

SECTION B – FLIGHT OPERATIONS

FLIGHT OPERATIONS – GENERAL

OPERATIONAL CONTROL

[119.9, 119.43]

Air Methods utilizes a two-tier system of operational control. The first tier consists of the managers and directors listed in Operations Specifications Paragraph A006 and the Air Methods 411 system. The 411 system verifies that a pilot is trained, qualified, and meets the duty rest requirements. Once the 411 system has validated that the requirements are met the pilot will be issued an electronic flight release for the duration of their shift.

The second tier consists of the operational control a Pilot in Command (PIC) exercises as the final authority to the operation of the aircraft. This includes the determination of whether a flight can be accepted, initiated, conducted, or terminated and the tactical and dynamic decisions made by the PIC during the flight in accordance with the guidance provided in the Regulations, General Operations Manual, and Operations Specifications. Only a PIC who is a direct employee of the company may exercise Second-Tier Operational Control, over any Air Methods flight. In the event the PIC is unsure that a flight assignment can be conducted in accordance with Regulations, General Operations Manual, and Operations Specifications the PIC will contact a manager listed in paragraph A006 of the Operations Specifications or the Operational Control Center for additional guidance and input.

Federal Aviation Regulations require that Air Methods be properly named and identified as the company providing the air transportation, and as such, must be included in all printed or advertising matter offered to the public. The intent of this regulation is to inform the public of the identification of the Federal Aviation Administration (FAA) certified and authorized operator of the aircraft. Aircraft operated on the Air Methods Air Carrier Certificate shall have displayed on the aircraft **“Operated By Air Methods”** so that it is legible and clearly visible and readable from the outside of the aircraft to a person standing on the ground at any time except during flight. At no time shall any non-certificated entity attempt to exercise Operational Control, nor hinder in any way, Air Methods’ oversight and/or exercising of Operational Control of any and all operations carried out under Air Methods’ Certified Air Carrier Certificate. (QMLA253U).

All employees, methods, equipment, and facilities used or employed by Air Methods will at all times be under Air Methods’ operational supervision and control. Air Methods’ personnel may be requested to, but shall not be required to assist in any patient care or patient handling except to the extent of providing patient transportation.

Pilots, mechanics, and other Air Methods’ personnel will abide by all Air Methods’ personnel policies as well as hospital or program rules and policies provided in written form to, and approved by Air Methods, concerning, conduct, and appearance. Air Methods shall retain full authority and rights to unilaterally exercise its right to hire, discipline, or remove its personnel from assignment. Compliance with Air Methods Operations Specifications and Operations Manual is mandatory. Failure to adhere to the certificate holder’s directions and instructions may be subject to legal enforcement action by the FAA.

Hospitals or other agencies have the right to request flight operations of Air Methods’ aircraft and may request that Air Methods respond for any mission. A request from a hospital transport call center is an authorization for Air Methods to proceed with evaluating, in accordance with established and authorized procedures specific to Air Methods’ Air Carrier Certificate, whether a flight can be completed. The hospital transport call center has no authority to override the authority of Air Methods, or the pilot's authority to refuse any mission request due to weather, maintenance, regulatory limitations, or other flight safety issues. At no time during a response to a medical flight will speed into action criteria be allowed to compromise safety.

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OPERATIONAL CONTROL (Continued)

All communications center personnel that intake flight request and/or flight follow with an Air Methods' aircraft must be trained according to the Air Methods FAA accepted Communications Specialist Training Program. The training program will be administered by the Program Aviation Manager or Aviation Services Manager that has responsibility for the communications center. The course completion documentation will be retained at the local program level. Additionally, the Program Aviation Manager or Aviation Services Manager shall keep an updated list of the names of all currently trained and utilized Communications Specialists in the "Comm. Spec. List" on the "135 Aviation Ops-Air Methods" page of the Air Methods Internet Based Portal.

