing at all times when in the service of **WYVERN** clientele. Dress will be conservative and hairstyles shall be neat and trim.
- b. Crewmembers shall not accept gratuities of any kind from passengers or any other sources when in the service of **WYVERN** clientele.
- c. Crewmembers shall make every reasonable effort to inform passengers of all matters pertaining to the flight (e.g., delays, changes, turbulence, safety issues).
- d. All disagreements between **WYVERN** clientele and crewmembers will be fully documented in writing and forwarded to the individual responsible for engaging the charter, the Operator and **WYVERN** for resolution.
- e. Passengers will always be escorted to and from the rotorcraft, regardless of whether the engines are running or not. Deplaning and boarding the rotorcraft will always be done from the side moving out and away from under the rotor disc. At no time should the aircraft engine be running without at least one pilot at the controls, nor should any ground vehicles be allowed to drive under the rotor disc.

#### B.1.3 Operating Policies

The Operator shall have an Operations Manual that complies, at a minimum, with national aviation regulations and includes procedures for:

- a. local flying area familiarization;
- b. destination heliport analysis;
- c. required preflight documentation in accordance with national aviation regulations; and
- d. required publications in accordance with national aviation regulations.

## B.1.4 Insurance

The recommended minimum Combined Single Limit (CSL) liability coverage is as follows:

- a. Small: \$ 10 Million USD
- b. Medium: \$ 22 Million USD
- c. Large: \$ 75 Million USD

## B.2 Operational Requirements

### B.2.1 Pilots

All pilots will be current and qualified per the appropriate section of the national aviation regulations and will meet or exceed the pilot experience requirements listed on the following chart:

	PIC	SIC
Airman Certificate	ATP – H	Commercial Instrument
Type Rating	Appropriate category & class	Appropriate category & class
Medical Certificate	1st Class	1st Class
Total Time in All Aircraft	N/A	N/A
Total Time in Category	2,000 hrs as PIC	1,500 hrs
Time in Type	200 hrs as PIC	50 hrs
Actual Instruments	100 hrs PIC for IFR and 0 hrs PIC for VFR	50 hrs for IFR and 0 hrs for VFR
Category and Class last 365 days	300 (hrs + landings) divided by 2	200 (hrs + landings) divided by 2
Category and Class last 90 days	75 (hrs + landings) divided by 2	50 (hrs + landings) divided by 2
NAA Sanctions last 5 years	None	None
Accidents/Incidents last 5 years <sup>3</sup>	None	None

### B.2.2 Training

- a. Each pilot assigned as a crewmember to an aircraft in the service of **WYVERN** clients shall have completed an initial or recurrent, factory or simulator training program within the preceding 12 calendar months in the specific aircraft type that is being chartered. Training shall be completed using the Operator's CAA-approved training program.
- b. Ground training shall consist of approximately 10 hours of instruction and should include, but is not limited to, aircraft systems review, normal/abnormal/emergency procedures, Operator's Operations Manual/Operations Specifications and formal Crew Resource Management (CRM) training.
- c. Flight training shall be approximately 9 flight hours conducted at a CAA authorized simulator training facility in a CAA approved flight simulator<sup>4</sup> or by the aircraft manufacturer and shall emphasize all items covered during the ground training with special emphasis on crew-related activities. If the training is conducted single-pilot only, the Operator must ensure the provisions of the Operator's CAA-approved training program are fully utilized.

<sup>3</sup> And noteworthy CAA enforcement sanctions to include monetary fines and certificate actions.

<sup>4</sup> The simulator training program is intended to be equivalent to FAR 142 type-training such as is provided by FlightSafety International or CAE.

- d. The Operator must ensure the certification and qualifications of the instructor.

### **B.2.3 Flight Following**

Whenever possible pilots will maintain flight following and radar advisories with ATC facilities during VFR flights. Specific flight following procedures shall be established by the company and strictly adhered to by the PIC. For operations in which radar advisories cannot be maintained a VFR flight plan shall be filed and utilized (i.e., opened and closed).

