DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

Fixed Wing Aviation Standard Operations Procedures

2005 Edition: valid until replaced a subsequently published edition.

Contains important information for Flight and Air Crewmembers.
May 19, 2005
Including information on:

- **Continuing Airworthiness**
- **Aircraft & Mission Specific items.**
- **Aerial Supervision.**
- **Flight Crewmembers / Air Crewmembers.**
- **Smokejumper Pilots & Contract pilots.**
- **National Interagency Airspace Information System airspace.nifc.gov**

NATIONAL AVIATION OFFICE

Bureau of Land Management

The following are Flight and Air Crewmember Standard Operations Procedures (SOP) that are to be complied with during BLM Fixed Wing Flight operations.

National Aviation Office
Bureau of land Management
National Interagency Fire Center
3833 South Development Ave
Boise, ID 83705

TABLE OF CONTENTS

Chapter

1

1.0 BLM Flight & Air Crewmember Standard Operations Procedures

1.1 The purpose of this Standard Operations Procedures Guide

This Guide provides flight and maintenance guidelines for BLM personnel assigned to BLM aircraft. For the employee to accomplish their work in a manner consistent with the standards of safety, reliability, comfort, and economy established by the Bureau. The SOP's compliance provides the same level of protection afforded the flying public through the rules of the Department of the Interior (DOI) and BLM. These guidelines, as accepted practices, are to be complemented with good, sound judgment and proper discretion in all cases in order to cover those situations for which specific procedures have not been established. All personnel are responsible for maintaining high standards by presenting to the BLM National Aviation Office recommended revisions to correct errors and deficiencies, to add supporting procedures contrary to the purpose of the guide.

SOP'S provide detailed guidance to **Flight** crewmembers and **Air** Crewmembers.

They do not supersede operational requirements already mandated by the FAR'S, DM, AIM, the Pilot Operating Handbook (POH), or the Aircraft Flight Manual (AFM). Throughout this SOP, the words must, shall, or will denote mandatory procedures. The words should, may, or can denote discretionary items or pilot techniques.

Chapter

2

2.0 Safety Standards

2.1 Safety

1. Safety can be defined as the steps we take to prevent property damage or employee injury. Risk is defined as the possibility of loss. It is the Bureau's policy to establish and operate with the highest of safety standards. Employees must operate within the scope of employment, following all Bureau policies and applicable Federal Aviation Regulations (FAR'S). The applicable parts of FAR 91and DOI/BLM regulations govern aviation operations. Safety is every employee's responsibility and will be enforced by all supervisors. Safety will come first in every mission. All ground/flight equipment and Bureau facilities will be maintained in top quality condition. It is the responsibility of each employee to bring to the immediate attention of management any practices or conditions that could lead to an accident or violation or which may result in an unsafe operation.

Safety standards are observed in day-to-day operations include, but are not limited to, the following:

1. No flight crew will leave the controls of an aircraft unattended with the engines running.
2. No passengers will be onboard the aircraft while it is being fueled. If, for some reason, the passenger or passengers must remain onboard, a crewmember will remain with the passengers with a fire extinguisher. No passengers will be onboard the aircraft while the oxygen system is being serviced.
3. No passenger will board or de-plane while the engine is running when the passenger door is on that side of the aircraft. This does not include smokejumper operations (see ISPOG).
4. No aircraft will taxi between the ramp and another aircraft that is loading passengers.
5. No flight crewmember shall leave their assigned duty station except as specified in FAR 91.105. Only qualified flight crewmembers shall occupy required flight deck stations except with permission from the PIC or per the Single Pilot Tactical Aircraft mission profile.
6. No flight crewmember or passenger will smoke on board BLM aircraft.

Chapter

3

3.0 Job descriptions

3.1 Pilot in Command (PIC):

The PIC Operates the aircraft in accordance with applicable FAR'S and USDI/BLM policy. Conforms to applicable guides and handbooks relative to the mission assigned, and procedure and within contract specifications. Develops, activates, and files FAA or agency flight plans. Wears personal protective equipment if required. Does not deviate from the filed Flight Plan or mission profile unless for safety of flight. Performs a thorough pre-flight inspection of the aircraft and briefs all passengers in accordance with 351 DM 1.5 and all applicable FAR'S.

3.2 Second in Command (SIC):

The SIC is directly responsible to the PIC. Duties and Responsibilities are for the safe and efficient conduct of the misson. Will ensure that they are legally qualified, adequately rested, and on time. Will perform other duties as delegated by the PIC, but the PIC'S responsibility may not be delegated. Will function as a crewmember in accordance with approved Cockpit Resource Management procedures. Will perform according to the ISPOG and BLM SOP for smokejumper special use missions.

3.3 Flight attendant / Cargo Load Master:

The National Aviation Office or PIC will designate the need for a flight attendant or cargo loadmaster. Those persons will be directly responsible to the PIC. **Spotters** are not required on Point-to-Point Flights using Smokejumper aircraft.

3.4 Air Tactical Pilot:

Meets the requirements of PIC and complies with the Aerial Supervision Modules Operation Guide (ASMOG).

3.5 Air Tactical Supervisor:

Meets the training requirements for Single Pilot Tactical Aircraft as an Aircrew member and complies with the Aerial Supervision Module Operations Guide (ASMOG)

3.6 Smokejumper Spotter:

Meets the requirements for Single Pilot Tactical Aircraft training as an Aircrew member**. Smokejumper Spotters** are familiar with the type of aircraft and capabilities (avionics, payload, etc) Maintains daily fire readiness of jump ships. May coordinate air traffic over a fire if no ATGS, ASM, HELCO or Leadplane is on the incident. Will perform flight following however **the PIC remains** responsible. Sets mission priorities. Coordinates with the PIC on jump spot selection, type of pattern. May help with local navigation. Responsible for air to ground fire communications. Follows the direction of the PIC during aircraft emergencies. Ensures that the jumpers follow appropriate smokejumper and BLM policy and procedures. Spotters will provide accurate charge code information to the PIC in a timely manner. **Point-to-Point Flights utilizing Smokejumper aircraft do not require spotters.**

3.7 Fixed Wing Manager:

General: The Fixed Wing Manager is responsible for the operational missions of the aircraft and will work jointly with the PIC to ensure safe, efficient flight management. Fixed wing managers are assigned on all BLM flights to provide management oversight. Use of Fixed Wing Managers with a flight attendant is optional. The NAO, ordering office or the PIC will determine on a case-by-case basis the need for a Flight Attendant.

The PIC is responsible for the operation of the aircraft and has final authority. On missions that only require the PIC to be onboard, the pilot shall assume the responsibilities assigned to the Fixed Wing Manager.

3.8 Dual Function / Incidental Pilot:

In order to qualify as a dual function pilot, the following steps must be taken:

1. A request to the NAO for development and implementation of a training planning and pilot file.
2. Letter of Authorization (LOA) on file, or PD amendment and AMD initial checkride.

Chapter

4

4.0 Crewmember Qualifications

Flight Crewmembers are defined as a person who is holding a valid FAA airman's flight and medical certificate appropriate to the operations being performed. The Pilot in Command (PIC or co -pilot) and designated to act in that capacity by the Bureau NAO.

Air Crewmembers are additional crewmembers required for the accomplishment of the mission, such an ATS, flight attendant, smokejumper spotter, cargo loadmaster etc. **Aircrew members do not fly the aircraft**.

4.1.0 Flight Crew Members

Flight Crewmembers must meet the following qualifications in addition to any FAR'S and Departmental Manual (DM) requirements.

4.1.1 Pilot in Command (PIC):

Pilot in Command Flight Crewmembers will be designated by the BLM NAO as PIC, and have an AMD or Interagency card issued as PIC.

1. **ATP Certificate** with the appropriate type rating for the aircraft flown (over 12,500# gross weight or jet)

2. **FAA /BLM /AMD/ Interagency** Pilot Proficiency Equipment Checks current within 12 months plus grace month. Current DOI or USFS 6 month IFR check for smokejumper operations. Current DOI or Interagency (USFS) mission approval are for general or *special use*. Alaska orientation checks are detailed in the Interagency Smokejumper Pilots Operations Guide and the Aerial Supervision Modules Operations Guide.

3. **Annual refresher** for special use.

4. **Medical Certificate must be** appropriate to the operation and aircraft flown.

    - Contract Smokejumper Captains are required to have First Class Medicals per the contract.

    - Agency Pilots must have a medical *appropriate* to the operation and or the aircraft flown.

4.1.2 Second in Command (SIC):

Second in Command / Flight Crewmembers will be designated by the BLM NAO as SIC, and have an AMD or Interagency card issued as SIC.

1. Commercial Instrument and Multi Engine ratings (no type necessary for transport category aircraft.) 351DM 3.2C.
2. DOI SIC issued card (current).
3. For smokejumper missions, five mission training flights are required initially and at least one refresher flight annually with Paracargo.
4. Second Class Medical Certificate.

4.1.3 Flight Instructors:

Flight Instructors will be designated by the NAO and hold a valid FAA flight instructor certificates for the particular instruction to be given. To give instrument instruction you would must have an *Instrument Instructor* rating, *Multi Engine Instructor* rating for multi engine instruction. For special use mission training please see the Interagency Smokejumper Pilots Operations Guide or the Aerial Supervision Module Operations Guide.

4.1.4 Smokejumper Pilot:

Smokejumper Flight Crewmembers will be designated as PIC by the BLM and Interagency (AMD or USFS) carded. Must meet and fulfill the requirements as PIC and the Interagency Smokejumper Pilots Operations Guide, BLM and Departmental Manuals. Second in Command's requires training in Smokejumper Operations per this guide, and meets the requirements of the Interagency Smokejumper Pilots Operations Guide.