ACCIDENT NOTIFICATION REQUIREMENTS

[135.23]

From the time any person boards the aircraft with the intention to fly until all such persons have disembarked; the occurrence of any of the following requires Air Methods to notify the National Transportation Safety Board:

- An aircraft accident, as defined in NTSB Part 830.
- A flight control system malfunction or failure.
- The inability of any required flight crewmember to perform his/her normal flight duties as a result of injury or illness.
- Failure of any structural component of a turbine engine, excluding compressor and turbine blades and vanes.
- In-flight fire.
- Aircraft collide in-flight.
- Serious injury, which means any injury which: (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fractures of fingers, toes, or nose); (3) causes severe hemorrhages, nerve, muscle, or tendon damage; (4) involves any internal organ; or (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.
- Substantial structural failure or damage which would adversely affect the structural strength, performance, or flight characteristics of the aircraft and would normally require major repair or replacement of the affected component.
- Damage to property, other than the aircraft, estimated to exceed \$25,000 for repair (including materials and labor) or fair market value in the event of total loss, whichever is less.
- An aircraft is overdue and is believed to have been involved in an accident.

Air Methods' personnel will notify the NTSB in the most expeditious means available as follows:

- The Pilot-in-Command shall notify the Director of Operations (or his/her designee), who will immediately notify the NTSB. This notification may be through the FAA (ATC, FSS, or FSDO), if possible; or may be direct to the NTSB if necessary.

The pilot should report, insofar as possible, the following information:

- Location, time, and date of the accident,
 - Number of persons involved,
 - Nature and extent of injuries if any, and
 - Brief description of circumstance(s) surrounding the accident.
- The Director of Operations or the Chief Pilot will insure that a report is immediately made to the National Transportation Safety Board (NTSB). This notification may be made through the Denver Flight Standards District Office, or may be made directly to the NTSB.

The report should include:

- Type, nationality, and registration mark of the aircraft,
- Name of the owner and operator of the aircraft,
- Name of the pilot in command,
- Last point of departure and point of intended landing of the aircraft,
- Position of the aircraft in relation to an easily defined geographical point,
- Number of persons aboard, number of fatalities, and number of seriously injured,
- Nature of the accident, the weather, and the extent of damage so far as is known, and
- A description of any explosives, radioactive materials, or any other dangerous articles carried.

The pilot shall discuss the accident **only** with the assigned law enforcement officer(s) or official(s) from the Federal Aviation Administration or National Transportation Safety Board. If the Press, or anyone else seeks information as to cause, or name of persons involved, refer them to the Vice President of the appropriate division.

ADVERSE OR COLD WEATHER OPERATIONS

[135.227]

Except for airplane pilots flying airplanes approved for flight into known icing conditions, pilots shall not fly into known icing conditions under VFR or into known or forecast icing conditions under IFR. However, if the current weather reports and briefing information obtained by the PIC indicate that the forecast conditions that would otherwise prohibit the flight will not be encountered because of changed weather conditions since the forecast, the above planning restrictions based on forecast conditions do not apply. The PIC shall not exceed the aircraft limitation as given in the applicable aircraft flight manual.

Any pilot initiating, or continuing, a flight based on a belief that “forecast conditions that would otherwise prohibit a flight will not be encountered...” must do so with great care. The decision to continue an operation will not be based solely on PIREP information. The decision shall be based on current METAR, AWOS, ASOS, ATIS, or amended forecast reports. For example, an area of wide spread freezing rain that had been previously forecast, could be considered to be no longer a threat if METAR, AWOS, ASOS, ATIS or amended forecast reports indicated the conditions were no longer present along the planned route of flight.

For VFR or IFR in VMC operations, avoiding an area of known icing conditions can be accomplished by flying clear of the conditions that would result in airframe or propeller/rotor blade icing, i.e. a forecast or report for icing in clouds or precipitation would allow a VFR flight so long as the pilot could operate clear of clouds and precipitation. Avoiding such conditions under IMC would be nearly impossible.