### **B.2.4 Specific Operating Limitations**

#### **B.2.4.1 Performance Limitations**

- a. Confined areas for takeoff and landing will be avoided other than those approved for normal helicopter operations.
- b. The Operator shall not takeoff or land unless areas are available from any point in the takeoff or landing flight path that allow an emergency landing to be made without undue hazard to passengers, or to persons or property on the surface.

#### **B.2.4.2 Altitude & Weather Minimums**

The Operator shall not operate a helicopter under VFR conditions when the ceiling and visibility are less than prescribed below:

- a. During en route operations
  - i. Day VFR: ceiling 800 feet and visibility 2 miles
  - ii. Night VFR: ceiling 2000 feet and visibility 3 miles, or ceiling 1500 feet and visibility 4 miles, or ceiling 1200 feet and visibility 5 miles
- b. Within a specifically delineated local area
  - i. Day VFR: ceiling 500 feet and visibility 2 mile
  - ii. Night VFR: ceiling 800 feet and visibility 2 miles
- c. The Operator shall not operate a helicopter for **WYVERN** clientele en route at an altitude above the surface less than:
  - i. Day 500 feet
  - ii. Night 700 feet
- d. The Operator shall not takeoff or land in **WYVERN** customer service when a thunderstorm is known to be within three miles of the takeoff or landing area.

#### **B.2.4.3 Operating Limitations**

An ILS approach shall not be started when the touchdown RVR for the landing area is reported to be less than RVR 1200. The following elements of the ground navigation system must be in normal operation:

- a. all components of the ILS;
- b. High Intensity Runway Lights, if available;
- c. standard approach lighting system and sequenced flashing lights, if available; and
- d. touchdown zone lighting and runway centerline lights, if available.

*NOTE: A precision radar fix or a compass locator may be used in lieu of an outer marker. If any component of the instrument landing system is inoperative, appropriate published approach minimums shall apply.*

#### **B.2.4.4 Missed Approach**

A missed approach shall be initiated when:

- a. the pilot has not established visual reference with any of the visual references required by national aviation regulations upon reaching decision height/altitude;
- b. the pilot determines the landing cannot be made within the touchdown zone;
- c. the Pilot Monitoring (PM) calls for a go-around; or
- d. any of the required airborne equipment becomes inoperative during a special helicopter landing minimums approach, except that an approach may be continued using a flight director system when the automatic approach couple malfunctions and is disengaged below 400 feet above the elevation of the touchdown zone.

#### **B.2.4.5 Freezing Precipitation**

No Operator may operate a helicopter in **WYVERN** client service in freezing drizzle, freezing rain, sleet or wet snow.

#### **B.2.4.6 Operations at Non-Airport/Heliport Landing Sites**

- a. The Operator's pilots will use their best judgment when considering potential landing sites. Factors that must be reviewed include:
  - i. obstruction clearance;
  - ii. ground slope;
  - iii. noise sensitive communities around the operating area; and
  - iv. Foreign Object Debris (FOD) hazards.
- b. A suitable landing site is defined as a minimum of 75 x 75 ft; provides a visual means to determine wind direction (e.g., wind sock, weather vane, smoke stack, flags, etc.); must be a dry, firm and level surface that is able to support the weight of the aircraft; and has at least one clear approach and departure path.

*NOTE: The location can be on the ground, a marine vessel, an elevated platform, or the roof of a building or parking garage. The landing surface does not have to be paved, but must be surface that produces a minimum of FOD.*

- c. Prior to landing at a Non-Airport/Heliport landing site, an aerial coordinator or the rotorcraft pilots will confirm with the local authorities that the rotorcraft landings are authorized at the proposed landing location. A high and low reconnaissance of the site will be performed prior to committing to a landing.