4.1.5 Air Tactical Pilot:

Air Tactical Pilots will be designated as PIC by the BLM NAO and carded by the AMD. Must meet and fulfill the requirements as PIC and the Aerial Supervision Modules Operations Guide, Chapter 4, ATP training and checks

4.1.6 Inspector Pilots:

Bureau Inspector Pilots are designated by the National Aviation Office and authorized by the Office of Aircraft Services with the appropriately issued card and training. For special use operations the ISPOG and ASMOG requirements are Bureau Policy.

4.2.0 Air Crewmembers

Air Crewmembers must meet the following qualifications in addition to any Federal Aviation Regulations (FAR), BLM 9400 and Departmental Manuals (DM).

4.2.1 Air Tactical Supervisor:

The ATS must meet and fulfill the requirements in the Aerial Supervision Modules Guide, Chapter 5, ATS training and checks.

4.2.2 Smokejumper Spotter:

Spotters will be designated and trained in accordance with BLM Smokejumpers Spotter training program. Spotters will attend a National Aviation Office approved Crew Resource Management course. Recurrent training in CRM and Human Factors is encouraged. Initial and recurrent spotter training will include Single Pilot Tactical Aircraft specific training and aircraft specific familiarization as required. The BLM 9400 Manual, OPM 22, DM and BLM SOP'S are policy.

- Spotters will become familiar with all applicable parts of the Departmental Manual and Federal Aviation Regulations (FAR 91 and 105) and BLM Standard Operations Procedures.

4.2.3 Cargo Load Master / Flight Attendant:

The National Aviation Office according to need will designate cargo loadmasters. Cargo/ Load Master / Flight Attendants will have initial and recurrent training every 12 months by a qualified Flight Crewmembers to include at least the following:

1. Preflight interior and exterior
2. Passenger briefings are required by the Federal Aviation Administration and DOI/BLM.
3. Emergency Procedures.
4. Passenger information cards.
5. Weight and Balance information.
6. Responsible to the PIC.

Chapter

5

5.0 Flight Operations

5.1 Two Pilot Operations:

A designated SIC, qualified to 351 DM 3.2C standards may be used on administrative transport flights that are not special use or mission specific and will be assigned by the NAO.

5.2 Single Pilot Operations:

The PIC of a single pilot aircraft will be designated by the NAO as PIC and operate according to BLM SOP, BLM 9400 manual, DM and FAR part 91.

5.3 Single Pilot Tactical Aircraft:

Air Crewmember's will perform functions trained for as directed by the PIC during special use missions such as ASM, Smokejumper and Paracargo or other fire suppression missions.

Any Air Crewmember not qualified as SIC (Second in Command), by FAR 135.235, BLM and DM policy and manuals, and occupying the right cockpit seat of any single pilot approved Tactical Aircraft, must receive mission specific training prior to being assigned to assist the PIC. These duties may include assisting the PIC with Checklists or other matters as directed by the PIC. Appropriate functions of the ATS or Smokejumper Spotter/ Loadmaster are:

1. Identification of appropriate checklists *Take Off* Checklist, *Landing* Checklist, and *emergency* checklists at the request of the PIC.
2. VHF and FM radio operations for fire related communications, agency flight following and air-to-air with other fire fighting aircraft.
3. Other functions as directed by the PIC.
4. **Manipulation of the aircraft controls, operation of non-fire related avionics (TCAS, VHF radios, Multi function displays) and essential aircraft systems is NOT authorized.**

5.4 Preflight:

The OAS-2 or 23, and the Deferred Maintenance Items Log (DMI) will be checked for discrepancies and insure they are properly deferred, in accordance with the MEL or repaired. For contracted aircraft, the individual company's procedures will be followed in order to determine airworthiness before departure.

The PIC is responsible for ensuring all preparations are made for flight. Pilots should arrive at their duty station one hour prior to scheduled departure time when conditions allow. If both pilots are PIC Captain qualified, one will be designated as the PIC for the flight. Responsibilities include aircraft preflight, aircraft loading and securing cargo, aircraft fueling, and information required for flight. The PIC is responsible for preflight items, but may delegate the specific duties to a qualified flight crewmember. The PIC must initial the appropriate documentation that the preflight and weight and balance has been completed, and takes final responsibility for these items regardless of delegation of the duties.

The following preflight items must be checked immediately preceding the first flight after maintenance is performed:

1. All fluid and fuel levels confirmed.
2. Log entries (weight and balance, sign-offs).
3. Maintenance of flight controls and surfaces require visual confirmation of proper function.
4. Performance of proper engine, propeller, and fuel system checks prior to takeoff.

Note: For Special Use, Aircraft Standard Weight and Balance figures may be used while in a "standard and consistent" configuration for mission specific profiles.

5.5 Sterile Cockpit:

Sterile cockpit rules apply within a 5-mile radius of the airport. The flight crew will perform no radio or cockpit communication during that time that is not directly related to safe flight of the aircraft from taxi to 5 miles out and from 5 miles out until clearing the active runway. Normally this would consist of reading checklists, communication with Air Traffic Control (ATC), Flight Service Stations, Unicom, or other aircraft with the intent of ensuring separation or complying with ATC requirements. Communications can be accomplished when the audio panels can be isolated and do not interfere with flight operations of the pilot.

Exception: When conducting firefighting missions within 5 miles of an uncontrolled airport, maintain sterile cockpit until departing the traffic pattern and reaching final altitude. Monitor CTAF frequency if feasible while engaged in firefighting activities. Monitor CTAF as soon as practical upon leaving the fire and returning to the uncontrolled airport. When conducting firefighting missions within Class B, C, or D airspace, notify dispatch that ATC communications will have priority over dispatch communications.

Landing Lights: Landing lights or pulse lights will be left on during sterile cockpit (5 miles from arrival/departure airport), or longer depending on the mission if conditions warrant.

Incident Reports: The SafeCom Form will be used to file any deviation from the DM or other unsafe flying condition, and will be routed through the AMD electronically or by hard copy.

5.6 Flight/Duty Times:

Flight crews will not accept a mission when it is clear that it cannot be completed within flight / Duty times. **See the DM 351 1.3 Flight Limitations.**

When a flight crewmember has exceeded the daily flight/duty time limitations, prior to accepting, or being assigned duty, that flight crewmember must have a rest period of at least:

- **11 consecutive hours** of uninterrupted crew rest is required if the flight/duty time limitation was **exceeded by not more that 30 minutes.**
- **12 consecutive hours** of uninterrupted rest is required if the flight/duty time limitation was **exceeded by more than 30 minutes or more.**
- **The next calendar day off** if the flight/ duty day was exceeded by **more than 60 minutes.**

The PIC is required to complete and file a SafeCom.

5.7 STOL Operations:

(Short Take Off and Landing) operations for back country airstrips will not be conducted without prior approval from the BLM NAO. See glossary for the definition of STOL.

5.8 Oxygen Requirements:

BLM operated aircraft comply with the **DM** and **FAR part 91** regarding oxygen usages. **§ 91.211 Supplemental oxygen.** (a) General. No person may operate a civil aircraft of U.S. registry.

(1) At cabin pressure altitudes above 12,500 feet (MSL) up to and including 14,000 feet (MSL) unless the required minimum flight crew is provided with and uses supplemental oxygen for that part of the flight at those altitudes that is of more than 30 minutes duration;

(2) At cabin pressure altitudes above 14,000 feet (MSL) unless the required minimum flight crew is provided with and uses supplemental oxygen during the entire flight time at those altitudes; and

(3) At cabin pressure altitudes above 15,000 feet (MSL) unless each occupant of the aircraft is provided with supplemental oxygen. **This is not the entire FAR!**

5.9 Cellular Phones:

Effective December 12, 1991, the Federal Communication Commission (FCC) prohibited the use of cellular phones while aircraft are airborne. "Airborne" is defined as the time an aircraft is not touching the ground. FCC Regulation 22.925 requires all cellular telephones to be turned off when an aircraft leaves the ground. If a cellular phone is installed in an aircraft, the following notice must be posted on or near each cellular phone: The use of cellular telephones while this aircraft is airborne is prohibited by FCC rules, and the violation of this rule could result in suspension of service and/or fine. The use of cellular telephones while this aircraft is on the ground is subject to FAA regulations. If the aircraft is not airborne, the use of a cellular telephone is permitted unless the aircraft's operator or pilot-in-command determines its use will interfere with the aircraft's communication or navigational equipment.

Cellular phones and your aircraft communication equipment are somewhat alike. Both use frequencies that are "line-of-sight" and can travel great distances. Accessing multiple antennas (much like UNICOM). At altitude, using a cellular phone can severely disrupt cellular service. The penalty for violating this FCC regulation can reach up to $10,000. **Some cellular phones are authorized for airborne use;** however, they are not your typical cellular phones. References: FCC Regulation 22.925 Prohibition on airborne operation of cellular telephones. Report and Order. CC Docket No. 88-411

5.10 Use of intoxicants, mental and physical well being:

The use of intoxicants by any BLM personnel while on duty, or in the case of Flight Crewmembers, and Air Crewmembers within eight hours prior to flight, is prohibited. Nor may any BLM personnel be intoxicated or suffering from the after effects of drinking when reporting for duty or when on duty. Except in an emergency, the PIC *may not* allow a person who is obviously under the influence of intoxicating beverages to be carried in BLM aircraft. No person may drink any alcoholic beverages on board Bureau aircraft.