For IFR operations in IMC, forecast icing conditions are known icing conditions. Unless the aircraft being operated is equipped and certified for flight into these conditions, the operation is prohibited.

Helicopter pilots encountering unforecast icing conditions enroute, shall comply with the procedures for deteriorating weather condition, found on page B-11 of this Manual.

Airplane pilots encountering severe icing should request an altitude change, diversion to another destination, or change to a route in order to escape the icing conditions and avoid further encounters.

In order to keep the medical equipment, supplies, avionics, and other interior furnishings, a heater may be placed in a safe location inside the patient cabin when cold weather (outside air temperature of 50° F or less) occurs. This is only during ground, non-operating conditions.

If the aircraft is equipped with tanis heaters, they should be utilized on the ground when the outside air temperature is 40° F or less.

During periods of low temperature operation, the PIC will notify the Communications Center of possible delays in response time due to increased engine and/or transmission warm-up times.

Flight into areas of embedded thunderstorms or squall lines is prohibited.

Engine anti-ice, if installed, will be used in accordance with the aircraft flight manual. Special caution should be used when operating in close proximity to other aircraft as snow, ice particles, or moisture may be blown onto critical aircraft components; dry snow may melt and refreeze. If there is any doubt that the aircraft is free of contamination, it should be shut down and re-checked or de-iced.

AIRCRAFT TRAINING/CURRENCY

At any time, any pilot may request additional training. This request shall be coordinated through the appropriate chain of command with final approval from the Chief Pilot or Aviation Training Manager. Additional training flights shall be documented appropriately.

If a PIC has not flown a specific make, model, or series aircraft in the last 60 days they will, as a minimum, accomplish one start and three takeoffs and landings. It is essential for night operations the pilot is familiar with all aircraft lighting. This flight shall be coordinated through the pilot's immediate supervisor. Additional currency flights shall be coordinated through the appropriate chain of command with final approval from the Chief Pilot (or designee).

A PIC who has not flown over a route and into an airport/heliport within the preceding 90 days will:

- Study the appropriate IFR enroute or VFR aeronautical charts.
- Study the destination airport/heliport diagrams, including alternate airports/heliports.
- Study the appropriate IFR approach charts for destination and alternate, if applicable.

AIRPORT REQUIREMENTS AND DIAGRAMS

[135.229]

Pilots will verify each airport/heliport is adequate for the proposed operation.

The following are requirements and procedures for night operations:

- Before takeoff and landing, each pilot will determine the wind direction via a lighted wind indicator, or communication with ground personnel. For takeoff the pilot may use their own observation of wind direction.
- Boundary or runway lights must clearly show the limits of the landing and takeoff area.
- Night means the period from the end of evening civil twilight to the beginning of morning civil twilight, as published in the American Air Almanac.
- Table of sunrise, sunset, and civil twilight are available on the web site of the U.S. Naval Observatory (usno.navy.mil).

At each base from which aircraft operations are required to private airstrips, unimproved landing areas, helipads, or heliports which are not included in an AFD or comparable publication, the Lead Pilot/Aviation Services Manager will develop and keep current a collection of airport/heliport/other landing areas diagrams. At a minimum, this collection will include a graphic depiction (photographic or hand drawn) of the landing area, available landing area, lighting, obstructions, refueling information, and other appropriate data. Each pilot will consult this information before beginning an operation to or from one of these private airstrips, unimproved landing areas, helipads, or heliports.

BEFORE START/BEFORE TAKEOFF CONFIRMATION CHECK

[135.83]

A checklist will be provided and each pilot will utilize the checklist for all operations.

A before start/before takeoff confirmation checklist will be provided and affixed to each instrument panel in plain view to the pilot. The confirmation checklist will include essential items that will be confirmed by the pilot before each start and takeoff. Prior to start and liftoff each pilot will verbally challenge him or herself and respond verbally to each item on the confirmation checklist to ensure that each item is complete.