#### **B.2.4.7 Night Operations at Non-Airport/Heliport Landing Sites**

The Operator will consider the following when operating at an Off-Airport/Heliport site during the hours of darkness:

- a. The landing site must be adequately illuminated. If perimeter or stadium lights are not available, rotorcraft operations will be limited to daylight hours only.
- b. If a visible, lighted wind direction indicator is available and the landing site has been thoroughly evaluated during the arrival landing process (during daylight hours), a night departure may be made at the discretion of the PIC.
- c. Pilots operating the rotorcraft at night will perform a thorough high, low and ground level reconnaissance during daylight hours, before a night takeoff is attempted. Maximum

performance takeoffs should be utilized at night, if feasible, to ensure obstacle clearance is assured.

- d. Special considerations should always be given to noise sensitive areas.

## **B.3 Maintenance Program Requirements**

The Operator shall have a maintenance program that complies at a minimum with the requirements of national aviation regulations, depending on aircraft seating configuration and is in accordance with the aircraft manufacturer's maintenance program. The program will include procedures that ensure all applicable activities are performed in accordance with the Certificate Holder's Manual.

## **B.4 Aircraft Requirements**

### **B.4.1 Required Equipment**

All aircraft for use by **WYVERN** clients shall have at least the basic equipment as prescribed in national aviation regulations. All additional equipment installed is in accordance with the CAA's requirements and shall be in a condition for safe operation with regards to intended function.

### **B.4.2 Life Rafts**

Approved life rafts of sufficient capacity to accommodate all aircraft occupants shall be carried during all over-water operations in compliance with national aviation regulations or as requested by **WYVERN** clients.

### **B.4.3 Floats**

- a. Multi-engine helicopters operated at a weight that will allow a climb, with the critical engine inoperative, of at least 50 feet per minute at an altitude of 1,000 feet above the surface, may be operated without flotation devices during over water operations less than 3 miles from the shore.
- b. Helicopters operating more than 3 miles from shore shall be equipped with Helicopter Flotation Devices (HFD).
- c. **WYVERN** strongly recommends that all helicopters be equipped with pop-out flotation devices whenever operating beyond auto-rotative distance from land.

*NOTE: Aircraft providing service for **WYVERN** clientele shall be equipped with flotation devices when requested by the client, regardless of aircraft configuration and intended flight path.*

## Appendix C: Industry Best Practice Resources

- a. The Wingman Standard, Original Reissue, dated 20 January 2014
- b. ICAO Document 9859 (Safety Management Manual), 3<sup>rd</sup> Edition, May 2013
- c. FAA Advisory Circular 120-92A. "Introduction to Safety Management Systems for Air Operators", dated August 12, 2010
- d. NBAA Management Guide, Fall 2012
- e. NBAA Business Aviation Management Journal
- f. International Standards for Business Aviation Operations (IS-BAO) Audit Standards, 2<sup>nd</sup> Edition, Rev 1, dated January 1, 2013
- g. FAA Advisory Circular 120-71A, "Standard Operating Procedures for Crewmembers", dated February 27, 2003
- h. Flight Safety Foundation, "AeroSafety World Magazine"
- i. Flight Safety Foundation monthly bulletins (prior to 2006)
  - i. Accident Prevention
  - ii. Airport Operations
  - iii. Aviation Mechanics Bulletin
  - iv. Cabin Crew Safety
  - v. Flight Safety Digest
  - vi. Helicopter Safety
  - vii. Human Factors & Aviation Medicine
- j. ISO 9000 Quality Management Standards
- k. Helicopter Association International , Helicopter Mission-Specific Standards (HMSS)
- l. IBAC , "Guidelines For The Conduct of Risk Analysis by Business Aircraft Operators"
- m. EASA, "European Strategy Safety Initiative (ESSI)"
- n. Aeronautical Repair Station Association (ARSA), "Human Factors Training Handbook", original issue, dated April 5, 2007