Use of drugs or hallucinatory drugs: The use of hallucinatory drugs by **Flight** and **Air** crewmembers anytime during their employment with BLM, not under the supervision of qualified medical personnel, is grounds for termination. Certain drugs in common use have a marked effect on the nervous system, which is temporarily detrimental to a flight crewmember's flying ability and judgment. Crewmembers should ask their doctor if any

drug he has prescribed would have any effect on the nervous system. For use of any drugs prescriptive or non-prescriptive, for which no medical determination of effects have been determined, the crewmember shall advise the NAO, which will consult qualified medical personnel or Advisory Circular 91.11-1 for determination of flight status**.**

Mental and physical well-being: Flight crewmembers are expected to use good judgment relative to obtaining adequate rest prior to flights and reporting for flight duty when under serious mental stress (i.e., serious personal problems, serious family illness, etc.). When this type of condition prevails, flight duty personnel should coordinate with their immediate supervisor to have them temporarily re-assigned from flight duties. **Medical Exams:** Flight crew personnel will maintain a medical certificate appropriate to the flight operation. The medical exam will be given by an FAA designated medical examiner. Notwithstanding, flight crew personnel should be in good physical condition while performing flight duties, if in poor physical condition, flight responsibilities should be re-assigned. The pilot's immediate supervisor will make this determination independently or upon the recommendation of the BLM NAO.

5.11 Personal Protective Equipment (PPE):

PPE will be properly worn (including gloves) for special use flights. All operations will be conducted according to the ALSE, except items under waiver. Helmets are waived for ASM and Smokejumper flight crewmember operations.

5.12 Flight into hazardous metrological conditions:

When a flight encounters or anticipates hazardous meteorological conditions, such as icing, hail, thunderstorms, severe turbulence, etc. The PIC, SHALL exercise their best judgment so to conduct the flight to minimize such hazardous conditions. If in the PIC'S opinion a deviation from the prescribed route is necessary, or advisable, such deviation from the route will be in accordance with procedures outlined in the FAR'S, AIM and BLM SOP.

5.13 Emergencies

Never hesitate to declare an emergency if one exists! It is a conservative and professional response to request and get all the help you can. In an emergency evacuation situation while operating with a single flight crewmember:

- Emergency passenger briefings should include the removal of glasses, pens and sharp objects.

- Putting heads down and protection with pillows or coats.

- Seat belts worn until the aircraft is completely stopped.
- Evacuation instructions with reassurances.

5.14 Weight and Balance:

Actual weights will be used to compute aircraft weight and balance information. Baggage and cargo will be weighed with an approved scale when available, other wise the PIC'S best estimation for the weight of cargo and passengers may be used. Standard weights may be used for certain personnel such as: Smokejumpers – 250 pounds, Fire Packs -45 pounds, Passengers – 200 pounds. All aircraft weight and balance data shall be either completed or checked and signed by the PIC prior to departure in order to determine compliance with the DM and FAR'S. Pre calculated mission weight and balance data meets the requirements as long as the weight information is current and reviewed prior to departure. The aircraft will not be flown unless the maximum gross takeoff weight is equal to or less than that allowed in the aircraft flight manual, and the center of gravity is with in limits.

5.15 Practice and Demonstration Jumps:

- **The Departmental Manual and Federal Aviation Regulations** make it clear that the Pilot in Command is responsible for practice and demonstration jumps.
- **There is no blanket waiver or immunity** available under public aircraft law for non-mission related jumps, such as normal practice jump training or demonstration jumps for public relations purposes.
- **The National Aviation Office has** provided a Practice and Demonstration Jump Guide containing related information required notifications regarding airspace issues
- **The** Airspace Management section of the Airspace.nifc.gov website allows NOTAM Airspace to be displayed to the aviation community allowing greater exposure and increased safety.
- **See Airspace table next page.**

Updated (07-30-02) Flow Chart for **Practice and Demonstration** Jumps for BLM Smokejumpers and this makes the information current regarding the Table in Appendix 1 Advisory Circular 105.2C
Tuesday, July 30, 2002 (Revised version of the table in appendix in AC 105.2C)

LOCATION OF JUMP	KIND OF AUTHORIZATION REQUIRED	WHEN TO APPLY OR NOTIFY	WHERE TO APPLY OR NOTIFY	FAR SECTION REFERENCE
Over or into a congested area or **open air assembly of persons**	FAA Form 7711-2, Certificate of Waiver or Authorization Application	Apply at least 4 working days before the jump	FSDO having jurisdiction over the area where jump is to be made	105.15
Over or onto an airport with or without a U.S. operated control tower	Prior Approval	Apply before jump	Airport management	105.17
In or into a control zone with a U.S. operated control tower	Authorization (Verbal can be used)	Apply before jump	ATC tower having jurisdiction over the control zone *	105.19
In or into an airport radar service area	Authorization (Verbal can be used)	Apply before jump	ATC tower at the airport for which the airport radar service area is designated	105.20
Into or within a positive control area or terminal control area	Authorization (Verbal can be used)	Apply before jump	Nearest FAA ATC facility or FSS *	105.21
In or into other controlled airspace	None	1 hour before jump is made, but not more than 24 hours before jumping is to be completed	Nearest FAA ATC facility or FSS	105.23
Jump over or within restricted or prohibited areas	Authorization (Verbal can be used)	Apply before jump	The agency in charge of the area	105.27

- * Communication required with nearest FAA ATC facility or FSS 5 minutes before jump.
- **BLM NAO desires NOTAMS to be filed at least 24 hours prior to the Practice or Demonstration Jump.**

5.16 Government pilots flying contract aircraft:

Government pilots flying contract aircraft must not only meet BLM requirements, but contractors training requirements as outlined in the contract. This includes MEL and weight & balance and aircraft operating procedures.

5.17 Prohibition against carriage of weapons:

Federal law provides that no person shall carry a deadly or dangerous weapon, concealed or unconcealed, onboard an aircraft being operated by the BLM, except:

1. Employees or officials of municipal, state, or federal governments, who are authorized or required to carry arms and who present proper identification.
2. Passengers carrying sporting firearms that are dismantled and/or unloaded and encased in a suitable container authorized by the PIC.
3. Such other person, including crewmembers, authorized by the Bureau.
4. As part of a survival kit.

In no case will authorization for the carriage of deadly or dangerous weapons be granted if such authorization is contradictory to state or local laws or FAR'S. Small arms and automatic weapons are not authorized to be carried or worn in Canada. **Alaska law requires aircraft survival kits contain a firearm.** It is recommended that this firearm comply with Canadian regulations (rifle or shotgun) for ease of transit through Canadian airspace.

Aircraft parked with survival kits containing firearms should be kept secure, and should be unloaded during transport or storage in BLM aircraft. The contractor is responsible for security of firearms as well as the aircraft on a contract-operated aircraft.

5.18 Airspace

The BLM has identified a need to enhance safety and awareness in our current airspace system and has provided a website at http://airspace.nifc.gov for graphical Airspace information that includes Temporary Flight Restriction (TFR) information on World Aeronautical (WAC), Sectional and Global Navigational Charts (GNC) has been made available at the BLM Airspace Information System website. TFR'S are updated twice daily, 7 days a week during the fire season, and once daily, 5 days a week during the rest of the year. In addition, a tactical chart with TFR specific information with incident names, frequencies and altitudes are available. **These charts are all current versions.** All aviators and fire staff are encouraged to view and use this site and others like it to improve overall safety of flight.

Extensive flight planning features that aid navigation through the airspace system are available through the BLM Airspace Information System website with the following group logins and passwords:

• BLM Aviation	Login:	blm@blm.gov	Password:	blmaviation
• Helicopter	Login:	copter@blm.gov	Password:	blmcopter
• Smokejumper	Login:	jumper@blm.gov	Password:	blmjumper
• Seat	Login:	seat@blm.gov	Password:	blmseat
• Dispatchers	Login	dispatcher@blm.gov	Password:	blmdispatcher
• National Park Service	Login:	nps@blm.gov	Password:	npsaviation
• Fish& Wildlife Service	Login:	fws@blm.gov	Password:	fwsaviation
• BIA	Login:	bia@blm.gov	Password:	biaaviation
• USFS Aviation	Login:	usfs@blm.gov	Password:	usfsaviation
• OAS	Login	oas@blm.gov	Password	oasaviation
• Minerals and Mining	Login	mms@blm.gov	Password	mmsaviation
• USGS	Login	usgs@blm.gov	Password	usgsaviation
• Air National Guard	Login	ang@blm.gov	Password	angaviati
• MAFFS	Login	maffs@blm.gov	Password	maffsaviation
• Air Tanker Pilots	Login	tanker@blm.gov	Password	tankeraviation

Chapter

6

6.0 Training

BLM and Contract Flight and Aircrew Members

6.1 .1 Fixed wing pilot recurrent and initial training:

This section provides the flight and ground training requirements for BLM Flight and Air crewmembers, including pilots, copilots, Smokejumper Captains (including contractors), ATP, ATS, flight instructors, check airmen, spotters and flight attendant/loadmasters. Alaska and the lower 48 with USFS specific requirements. Aircraft specific training and standards for interagency pilots and relief pilots.

6.1.2 Agency Flight Crew Members:

Initial and recurrent training standards are established for pilot proficiency in procedures and techniques. All training must be documented in the Flight Crewmembers training records.

BLM specific:

1. Initial and recurrent training will be to FAA Practical Test Standard (PTS) Guides and flown to the certificate held.

2. NAO approved simulator or Flight Training syllabus on an annual basis. (See program specific requirements for Smokejumper Captain's, ATP and ATS).