CARRIAGE OF WEAPONS

[135.119]

Passengers (including patients) shall not carry deadly or dangerous weapons anywhere aboard Air Methods' aircraft. Local, state, or federal employees (i.e. law enforcement officers) authorized to carry weapons are permitted to carry that weapon on board Air Methods' aircraft.

Air Methods' employees shall not carry firearms aboard Air Methods' aircraft.

CELL PHONES/PORTABLE ELECTRONIC DEVICES - UTILIZATION

[135.144]

In compliance with FCC regulations, the PIC shall not allow cellular phones to be used or turned on during ground operations (including taxi and hover operations), takeoff, enroute, approach, and landing. Use of cellular phones while the aircraft is on the ground, not in motion, is acceptable provided it does not interfere with onboard navigation and/or communication equipment.

The PIC will not allow portable electronic devices, such as personal data assistants (PDAs), laptop computers, etc. to be operated on board their aircraft unless an **EMI/RFI Flight Test Profile**, developed by Air Methods, has been conducted and completed successfully. Contact the Director of Maintenance for a copy of the EMI/RFI Flight Test Profile.

CONFLICT OF INTEREST

Pilots shall not engage in business or any other activity to the extent that their performance as a pilot for the company suffers, their availability degrades or the best interest of Air Methods becomes secondary to their outside activity.

COORDINATION TRAINING – PILOTS AND MEDICAL PERSONNEL

NOTE: This paragraph is applicable to medical personnel who have not been trained per the **Air Methods'** Crewmember Training Program.

Medical personnel will receive annual training on at least the following subjects as per 8900.10:

- Physiological aspects of flight
- Patient loading and unloading
- Safety in and around the aircraft
- Passenger briefing (when appropriate)
- Appropriate in-flight emergency procedures
- Emergency landing procedures
- Emergency evacuation procedures

The Program Aviation Manager or Aviation Services Manager for the respective program will be responsible to ensure that the above listed training has been completed and documented for all medical personnel. Course completion documentation must be forwarded to the Chief Pilot via the 135forms@airmethods.com email address using the proper naming convention.

CYCLIC / CONTROL YOKE WARNING COVER

All Air Methods' aircraft will have a RED and YELLOW cyclic/control yoke warning cover (red/yellow sock, red/yellow golf club cover, etc.) located in the cockpit in a location accessible to the pilot or mechanic.

Prior to rendering an aircraft out of service, the Mechanic or Pilot will install a **RED** cyclic/control yoke warning cover over the pilot's cyclic stick or control yoke as applicable. The **RED** cover can be installed by a Pilot or Mechanic but will only be removed by a Mechanic after the aircraft has been returned to service.

Pilots who perform a function that returns the aircraft to an airworthy condition are authorized to remove the red cover after returning the aircraft to an airworthy condition. An example would be a pilot who is trained and authorized to unfold the rotor blades may remove the red cover. This allowance is only for functions that pilots have been trained and authorized to perform.

Pilots will utilize a **YELLOW** cyclic/control yoke warning cover anytime the aircraft is restrained from flight (i.e. tie downs in place, ground/shore line power connected, required documentation removed from aircraft, etc).

All Air Methods' flight crews (medical personnel) will be informed as to the purpose of these cyclic/control yoke warning covers.

DAILY FLIGHT LOG/LOAD MANIFEST (DFL)

[135.63]

A DFL shall be carried in each aircraft and will be prepared prior to each departure. The following guidance shall be utilized in preparing the DFL:

- Record the Base: City and State.
- Record the date, aircraft N-number and model designation.
- DFL No.: The DFL number will start with an H (Helicopter) or P (Airplane) (i.e. H or P followed by the company's aircraft number, H 20 or P 10).

The DFL numbers start on the first day of January in each calendar year, at 0001 hours (one minute after midnight, local time). The first DFL number will be 001, then 002, etc. If no flights are conducted during the 24 hour period (local time), commencing at midnight, the DFL number will be carried forward to the next 24 hour period; except for bases with require a DFL page for each calendar day due to company requirements. The last item entered will be the last two digits of the current year.

Example: H20-001-02 or P10-001-02

If two DFLs are used in one 24 hour period, each will be closed out completely and each will have a sequential DFL number and all appropriate data; including aircraft and pilot information.

- Time in Service Brought Forward: Brought forward from the previous DFL and recorded as hours and tenths.
- Time in Service Today: The total time recorded from the hobbs meter, or as calculated, for the recently finished 24 hour period, shown in hours and tenths. Hobbs meter time will only be utilized with the approval of the Director of Maintenance, or their representative, and the Chief Pilot.
- Total Time In Service: The time brought forward added to the time of today's flights as calculated or, in instances where authorized by the Director of Maintenance and Chief Pilot, hobbs meter time.
- PIC and SIC names: Print the last name and first name initial, followed by the pilot certificate number and type (i.e. DOE, J – 123456789 ATP).
- Circling the flight leg number shall indicate engine start(s) (other than maintenance starts). If, in the instance of a helicopter scene flight, engine(s) starts are not performed, do not circle the flight leg number.
- Each line in the DFL will be utilized. Lines will not be left blank to separate individual missions.
- Maintenance starts shall be recorded at the top of the DFL in such manner as to clearly indicate the number of maintenance starts for each engine.
- On each flight leg, the number of passengers.
- On each flight leg, the printed last name of the PIC/SIC.
- Flight origin and destination shown as coordinates, NAVAID, fix, radial, distance, airport identifier (KAPA, KINT, KMFI), or plain language name of location (scene, Rockford).
- Multiple landings (such as might occur during training flights) shall be totaled in the "remarks" block for each flight leg as appropriate.
- Takeoff and landing times shall be entered in local time using the 24-hour clock format. Takeoff time shall be recorded just prior to departure.
- Airplane flight time will be entered as block to block.
- The result of the pilot's risk assessment shall be recorded in the "remarks" section.

In the event that an aircraft lands at a destination in another time zone, the time entered shall be the local time of the base where the aircraft departed from. Any subsequent departure or arrival in a different time zone shall utilize the same procedure. This method simplifies the record keeping of flight and duty time and times logged on the DFL.

When an aircraft departs prior to midnight and lands at a destination after midnight (i.e. scene) and then returns to the base (hospital, fire station, airport, and heliport), the entire flight may be shown on the DFL of the day of departure. However, if an aircraft departs prior to midnight and continues to a destination where the pilot has enough time on the ground to close out one DFL and initiate another, then the next sequentially numbered DFL shall be executed. Under normal circumstances, only one flight (out and back) will be recorded after the required, midnight changeover time.

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DAILY FLIGHT LOG/LOAD MANIFEST (DFL) (continued)

- The Flight Time Section shall be filled in with time entered as **hours** and **minutes**. At the end of the day, the hours and minutes will be totaled and converted to hours and tenths. **Six minutes is equal to one tenth of an hour.**
- Takeoff weight and max weight will be entered for all flights. The only exception will be for maintenance, training, ferry flights, and reposition flights with only Air Methods employees on board which are considered Part 91 flights. For Part 91 flights, "Part 91" will be written in the weight and balance portion of the DFL. Additionally, the purpose of the flight (training, maintenance, ferry, or reposition flights with Air Methods employees) will be entered in the remarks section of the DFL.

NOTE: The PIC must still determine takeoff weight for all flights (regardless if operated under Part 91 or 135), the requirement for recording the takeoff weight and max weight is not mandatory for Part 91 flights.