3. **Departmental Manual:** See OPM 22 for more information DOI pilots are required to attend an Aviation Conference and Education (ACE) during their first 12 months of employment. See OPM 22 for more information. The required modules are listed below:

A101 Aviation Safety
A105 Aviation Life Support Equipment
A106 Aviation Mishap Reporting
A107 Aviation Policy and Regulations I
A110 Aviation Transport of Hazardous Materials
A111 Flight Payment Documents
A112 Mission Planning and Flight Request Process
A113 Crash Survival
A201 Overview of Safety and Accident Prevention
A202 Interagency Aviation Organizations
A203 Airspace Management and Coordination
A302 Personal Responsibility and Liability
A303 Human Factors in Aviation
A305 Risk Management
A307 Policy and Regulations II
A310 Crew Resource Management

All DOI pilots are required to complete the following modules or the equivalent every **4 years**. These modules can be completed by attending an ACE or via online computer based training. **Se**e OPM 22 for more information.

A105 Aviation Life Support Equipment
A106 Aviation Mishap Reporting
A110 Aviation Transport of Hazardous Materials
A113 Crash Survival
A203 Airspace Management and Coordination
A302 Personal Responsibility and Liability
A303 Human Factors in Aviation
A305 Risk Management
A307 Aviation Policy and Regulations II
A310 Crew Resource Management

All DOI pilots must obtain 30 credits of aviation-related training every 2 years. The options available to fulfill this requirement are listed below: *No. Training Credits*

1 DOI flight clinics: ski, float, off airport, low-level, LE/resource, etc.
(3-day minimum) 30 Emergency maneuver/spin training (with vendor, 8 hours) 30
2. Emergency maneuver/spin training (with vendor, 4 hours) 15
3. FAA certificate upgrade 30
4. CFI renewal clinic 15
5 FAA Wings Program (obtain one level) 4
6. FAA safety seminar (credits per seminar) 4
7. Flight review 4
8. Pilot safety course
a Accredited college aviation course 5
b Dunker training 5
c Cool school or wet weather school 10
d Aviation Conference and Education 10
9. Flight hours
a Receiving training from a CFI (credits per flight hour) 5
b Giving training to a DOI pilot (credit per flight hour) 1
10. IFR training
a Formal simulator class (not PC-based) 30
b Simulator or IFR flight with a safety pilot (credits per flight hour) 3
11. Expos (Oshkosh, Sun & Fun, AOPA, HAI, NBAA, etc.) 5
12. Factory schools (Bell, Cessna, Flight Safety, SimuFlite, SimCom) 15
13. Make and model ground refresher 5
14. DOI/bureau pilot ground school (3-day minimum)

6.1.3 Pilot in Command (PIC):

Agency pilots will be designated by the NAO as PIC and then must meet the following:

1. Initial flight and ground training in the aircraft to be flown, which meets FAA PTS, BLM and Departmental Manual standards.

2. Annual recurrent flight and ground training in the primary aircraft to be flown to include a minimum of a 1-hour refresher flight.

3. Annual AMD PPE checkrides or equivalent (Flight Safety, SimCom) in each turbine or piston aircraft to be flown. (See OPM for "like models").

4. Maintains a current medical certificate for the operation and aircraft to be flown. Smokejumper Captains require a First Class Medical.

5. 61.58 PPE checkride for aircraft requiring more than 1 pilot.

6. Annual 12 month and 6 month Instrument Checks that meet FAA Practical Test Standards (PTS).

7. Annual recurrent training in FAR'S, DM and BLM Standard Operations Procedures (SOP).

8. Recurrent training in Crew Resource Management and Human Factors every 3 years.

9. Special Use:

Air Tactical Pilot (ATP) will:

a) Meets the requirements of the Aerial Supervision Module Guide (ASMOG)

b) NAO approved simulator training in the primary aircraft to be flown (if available), **which will be from an outside source every year,** such as Flight Safety or SimCom.

Smokejumper Captain

a) All Smokejumper Pilots will meet the requirements of the Interagency Smokejumper Pilots Operations Guide (ISPOG). The Pilot Evaluation Board is for agency pilots only. See 6.1.6

b) For Bureau Pilots, annual NAO approved simulator training in the primary aircraft to be flown (if available), **which will be from an outside source every year,** such as Flight Safety or SimCom.

6.1.4 Contract Smokejumper Captains and Second in Command:

Contract smokejumper pilots will meet the requirements established in the ISPOG (Interagency Smokejumper Pilots Operations Guide) with the exception of the Pilot evaluation board, which is for agency pilots only.

6.1.5 Second in Command (SIC):

1. 12-month instrument checks that meet FAA Practical Test Standards (PTS) carded by the AMD (or Interagency).
2. Annual recurrent flight and ground training in FAR'S, DM and BLM Standard Operations Procedures (SOP).
3. Recurrent training in Crew Resource Management and Human Factors every 3 years.
4. An initial SIC candidate must have **a minimum of 5 Smokejumper practice jumps** before assuming those duties. (This includes Contractors)
5. Annual refresher flight for smokejumper operations.

6.1.6 Smokejumper Large Aircraft Commander Evaluation Board:

INTERAGENCY AIRCRAFT COMMANDER EVALUATION BOARD

The purpose of this board is to approve candidates for upgrade to aircraft commander in airplanes with a gross takeoff weight in excess of 12,500 pounds or that require a type rating. This position will hereafter be referred to as large aircraft commander. The intention is to base the upgrade to large aircraft commander on performance and experience rather than minimum flight hour criteria.

The board will consist of five members representing the USFS, BLM and AMD. Board members will be appointed by the respective agencies and will be agency captains with a depth of experience in both operations and management. The board will designate additional captains as evaluators when requested by the board. Members are identified by letter annually or upon change of membership. Board membership will be comprised of the U.S.F.S. National Fixed Wing Standardization Pilot, the U.S.F.S. National Smokejumper Program Manager, the BLM Flight Standards / Transport Category Pilot, the AMD Fixed Wing Specialist and a U.S.F.S. Regional representative. The board will meet annually and additional meetings may be held when deemed necessary by the board.

The OPM <u>Operating Manual for Qualification Standards for General Schedule Positions</u> (p. IV-B-282) for Aircraft Operation Series states:
"Minimum eligibility requirements for positions in the occupation are based on 1) possession of the appropriate Federal Aviation Administration (FAA) pilot certificates and/or appropriate military ratings, 2) meeting the applicable flight hour requirements, and 3) possession of the knowledge and skills required for the positions."

In order to meet the letter and intent of the three conditions outlined in the statement above, all USFS and DOI large aircraft commanders must meet the following minimum requirements.

1. A current FAA ATP pilot certificate with appropriate type rating.

2. The following flight hours:
    - 1500 hours Total Time
    - 1200 hours Pilot in Command
    - 500 hours Multi-engine
        - 250 hours multi-engine PIC experience
        - 100 hours heavy multi-engine experience (PIC or SIC)
    - 75 hours Instrument – actual or simulated
    - 50 hours Instrument – in flight
    - 100 hours Night
    - 100 hours Turbine Engine Experience (PIC or SIC)

3. Possession of the required knowledge and skills as evidenced by a designation as aircraft commander from the Large Aircraft Commander Evaluation Board.

All agency pilots who will be flying as a large aircraft commander, whether new hire or upgrade, will go through the board evaluation and designation. If the candidate's large multi-engine airplane experience is in excess of 250 hours as pilot in command, the board may elect to reduce the number of evaluation flights based on performance. If the candidate is a DOI employee, this evaluation process may also serve as the initial flight evaluation required by 351 DM 3.4.

It should be noted that this process is intended to evaluate the candidate's potential as a large aircraft commander and is not concerned with a specific mission qualification.

For the purposes of this document the following definitions will apply:

- **Pilot in Command experience** – that flight time logged as defined in FAR Part 1: Definitions and Abbreviations,
    - Pilot in command means the person who:
        - Has the final authority and responsibility for the operation and safety of flight;
        - Has been designated as pilot in command before or during the flight; and
        - Holds the appropriate category, class, and type rating, if appropriate, for the conduct of the flight.

- **Large Aircraft** – aircraft of more than 12,500 pounds maximum certificated takeoff weight, or requires a type rating to be pilot in command.

Candidates wishing to be considered for upgrade to large aircraft commander will submit a recommendation package to the board. The candidate will be type-rated prior to the package being submitted. The recommendation package will consist of a written recommendation for upgrade from the candidate's supervisor, training records (including type training), and flight experience records and upgrade recommendations from line captains who have flown with the candidate.

If the candidate is already qualified as a large aircraft commander and this is an additional aircraft to be added to their designation as aircraft commander, the candidate need only submit the upgrade recommendation and the type certificate training records. In this case the board, at their discretion, may approve the additional qualification with no evaluation flights.

If the initial package review is satisfactory, the board will recommend the candidate for evaluation flights. Board members or their designated representatives will conduct all evaluation flights and must be current and qualified in the aircraft. It should be noted that these are ***evaluation*** flights, not ***checkrides***.

- **Evaluation Flight 1** – This flight will be patterned after a FAR 61.58 check. It is intended to establish the candidate's general level of proficiency in the aircraft. If the candidate satisfactorily completes this flight they will be recommended for Evaluation Flight 2.
- **Evaluation Flight 2** – This evaluation may consist of multiple flights and will include actual and/or simulated IFR and enroute scenarios, aerial fire fighting missions (if appropriate) and back country flight/airport operations (if appropriate). The candidate may be expected to spend several days to a week

flying Evaluation Flight 2 away from their home base. Satisfactory completion will result in recommendation for Evaluation Flight 3.

- **Evaluation Flight 3** – Satisfactory completion of this flight will result in USFS candidates being signed off as large aircraft commander and DOI candidates being recommended for their agency qualification check ride. Large aircraft commander designation now clears the candidate for a mission qualification check ride upon completion of that training. If mission training has been completed prior to the evaluation flights, Evaluation Flight 3 can be a mission qualification check ride.