- The CG portion pertains only to multiengine aircraft; this information must also be recorded in the 411 pilot logs. All blocks of this section will be filled out (i.e. Fwd Limit, Actual CG, Aft Limit, and Max Weight for the flight). If the flight is a Part 91 flight, then that will be noted. The only Part 91 flights will be maintenance flights, training flights, ferry flights, and reposition flights with Air Methods employees. All other flights will be considered Part 135 and weight and balance will be computed. This weight and balance section will be completed before takeoff.

NOTE: The PIC must still compute weight and balance information to determine compliance with limitations as listed in the aircraft flight manual. The requirement for recording the results is not mandatory for Part 91 flights.

- PIC signature at the bottom of the form constitutes verification of aircraft airworthiness and is completed before startup.
- The Program Aviation Manager, Aviation Service Manager or their designee will audit the DFL's before they are sent to Air Methods.
- A copy of the DFL will be taken aboard the aircraft during the flight and a completed copy will be kept on file at the local Air Methods' base for not less than 30 days. On the 3rd and 18th of each month copies of the DFL's will be scanned or converted to a PDF file and forwarded electronically to the Chief Pilot using the 135forms@airmethods.com email address with the proper naming convention. Scanned copies of DFL's will be kept at the main office for a period of 30 days after its completion. The scanned copy satisfy's the requirement of keeping a duplicate copy.

The DFL satisfies all the requirements of a Load Manifest if the weight and balance section is completed.

The duty pilot will double check the calculation of times on each DFL on a daily basis to prevent continuation or carry over of a mathematical error in computing airframe and/or engine times.

File completed DFLs at the base in a consistent and commonly known location to expedite access by pilots and mechanics.

DEPLANING AIRCRAFT AFTER LANDING/BEFORE TAKEOFF PROCEDURES

Medical personnel/crewmembers or passengers shall not depart the aircraft until the pilot verbally notifies them that they have landed and are cleared to deplane. The medical personnel or passengers shall inform the pilot prior to departing the aircraft.

Pilots shall not takeoff until they have received verbal confirmation from onboard medical personnel/medical crewmembers or other passengers that they are seated, safety belts/shoulder harnesses (as applicable) are fastened, and doors are closed and secured.

DESTINATION HAZARDS

[135.369]

An Air Methods' pilot will not continue a flight if they become aware of a condition that involves an airport/destination and/or runway that may present a hazard to safe operations. Operations shall be restricted or suspended as necessary until those conditions are corrected.

Pilots may continue toward an airport/destination and/or utilize a runway when a hazard exists, provided the hazard will not longer exist at the estimated time of arrival.

DETERIORATING WEATHER CONDITIONS ENROUTE

If while conducting VFR operations, deteriorating weather conditions are encountered, one of the following procedures is to be followed:

- Divert to an alternate airport/heliport or other suitable area where the patient(s) can be transferred to other means of transportation, if applicable.
- Return to the departure point, if practical.
- Land and notify dispatch or hospital personnel of the situation and make arrangements for care of the patient(s), if applicable.
- If weather conditions and regulations permit, continue the flight under IFR (not applicable to VFR only operations)
- Execute the IIMC procedure on page B-24 of this manual if the preceding options are not available.

DOCUMENTS/EQUIPMENT REQUIRED IN AIRCRAFT

[91.9, 91.203, 91.519, 135.21, 135.25, 135.83]

All Air Methods' aircraft shall carry the following standardized documents on board:

- Air Methods' General Operations Manual (Including Operations Specifications)
- Aircraft Maintenance Log
- Airworthiness Certificate (displayed at the cabin door or cockpit entrance so that it is legible to passengers and crew)
- Aircraft Registration
- Complete Aircraft Status Report
- Airplane or Rotorcraft Flight Manual
- Appropriate and current aeronautical charts for VFR or IFR operations
- One passenger briefing card per seat at a location convenient for the use of each passenger. The passenger briefing cards shall be appropriate for the aircraft configuration.
- Cockpit Checklist (meeting the requirements of 135.83)
- Daily Flight Log
- Deferred Discrepancy Report
- FCC radio station license (when required)
- IIMC Procedure
- Minimum Equipment List (If applicable)
- Preventive Maintenance Training Program, as applicable
- Weight and balance information

In addition to applicable FARs, aircraft shall be equipped with the following:

- Flashlight with two D cell batteries or equivalent.
- An operable radar altimeter is required for all night flight operations. The intent of this requirement is for VFR helicopter operations that are typically conducted at low altitudes into and out of unimproved areas. This requirement does not apply to airplanes.
- A slewable searchlight, or equivalent, is required for helicopter night scene flights.