A different board member will conduct each Evaluation Flight. All evaluations will be documented in detail and any deficiencies in skill or judgment will be clearly identified. Remedial training at the unit level will also be well documented.

If any Evaluation Flight is unsatisfactory, the candidate will return to their home unit for additional training. After additional training the candidate will fly that Evaluation Flight again with a different board member.

BOARD MEMBERS

- Scott Curtis — U.S.F.S. National Fixed Wing Standardization Pilot
- Gordon Harris — U.S.F.S. National Smokejumper Program Manager
- Ben Hinkle — BLM Flight Standards / Transport Category Pilot
- Joe Bussard — AMD Fixed Wing Specialist
- Bob Coward — Regional Representative

6.1.7 Instrument Currency:

PIC:

1. A 6-month IFR check to FAA PTS for the certificate held.

2. A 6-month check can be accomplished with 12-month equipment checks and/ or a PPE check.

SIC:

1. The annual 12-month check will also serve as the Instrument Check.

2. If not IFR current (FAR 91) after 6 months, a checkride will be given. It is the SIC'S responsibility to inform the PIC or supervisor of this status.

6.1.8 Flight Instructors:

1. Must be designated by the NAO as a flight instructor and have a current instructor certificate.

2. Must be rated in the aircraft to be used.

3. Must meet the qualifications for the appropriate Special Use Guide, such as the ASMOG, ISPOG, and ILOG as an Instructor.

6.1.9 Bureau Inspector Pilots

1. Must be designated as an inspector pilot by the NAO.

2. Completes AMD approved training and recurrent training.

4. Must be rated in the aircraft that will be used for instruction.

3. Must meet the qualifications for the appropriate Special Use Guide, such as the ASMOG, ISPOG, and ILOG as an Inspector.

6.1.10 Checkrides:

All Checkrides will be to FAA PTS and Special Use Guides, such as the ISPOG, ASMOG and ILOG.

6.1.11 Large Aircraft (over 12,500 pounds):

All Bureau Initial PIC'S in large aircraft (over 12,500 pounds gross weight) will certify through the Pilots Evaluation Board as determined in the ISPOG (Interagency Smokejumper Pilots Operations Guide and Smokejumper Screening Equipment and Evaluation Board, (SASEB).

6.1.12 NAO approved Simulator Training:

The National Aviation office currently recognizes Flight Safety, SimCom, and SimuFlight as sources for simulator training. This does not mean others are not approved, and the NAO staff will review simulator facilities at request. Simulator training is available through the use of the USFS WO simulator with approved instructors.

6.1.13 Simulated Single Engine Operations:

Single-engine training is emphasized heavily during the initial checkouts. The engine is not routinely shut down, but simulated. All pilots should have one experience flying with the engine actually shutdown and then going through an airstart. This event will be briefed ahead of time so that an optimum training experience will occur. The appropriate checklists will be used during the procedure. No engine shut down will occur in an impromptu manner - including checkrides. No condition, fuel, or prop levers will be moved aft during simulated engine failures in the traffic pattern or during approaches and departures. The check airman or instructor will move a power lever aft to simulate a failure, and may then set zero thrust when appropriate. At no time will engines be feathered below 1,000 feet Above Ground Level (AGL). Banks should be limited to standard rate during simulated engine out operations. **During Smokejumper PIC checkrides** the Spotter will be included in the briefing if a simulated emergency is to be performed.

6.2.0 Air Crewmembers

6.2.1 All Aircrew members, as required by OPM 22, must take the following courses every 3 years. This must be documented. The Initial Air crewmember-training courses must be completed in a classroom setting, but thereafter it may be completed using the IAT online format.

- A-101 Aviation Safety
- A-105 Aviation Life Support Equipment
- A-106 Aviation Mishap Reporting
- A-110 Aviation Transport of Hazardous Materials
- A-113 Crash Survival

6.2.2 Air Tactical Supervisor:

1. **Documented initial** and recurrent training in BLM SOP'S, Federal Aviation Regulations (FAR'S 91) and OPM 22.
2. Meets the requirements of the Aerial Supervisors Modules Operations Guide (ASMOG).
3. Single Pilot Tactical Aircraft training annually. (aircraft specific).

6.2.3 Smokejumper Spotters:

1. **Documented initial** and recurrent training in BLM SOP'S, Federal Aviation Regulations (FAR'S 91 & 105) and the requirements of OPM 22.
2. Initial and recurrent training in the Interagency Smokejumper Pilots Operations Guide (ISPOG).
3. Initial Crew Resource Management Training.
4. Aircraft emergency procedures (aircraft specific).
5. Single Pilot Tactical Aircraft training annually. (aircraft specific).

6.2.4 Flight Attendants and Loadmasters:

1. **Aircraft emergency** procedures (aircraft specific).
2. Weight and Balance briefing (if load master).
3. Training folder of Flight Attendant/ Loadmaster training.
4. Designated by the NAO.

Chapter

7

7.0 Aircraft Specific

Twin Otter/C23A Sherpa

7. 1. Twin Otter N49SJ

Engines: N49SJ has PT 6-34 engines installed

- Igniters instead of glow plugs

- **Avionics:**
  - 1 Garmin 530 GPS Navcom
  - 1 Garmin 430 GPS Navcom
  - Class B TAWS and TCAS1 installed.
    - TAWS displays on MFD
    - TCAS displays 2 Garmin Navcoms and the MFD.
  - Manuals found at aviation.blm.gov
  - 2 Narrow Band NAT FM radios
  - 1 P2.5 FM radio
- **Fuel System:** N49SJ has a **standard wingtip fuel system**. It is imperative that a pilot review and understand the AFM regarding the fuel system prior to flight. .
- **Batteries**
  - One Lead Acid battery
    - Secondary battery is remains a Nicad.
  - **Start**: After starting and bringing generators on line, do not retard either power lever from idle +15% until both generator loads are at .5 or less.
- **Checklists:** The approved checklist for the Twin Otter is the Flight safety checklist dated April 1997. For normal operations other than first flight of the

day, the short checklist above the windshield may be used as appropriate. You may find these checklist at aviation.blm.gov

- **The Bug System:** The Bug System is installed on N49SJ and used for special use and STOL missions. A copy of the airspeed table is available on request. STOL operations must have prior approval (see glossary).
- **Passenger carrying limitations:** N49SJ is equipped to carry 9 passengers or less.
- **Performance:** The Twin Otter will be operated at weights that will allow an initial single engine climb after Takeoff from a point 35 feet above the runway surface of 50 fpm.

7.1.2 Continuing Airworthiness Program: N49SJ is equipped with a structural health monitoring package that collects various data, including Trend Monitoring, which is automatically transmitted after the aircraft is shut down at the conclusion of a flight.

- To correlate the automated transmitted data with the mission flight profile the OAS 2's must contain specific information.
- The OAS 2 must be submitted in the Single Day Format
- A supplemental form must be completed and attached to the White Copy of the OAS 2 (single day format) and it is then submitted in the current manner.
  1. Date of flight
  2. Purpose of flight (firefighting/training/ferry/etc.)
  3. Departure location
  4. Location of drop(s)
  5. Flight (or mission) time
  6. Weight at take-off
  7. Number of smoke jumpers
  8. Weight of paracargo
  9. Above ground altitude(s) over fire
  10. Any "special" maneuvers
- See the following document

AIRCRAFT STRUCTURAL HEALTH MONITORING PROGRAM - OAS-2 REPORT SUPPLEMENT

DATE	US DOI - BUREAU OF LAND MANAGEMENT							CORRESPONDING OAS-2 NO#	
(1) date	DHC-6-300 TWIN OTTER N49SJ							(*) 221053	
FLT NO#	TIME (MST)	PURPOSE OF FLIGHT	WEIGHT @ TAKE-OFF	DROP LOCATION	JUMPERS DEPLOYED*	WT. OF CARGO DROPPED*	MISSION ALTITUDE (AGL)	REMARKS / SPECIAL MANEUVERS	PILOT INITIAL
1		(2) purpose of flight	(6) T.O.Weight				(9) altitude over fire		
2	(5) acual time			(7) drop location				(10) special maneuvers	
3									
4									
5									
6									

* TOTAL INITIAL PASSENGERS AND WEIGHT OF CARGO TO BE DOCUMENTED IN PAYLOAD COLUMN ON OAS-2 REPORT.

OTHER NOTES:

7. 1. 3 Twin Otter N49SJ Maintenance Procedures

If any maintenance issues arise in the field the Flight Crew Member on duty will contact Guy Exon from the AMD. In the event that he is not available they will then contact Rob Sievers (Turbo Air Inc.), or Ben Hinkle, BLM National Aviation Office.

Contact	**Office Phone**	**Cell Phone**	
Guy Exon AMD Debbie Standifer, AMD	208-433-5082 208-433-5083	208-867-9774 FAX 208-433-5058	
Rob Sievers, Turbo Air Inc.	208-343-3300	Answering Service 24/7	
Ben Hinkle NAO	208-387-5184	208-850-4311	

Scheduled maintenance will be arranged by Flight Crew Members through Guy Exon but may be presented directly to Rob Sievers at Turbo Air.

Use of a government contract requires the permission of the appropriate Contracting Officer. For unscheduled maintenance or scheduled maintenance from other than the Boise contractor, a list is included in each airplane of government contract maintenance facilities. , Flight Crew members will contact Guy Exon or Debbie Standifer to assure the proper payment schedule is in place (re: credit cards or billings) and that the facility has the pertinent expertise, manuals, tools, and parts to perform the work. Flight crewmembers will need to assure that the repair facility understands the BLM discrepancy reporting and sign-off procedure, etc…

For minor unscheduled maintenance with the Boise contractor, Flight Crew members may contact Turbo Air directly. The AMD Aircraft Maintenance Specialist (Guy Exon) shall be contacted as soon as possible.