DROPPING OBJECTS

Air Methods' pilots will not allow objects to be dropped from their aircraft unless it is in conjunction with a medical flight and the PIC has determined that a hazard will not exist for persons on the ground. Requests for public relations event support in which objects might be dropped will be approved by the Chief Pilot or their designee prior to the event.

EMERGENCY NOTIFICATION

[135.19]

In the event the certificate holder or PIC who, under emergency authority, deviates from any Federal Aviation Regulation shall, upon the safe completion of the flight, write a complete report of the aircraft operation involved. He/she will include a description of the deviation taken and the reasons for it. He/she will immediately send it to the Director of Operations and/or Chief Pilot who will forward it to the FAA no later than ten (10) business days after the day of the deviation.

EMERGENCY OPERATIONS

[135.19, 135.23, 135.123]

During any aircraft emergency, the pilot's first responsibility is to fly the aircraft. During an emergency, the pilot will comply with the emergency procedures set forth in the aircraft flight manual, Air Methods' approved checklist, and any other appropriate action as required. All aircraft operations shall be conducted in accordance with the provisions of this Manual, company policy, and the FARs. As medical flights are planned flights, patient condition will not be a valid consideration for use of FAR 135.19 emergency deviation authority. This does not preclude the appropriate use of FAR 135.19 for other valid emergencies to the extent required to meet the emergency.

When on board and necessary, the trained medical personnel will assist the pilot with evacuating patient/passenger, fighting on-board fires with hand-held fire extinguishers and with briefing conscious and coherent patients/passengers and securing their loose items.

All Air Methods' pilots and medical personnel/crewmembers will have annual training on emergency evacuation procedures. It will be the responsibility of the pilot and medical personnel/crewmembers to assist passengers and/or patients in emergency evacuation. These duties will include but not limited to:

- Opening of main exit doors, if possible,
- Assisting Passengers/Patients to disembark,
- Leading Passengers/Patients to safe area,
- Notifying proper authorities and requesting aid, and
- Give necessary medical attention if necessary.

If an emergency occurs on the ground, or once an aircraft is returned to the surface, the pilot(s) will evacuate the aircraft via any normal or emergency exit. After successfully evacuating themselves, each pilot will assist in passenger evacuation. It will be the duty of both the pilot and medical personnel/crewmembers to assist in the evacuation of any and/or all handicapped persons or those needing assistance that are aboard the aircraft.

EMERGENCY PROCEDURES – PERFORMING PRACTICE

Emergency procedures, including autorotations, shall not be performed except under the supervision of a Company Instructor or Check Airman during training or flight checks. This does not preclude normal aircraft testing included in a post-maintenance flight.

ENROUTE QUALIFICATIONS PROCEDURES

[135.23, 135.299]

Any pilot, who has not flown over a route and into an airport within the preceding 90 days, will before beginning a flight over that route and/or into that airport:

1. Study the route on low altitude VFR or IFR charts as appropriate, noting MEA's, MOCA's, routing, ATC frequency allocations, changes to NAVAIDS, and any other pertinent information.
2. Study the current Airport Facility Directory, noting runway lengths and orientation, available instrument approaches, weather observation capability, tower hours of operation, and any other pertinent information.