DOI – Aviation Management Directorate (AMD)

300 E. Mallard Dr., Ste 200
Boise, ID 83706-3991
Fax 208-433-5085

Turbo Air Maintenance & Avionics
Office Hours: 8-5 Mon. - Fri. 208-343-3300
Rob Sievers - Maintenance Manager
Bill Griffith - Avionics Manager

7. 1. 4 Fleet Maintenance Procedures.

FLEET MAINTENANCE

PURPOSE

To furnish operational guidelines for a Bureau aircraft maintenance system and establish procedures necessary to maintain aircraft on a routine and timely basis.

POLICY

BLM aircraft will be maintained in airworthy condition with a neat and professional appearance. Airworthiness and appearance of aircraft can be determined only by those people who have direct operational control. Pilots will be considered to have primary responsibility for the determination of those factors.

A. Maintenance Program.
   (1) Certified aircraft must have an inspection program approved by the FAA: or the Aircraft Manufacturer approved program.
   (2) Surplus military or uncertificated aircraft will be maintained in accordance with the military program or the manufacturers recommended procedures.

B. Maintenance Records.
   (1) Log book records will be maintained at the Boise base and must be kept up-to-date. Logs will only travel with the aircraft to another location when major maintenance is being performed.
   (2) Computerized maintenance historical data will be maintained by the AMD aircraft Maintenance Specialist (Fleet) (AMS)for all fleet aircraft.

AUTHORITY

A. Mechanics used shall be qualified by experience or training on the type of aircraft or equipment being maintained. Maintenance personnel must have a current Airframe and Power plant (A&P) Certificate or work for an approved FAA Repair Station, certificated for the type aircraft being maintained. Preventative maintenance may be performed by Flight Crewmembers per Part 43, Appendix A. C if specifically trained and approved for the appropriate task and person returning the aircraft to service makes the appropriate log entry per FAR Part 43.5 and 43.9

B. Scheduled Maintenance and modifications will be performed only by an AMD approved vendor; unscheduled maintenance may be performed by a facility meeting the requirements of the paragraph above.

C. Field maintenance can be performed at AMD vendors or, as necessary, by pilots possessing an A&P mechanic rating. The person ordering maintenance must assure the agency is getting quality performance at a reasonable price.

AIRCRAFT MAINTENANCE AT COMMERCIAL FACILITIES

A. Pilots who require maintenance services on an aircraft shall contact the AMD Maintenance Specialist, Guy Exon or Fleet Activities specialist, Debbie Standifer outlining the type of services required. If maintenance at commercial facilities is determined to be appropriate, the pilot will coordinate with the contract facility and prepare a work order indicating the maintenance services to be performed and estimated cost. The pilot will subsequently notify the AMD of the work order number, work to be accomplished and the facility or individual's name who will perform the work

B. Any maintenance request that exceeds $2,500 must be approved by the AMD prior to proceeding with repairs/service with a field repair facility. Invoices for Minor maintenance paid for by credit card shall be forwarded to the AMD with a signature Indicated Services were received.

C. The AMD will evaluate, counsel and qualify commercial maintenance facilities or qualified individuals for work on BLM aircraft. A list of approved facilities/individuals will be furnished to the pilots, and each GACC.

D. Left Open:

E. Pilots with aircraft requiring annual or 100-hour/phase inspections at commercial facilities will notify the AMD prior to obtaining service. Inspections shall be accomplished in accordance with applicable manufacturer's instructions, FAR'S 91 and 43, and AMD procedures.

F. Hour meter (Hobbs) time will be used for recording inspection times. In the event the 100 hour/Phase inspection is to be exceeded, a special flight permit shall be requested from AMD, per 351 DM 2.4. When the aircraft has exceeded 100-hours/phase since last inspection, the excess time must be included in computing the next 100-hour/phase due time.

G. When an aircraft, engine, or propeller is approved for return to service a certificated individual or facility will complete and sign the maintenance release statement provided or enter a statement in the flight log if provided. Pilots are responsible to ensure that the approval for return-to-service is appropriately accomplished.

E. Pilots will ensure that the maintenance release and the OAS-2 blue sheet documenting the maintenance are sent to the AMD upon the return-to-service of the aircraft.

RESPONSIBILITIES

A. Maintenance Contracting.

(1) Contracting Officer's Representative (COR). The COR is authorized to perform administrative functions pertaining to all BLM fleet aircraft maintenance performed under contract. The AMD Maintenance Specialist is designated COR on all maintenance contracts.

(2) Project Inspector (PI). Pilots and/or mechanics may be appointed as PI to assist the COR. This requires specific training to be conducted by the COR, COTR, or CO and will be documented.

B. Flight Operations. Daily flight status must be coordinated between the pilot, the appropriate GACC, customer, and the maintenance staff/facility. The following tasks are the responsibility of the Pilot in charge:

(1) Coordinate with requesting office to determine type of aircraft and associated equipment necessary to perform particular flight missions.

(2) Coordinate with the customer any recommended alternatives when a maintenance schedule adversely affects mission requirements. In the event the scheduling is not compatible with the customer's request, the AMD will be consulted for a deferred maintenance determination.

(3) Notify the GACC and AMD 20 hours prior to attaining 100-hour/phase inspection times.

(4) Contact the responsible mechanic/facility immediately for an evaluation of an aircraft's status when its airworthiness is in question.

(5) After completion of all maintenance and required OAS-2 entries, the PIC shall have removed the blue copy of the OAS-2 and forward it to the AMD.

C. Pilots.

(1) Prior to flight, pilots shall have an OAS-2, Aircraft Flight/Use report, Deferred Maintenance Items sheet, and the MEL if appropriate for the aircraft to be flown. The OAS-2 and Deferred Maintenance Items sheet must be reviewed to determine maintenance status of the aircraft prior to flight.

(2) Pilots of reciprocating engine aircraft are responsible for scheduling oil changes except in conjunction with an inspection, i.e., 100-hour or annual.

(3) Aircraft flight/Use Reports.

(a) There are four copies of any OAS-2 sheet. The white and yellow sheets are used for billing purposes. The single blue sheet is used exclusively for maintenance tracking. The pink

sheet, which remains in the OAS-2 book, is also used for maintenance purposes.

(b) An OAS-2 line entry will be completed for each flight leg immediately upon termination of that flight leg. Upon completion of multiple flight legs on a calendar day, an OAS-2 sheet will be completed. All applicable data will be correctly entered in appropriate spaces of the OAS-2 form.

(c) On Monday of each week, the white, yellow and blue copies of the OAS-2 will be removed and forwarded by US mail directly to AMD only, and not to any third party. Include with the OAS 2's all applicable fuel receipts If circumstances do not permit a Monday mailing, as soon as possible. Completed OAS-2 books with the pink sheets still attached, will also be forwarded by US mail to the CAM only at the first available opportunity, and not to any third party.

(4) Pilots will provide detailed entries into the aircraft's OAS-2 book to include the following turbine engine cycles in accordance with the following definitions:

(a) Allison 250-C20: A cycle is a start or start attempt:

(b) Garrett Air search TPE 331: A cycle is an operational sequence; i.e., an engine start, aircraft takeoff and landing, followed by engine shutdown;

(c) Pratt and Whitney PT6 Series: A full cycle is any flight consisting of a start, idle, take off, flight, landing, idle, shutdown. An abbreviated cycle is an idle, takeoff, flight, and Landing, idle. ALL STARTS are to be logged as a full cycle.

(d) Other turbine engines as prescribed by the AMD.

(5) When aircraft arrive for maintenance, the PIC shall insure that all discrepancies are transcribed from the OAS-2's to a work order.

D. Aircraft Mechanic. BLM aircraft are maintained by contract facilities. The authorized mechanic or facility will coordinate with the pilot to:

(1) Review the aircraft's records and Minimum Equipment List (MEL) to ensure the aircraft will mechanically meet mission requirements. If maintenance is necessary, furnish estimated completion date.

(2) Schedule aircraft into maintenance, final inspection, Operational check flights, and approval for return-to-service procedures.

(3) Initiate work orders for AMD approval to schedule maintenance on the aircraft.

(a)Maintenance personnel will inspect the aircraft, correct discrepancies and an FAA authorized Aircraft Inspector will initial each correction on the work order. When all discrepancies are

corrected or deferred, Maintenance will conduct the final inspection.

(b)The mechanics completing the work shall return the aircraft to service in accordance with FAR Part 43.9. Appropriate entries shall be made in the "Corrective Action" block of the OAS-2 and a Maintenance Release shall be filled out by the mechanic to be entered into the appropriate logbook by the AMD. With the approval of the AMD, discrepancies deferred to the next scheduled maintenance will be entered or maintained on the aircraft's Deferred Maintenance Items sheet.

(4)Complete all entries to the weight and balance records, update inspection procedure cards, and updates the Pilot's Operating Handbook.

INSPECTIONS

A. Inspection Program. Except those aircraft being maintained under an approved military inspection program or a continuous maintenance program, no Bureau aircraft may be operated within the preceding 12 calendar months, unless it has had:

(1) An annual inspection in accordance with FAR Part 43 and has been approved for return-to-service by a person authorized by FAR Part 43.7;

(2) An inspection for issuance of an Airworthiness Certificate.

B. Mandatory Inspections.

(1) Bureau aircraft must receive an annual inspection or 100-hour/phase inspection and been approved for return-to-service in accordance with FAR Part 43 prior to operation.

(2) Bureau aircraft operated under an approved inspection program or a continuous military maintenance program shall be operated in accordance with the approved program.

(3) 100-hour or phase inspections may be exceeded by a maximum of 10 percent only for returning the aircraft to a maintenance facility if a special flight permit has been requested and approved by AMD. This time will be subtracted from the next inspection time.

C. Aircraft Discrepancies.

(1) All maintenance discrepancies must be either corrected or documented as deferred on the OAS-2 and the Deferred Maintenance Items (DMI) sheet.

(2) With the approval of the AMD, pilots may defer discrepancies not affecting airworthiness. Multi-engine aircraft will be operated in accordance with the MEL if established for the make/model. Pilots will note on the OAS-2 and the DMI sheet their name and date the AMD deferred the item.

(3) All discrepancies that affect airworthiness shall be corrected by authorized maintenance personnel prior to flight. Pilots are responsible for determining aircraft airworthiness status.

(4) When a discrepancy is deferred, it will remain on the DMI sheet until corrected. New OAS-2 books will have the discrepancies transferred from the proceeding book.

(5)

(6) Pilots will record all maintenance discrepancies in the OAS-2. The maintenance facility will record discrepancies on a maintenance work order

(7) The aircraft's airworthiness release will be recorded on the OAS-2.

D. Airworthiness Directives and Special Inspections.

(1) Airworthiness Directives and/or Military Safety of Flight Messages will be performed in accordance with the requirements of that Directive.

Airworthiness Directives, AD's due times may not be exceeded unless by authorization within the text of a particular AD.

(2) Special inspections will be performed as required by the maintenance program approved for the affected aircraft.

(3) All Manufacturers Mandatory Service Bulletins will be performed in accordance with the requirements of the manufacturer.

E. Weight and Balance. Aircraft must be weighed using certified scales every 36 calendar months. Weight and balance data must be recorded in the operating manual for the aircraft. At the time equipment is either added or removed, a new weight and balance must be calculated or the old weight and balance amended and recorded.

F. Unscheduled Maintenance and Repairs. Pilots with aircraft requiring unscheduled maintenance will notify the AMD. Maintenance will be accomplished in accordance with applicable manufacturer's instructions, FAR'S 91 and 43, and AMD procedures. Repair Stations will use the statement provided in the OAS-2 book, for approval for return-to-service. Pilots are responsible to ensure that the approval for return-to-service is appropriately accomplished.

G. Modifications. Due to the need to maintain continuity and commonality throughout the BLM fleet, modifications will be accomplished at the maintenance base in Boise, Idaho. If extenuating circumstances deem it necessary, authorizations for modifications at facilities other than Boise must be obtained from the AMD.

QUALITY CONTROL

The maintenance person and/or pilot responsible for a Bureau aircraft repair or inspection will:

A. Coordinate with the maintenance facility for scheduling initial and final inspection, and aircraft approval for return-to-service.

B. Review all engine/airframe logbooks, Airworthiness Directives, and other required items and prepare the appropriate inspection sheets. All inspections or component maintenance, which will fall due during the next 100-hour/phase or 90 days, will be entered on the work order.

C. Evaluate discrepancies noted by pilots/maintenance personnel and determine appropriate action. When the aircraft is found to be unairworthy, GACC will be notified.
D. Conduct an initial inspection and enter maintenance discrepancies on work orders for appropriate action to include requirements to change item(s) in the Pilot's Operating Handbook (POH).
E. Forward to the AMD any changes or prepare information and a description of modifications which may cause a change to the POH.
F. Assign or conduct test flights, as required. All deferred discrepancies will be listed on the DMI sheet.
G. Identify maintenance discrepancies noted during functional test flights, record discrepancies and communicate to maintenance.
H. Notify the user of an aircraft's approval for return-to-service after all appropriate maintenance releases have been signed/entered in the aircraft and engine logbooks and FAA Repair Station requirements have been satisfied.

MAINTENANCE AND OPERATIONAL CHECK FLIGHTS

A. Replacement of engine, power train, rotor system, landing gear, flight controls or control rigging requires a subsequent operational check flight. The cost of any maintenance flights will be charged to the Working Capital Fund (WCF), and entered on the OAS-2 used for the operational test flight. The use code MA will be entered on the OAS-2's accompanied by an explanation in the remarks section of why the flight took place.

B. If ground tests of inspections show conclusively that preventative maintenance, rebuilding or alteration has not appreciably changed the flight characteristics or substantially affected their flight operation; the aircraft need not be flight-tested.
C. Test flights will be conducted with minimum flight crew aboard and in accordance with 351DM2.4 2(b). Passengers will not be carried during test flights. A mechanic may be carried with the authorization of the AMD. A Government pilot who is AMD carded or FAA type rated and current in the make/model aircraft will conduct a test flight as required.

FERRY FLIGHTS

With the approval of the AMD, any aircraft that does not meet its type design because of damage, inoperable equipment or systems may be flown to a repair facility. Passengers are not permitted on such flights. Ferry flights may be paid by the WCF when the AMD determines that the cost of ferry to a Boise facility, or the contract facility, offsets the higher cost of maintenance in the field facility.

PARTS INVENTORY MANAGEMENT

A. The AMD will be responsible for the inventory of all spare parts. Responsibility may be delegated, as necessary, by the AMD.

B. Storage and Security will be furnished by the NIFC Warehouse, Boise, Idaho.

C. Consumable parts will be stored at aircraft locations based on need and usage.

D. Universal parts and consumable parts may be secured by field pilots or maintenance personnel for locations where aircraft are based. Procurement will be by AMD Purchase Order (AMD requisition number must be assigned in advance), AMD Master Card card, or AMD maintenance contract and are accompanied by a DI-1, Requisition form.

PAYMENT

Aircraft maintenance costs will be borne by the AMD WCF only under the following conditions:

A. The vendor's invoice must have been authorized by the AMD prior to AMD payment.

B. The cost must have been incurred at an AMD approved facility or with an authorized individual.

C. A proper invoice/work order is signed by a BLM pilot or Aviation Manager indicating all services and/or supplies are legitimate. A properly constituted invoice must include the following information and/or documentation:

(1) Business Name;

(2) Purchase order number or other authorization for delivery of property or services.

(3) Description, price, and quantity of property and services actually delivered or rendered;

The date, aircraft, hour meter reading and/or aircraft total time, the services were performed.

(5) Name, (where appropriate), title, phone number, and complete mailing address of responsible official to whom payment is to be sent;

(6) Agency personnel signing that they have received supplies and/or services from an authorized facility or individual are required to submit a copy of each work order or receipt for supplies to AMD as soon as practicable after supplies have been received;

(7) AMD inspection and discrepancy forms.

(8) All invoices for Aircraft Maintenance must be billed to the AMD only.

Aviation Management Directorate
Fleet Activities Specialist
300 Mallard Dr. Ste. 200
Boise, Idaho 83706-3991
208-433-5083 fax 208-433-5085

MINIMUM EQUIPMENT LISTS (MEL'S)

The Minimum Equipment Lists (MEL'S) will be used and complied with when approved for the aircraft. The MEL will be found in the back of the Aircraft Flight Manual, as well as directions to its use. The OAS-2 and Deferred Maintenance Items (DMI Log) must reflect the discrepancy being deferred via the MEL. The letter AM@ denotes a maintenance function requiring a mechanic comply with the MEL; the letter AO@ denotes the flight crew must comply. AINOP@ stickers are found inside the flight logbook or maintenance notebook.

Inoperable items not listed in the MEL must be repaired before flight or a ferry permit must be obtained. In these instances, the AMD should be notified. Intermittently operating items are considered to be inoperative.

7.2 Sherpa C23A/ Shorts 330 specific:

Introduction: The BLM currently maintains Sherpa Flight crews for USFS aircraft. This chapter describes operations specific to the Shorts C-23A Sherpa. Its goal is to standardize procedures to the extent possible to increase safe operations through standardization. **All BLM Sherpa/Shorts 330 Flight crewmembers will follow the Interagency Flight Management and Standardization Book, training courses (USFS) and those policies set forth below regarding BLM specific operations.**

Non-Standard Operating Procedures for C-23 Aircraft in Alaska: Operations into airports with runways of less than 3000 feet will not be permitted. Operations into airports with runways of 3000 feet or greater are permitted, provided takeoff parameters and all appropriate performance charts reviewed. Sparrevohn, Cape Newenham, Cape Romanzof, and Indian Mountain are considered "special condition" airports due to extreme runway gradientents and terrain proximity. Operation into or from these airports will be subject to the following standards:

1. **Pilots with documented experience** (logbook, OAS-2, Flight Check Form, etc.) Are considered operationally qualified into all four airports for 48 calendar months from the date of their most recent experience.
2. **Pilots with no previous experience** or pilots, who have allowed currency to lapse, must receive an orientation flight into at least one of these airports, with a qualified instructor pilot, prior to conducting flight operations as PIC.
3. **Orientation flights** must be performed in the same category of aircraft.

4. **IFR operations** into these airports must be conducted in "C" category with less than 20 knots or reported wind.
5. **One Alaska corporate jet** operator reportedly uses the following FAA approved takeoff briefing at airports such as these: AV1, add power, brakes off. @ It is recommended the same frame of mind be set for BLM operations at steeply sloped airports.
6. **Special IFR Approaches:** The BLM has approval to use special IFR approaches at Missoula, Montana (BLM aircraft and crews only). These lower approaches require certain climb gradients and aircraft performance. Pilots must ensure that their aircraft meet all performance requirements before initiating a special approach.
7. **Operations on gravel and unimproved airstrips:** Performance notations for gravel airstrips are not noted in most aircraft handbooks or flight manuals, including the Sherpa Dash 1. Flight crews will add 10% to performance figures for soft gravel, 5% for hard gravel, and 15% for grass. For runway slopes over 2%, add 15% to performance figures for each 1% increase.
8. **Fueling:** To obtain another approximate 200 pounds of fuel in the Sherpa, complete fueling over the wing after wing stub fueling is complete.

7.3 Cessna 206

- **Engines:** N736 has an IO-550 engine installed
- **Avionics:** N736 has a SAT Phone and Type 2 avionics package
- **Fuel System:** N736 is equipped with a Flint Aero aux. fuel system. For normal operations 7 gals. of fuel will be carried and not used in each aux. fuel tank. This is due to weight and balance limitations.
- **Passenger carrying limitations:** N736 is equipped to carry 3 passengers
- **Performance:** N736 is equipped with a Roberston STOL kit. It is imperative that the pilot review and understand the systems cross-wind limitations prior to flight.
- **Weight and Balance:** N736 has a Max Gross Weight of 3600 lbs., no waivers or extensions apply.

Chapter

8

8.0 Aircraft Maintenance and Servicing

8.1 Fueling Procedures:

Bureau aircraft servicing must be accomplished by qualified personnel or must be supervised by qualified personnel. Aircraft preflight inspections should include draining fuel tank sumps of sufficient quantities of fuel to provide a positive indication of no water, microbiological, rust, or dirt contamination. When using an unknown or seldom used fueling source, flight crews or Bureau maintenance personnel will ensure that a clean fuel sample has been taken from the source of fuel prior to fueling. When parking an aircraft overnight in a climate conducive to tank condensation, the PIC should consider his next fuel requirements and possible fueling prior to securing the aircraft. Personnel fueling or supervising fueling of Bureau aircraft shall be particularly attentive that the correct type of fuel is pumped into the aircraft, and also that the protective mats and fuel nozzles are clean.

When contamination is observed as a result of improper fuel type, the crew will be guided by the aircraft flight manual with respect to allowable concentrations and will defuel the required amount of contaminated fuel and refuel as necessary. Any observation of fuel contamination will be entered in the Aircraft Flight Logbook with the corrective action taken.

It is the responsibility of the PIC to check the amount of fuel serviced at each station and correlates this amount with the total fuel as reported by the servicing agent and as indicated by the fuel gauges, or preferably by visual check. Smoking is prohibited inside or within 100 feet of a Bureau aircraft during fueling operations. Except when operational necessity dictates, electrical power will be applied to only those systems necessary for fueling the aircraft. When external power or the aircraft auxiliary power unit is operating, a flight crewmember or a qualified Bureau aircraft mechanic shall be present to monitor the aircraft and the fueling operation.

Only a flight crewmember may authorize the fuel order. Bonding, the first step in fueling an aircraft is properly grounding the airframe to an adequate grounding spot. Grounding the fueling vehicle or dispensing unit first, then attaching a grounding cable to a proper grounding spot on the aircraft is the procedure the procedure and policy.

Ensure that no obstacles are positioned under the wings or fuselage (such as ladders), which, as the aircraft lowers under the weight of fuel, will cause any damage to the aircraft. Ensure that brakes and chocks are as required for the aircraft. When fueling over the wing, ensure that the hose is brought to the fuel receptacle from the leading edge. Fueling vehicles shall be positioned no closer than 10 feet from the aircraft; the exhaust outlet shall be no closer than 20 feet from the filler point and fuel vents. Upon completion of fueling ensure that all fuel caps, fuel doors, and switches are properly secured. Remove grounding cables in the reverse order specified for attachment. All precautions taken for fueling operations apply to defueling operations.

8.2 Oxygen Servicing:

Smoking is prohibited inside or within 100 feet of Bureau aircraft during oxygen servicing. Oxygen servicing will not be accomplished during fueling operations. Passengers are not permitted onboard aircraft while servicing oxygen. Only those persons qualified to service oxygen are permitted to service Bureau aircraft. Particular attention will be given to the correctness of servicing, the cleanliness of the tools and personnel servicing the aircraft, and the absence of potential sources of ignition in the vicinity of the servicing.

Oxygen servicing is a maintenance function, any such servicing requires that maintenance personnel be appropriately rated, possess and use the correct current maintenance publications, and make the appropriate entries in the OAS-2 or 23. The PIC is responsible for ascertaining compliance.

8.3 Fleet Maintenance:

The BLM currently operates two fleet aircraft. Maintenance and contact information are listed below:

Twin Otter N49SJ

Maintenance

- Guy Exon, AMD, 208/387-5771, Cell Phone 208/867-9774

Agency Contact

- Ben Hinkle, BLM NAO, 208/387-5184, Cell Phone 208/850-4311

Cessna 206 N736

Alaska – April through July

Maintenance

- Bud Walters, AK-AMD, 907/271-5099

Agency Contact

- Wally Griffin, BLM AFS, 907/356-5505,Cell Phone 907/388-2729

Lower 48 – August through March

Maintenance

- Guy Exon, AMD, 208/387-5771, Cell Phone 208/867-9774

Agency Contact

- Rusty Warbis, BLM NAO, 208/387-5185, Cell Phone 208/867-0323

GLOSSARY OF TERMS

AIM - Aeronautical Information Manual, FAA Publication.

AFM - Aircraft Flight Manual.

AMD - Aviation Management Directorate , That agency formerly known as the OAS.

ASM1- Aerial Supervision Module 1 (Low Level Lead Qualified).

ASMOG- Aerial Supervision Module Operations Guide.

ATC - Air Traffic Control.

ATP - Airline Transport Pilot FAA Rating.

ATP (Agency)- Air Tactical Pilot.

ATS -Air Tactical Supervisor.

BFR - Biennial Flight Review -- FAR 61.56.

CAM - Chief Of Maintenance, National Aviation Office.

CAT - Clear Air Turbulence.

CFI - Certified Flight Instructor.

CFII - Certified Instrument Flight Instructor.

CFMEI - Certified Multiengine Flight Instructor.

CG - Center of Gravity.

CREWMEMBER –

1. **Air Crewmember** - Additional crewmember required for accomplishment of the mission such as an ATS, flight attendant, smokejumper spotter, cargo loadmaster, observer, Helitack crew etc. These positions usually do not require any special Airman Certificate(s) or flight physical.
2. **Flight Crewmember** - A person who is a flight crewmember holding a valid Federal Aviation Administration (FAA) Airman's Certificate and flight physical as a prerequisite to performance of duties of the position during flight, e.g., a pilot, co-pilot, flight engineer, flight navigator.

CRM - Crew Resource Management.

DOI DM - Department Of Interior Departmental Manual

DOISPOG - Department of Interior Smokejumper Pilot Operations Guide.

FAF - Final Approach Fix.

FAR - Federal Aviation Regulations

Flight Manager - Any government employee (Federal or State) authorized to conduct specific missions (i.e., fire, law enforcement, aerial photography, resource, special use, reconnaissance, etc.) assigned as an air crewmember to BLM aircraft who has received the required knowledge and training to conduct missions and to ensure safe and efficient flight management.

FSI - Flight Safety International

IFR/IMC - Instrument Flight Rules/Instrument Meteorological Conditions.

IATBOG - Interagency Air Tanker Board Operations Guide

IHOG - Interagency Helicopter Operations Guide

ILOG - Interagency Leadplane Pilot s Operations Guide.

IP - Instructor Pilot.

MAFFS – Modular Aerial Fire Fighting System

MEA - Minimum Enroute Altitude.

MEL - Minimum Equipment List. FAA definition and document, part of the Aircraft Flight Manual.

Mission(s) - The term used in this SOP to cover operational aspects of BLM aircraft, Air Attack, Leadplane, Reconnaissance, Special Use, Aerial Photography, Law Enforcement, Resource, Smokejumper, etc.

NAO - National Aviation Office, Boise, ID.

Passenger - Any person aboard an aircraft who does not perform the function of a flight crewmember or air crewmember.

PIC - Pilot In Command.

PF - Pilot Flying.

PNF - Pilot Not Flying.

PPE - Pilot Proficiency Exam (FAA term for checkride in large aircraft-FAR 61.58).

POH - Pilot Operating Handbook

PTS - Practical Test Standard (FAA)

SASEB – Smokejumper Aircraft Screening and Evaluation Board

SIC - Second In Command.

SOP - Standard Operating Procedure

SPOTTER- is familiar with the type of A/C and capabilities. (Avionics, payload, etc.). Maintains daily fire readiness of the jump ship. May coordinate air traffic over a fire. (If no ATGS, ASM or lead plane is on scene). Will flight follow and sets mission priorities. Coordinates w/ PIC on jump spot selection, type of pattern, *may* help with local navigation and is responsible for air to ground fire communication. Provides fire information to the PIC. Follows the direction of the PIC during aircraft emergencies. Ensures that jumpers follow appropriate smokejumper procedures. Responsible to see the PIC has accurate information for record keeping for OAS 2's and 23's

> **Air Operations Specialist (Boise) –** Smokejumper Spotter who is the COR on Lower 48 Aircraft contracts, in charge of spotters and spotter training.
> **Air Operations Specialist (AK)** - Smokejumper Spotter in charge of spotters and spotter training.

STERILE COCKPIT - The flight crew will perform no radio or cockpit communication during that time that is not directly related to safe flight of the aircraft from beginning taxi to 5 miles out and from 5 miles out until after landing and clearing the runway

STOL - Short Takeoff and Landing. For the purpose of this document, STOL airports are defined by the USFS as "Mountain airstrips@ designations, including the Aback country airstrips@ of central Idaho. Unimproved dirt airstrips in Nevada or Alaska, for example, are not considered ASTOL@ unless the aircraft cannot operate within its standard performance charts.

VFR - Visual Flight Rules.

INDEX