FLIGHT FOLLOWING PROCEDURES

[135.23, 135.79]

Air Methods has established the below procedures for VFR flight following:

- The Communications Specialist will enter the initial flight information on the Air Methods internet based Flight Log prior to aircraft departure.
- When an aircraft lifts off on an assigned flight, communications will receive from the pilot or their designee, the number of people on board, fuel load remaining in flight time, destination, ETA, and risk assessment value.
- Every 15 minutes into the flight, the pilot will give his/her present position in latitude and longitude or by ground reference and the remaining time left to the destination. Each position report will be entered on the Air Methods internet based Flight Log. If the pilot fails to call within 15 minutes the Communications Specialist(s) will call the aircraft and request an up-dated position report.

NOTE: If the aircraft is equipped with an operable GPS based flight following system, such as Outerlink and the flight is continuously tracked by the Communications Center, the position reports are not required.

- When landing is assured at the intended destination the pilot will notify the communications center by radio (or telephone after landing) of the landing time.
- At the completion of the mission the flight will be “Completed” on the Air Methods internet based Flight Log.

NOTE: In the event the Air Methods internet based Flight Log is inaccessible the Communications Specialist will call the Air Methods Operational Control Center to relay the pertinent flight information. The number for the Operational Control Center is (866) 676-3442.

If the pilot has to land for any unforeseen reason before reaching the intended destination, i.e.; malfunction or weather related, he/she will call the communication center either by radio or telephone. The pilot shall give their approximate location, reason for landing, estimated lift off time (if possible), and a revised ETA to the hospital or scene.

If the flight takes the aircraft out of the communication center radio range, then the pilot will give position reports to another facility (hospital, airport unicom, air medical program communication center, etc.) that is within radio range and request the position report be relayed to the appropriate communication center by telephone.

If, for any reason, the pilot knows he/she will be out of radio contact for an extended period of time, he/she will contact the communication center with reason and expected time of delay.

After 30 (thirty) minutes on a scene, or 45 (forty five) minutes for an inter-hospital flight, if the crew has not contacted the communication center with a liftoff time and an ETA back to the receiving facility, the Communications Specialist shall attempt to ascertain the status of the flight. The pilot will follow the above as appropriate for the return trip.

Air Methods' aircraft on an IFR flight plan will file an IFR flight plan with the controlling agency, Flight Service Station, or appropriate facility as required. Prior to takeoff and after landing the Pilot-in-Command will contact the appropriate communication center to advise of any updated information concerning the flight. This information will be entered by the Communications Specialist on the Air Methods internet based flight log.

NOTE: Air Methods owned LifeCom and ARCH Communications Centers who use Air Methods Approved flight following software are not required to complete the Air Methods internet based Flight Log as described in this paragraph.

FLIGHT TIME AND DUTY TIME

[135.63, 135.263, 135.267]

All pilots and certificate managers are responsible for ensuring compliance with flight time and duty time requirements of the FARs. Duty and flight time will be captured and documented with the Air Methods' 411 system. The duty sheet (reference page Y-3) will be printed at the end of each month and signed by the pilot. At the end of each month this sheet will be forwarded to the appropriate Aviation Manager who will check it for accuracy and then forward it to the Chief Pilot via the 135forms@airmethods.com email address using the proper naming convention.

If a flight crewmember's duty period exceeds 14 hours because of an unplanned occurrence (i.e. weather, patient condition, etc) it will be the pilot's responsibility to notify the Chief Pilot or appropriate Aviation Manager by AIDMOR and by making an entry into the Air Methods 411 system. The AIDMOR shall be forwarded within 24 hours. At a minimum the notification will contain an explanation in sufficient detail to include the time worked in excess of 14 hours, a description of the unplanned occurrence and a statement that the pilot will get the required rest before returning to duty. The pilot will not return to duty until he/she has had a minimum of 10 consecutive hours of uninterrupted rest.

Air Methods will not assign, nor may any pilot accept a duty assignment during a required rest period. Pilots will report for duty with the appropriate rest and be capable of performing the functions of a flight crewmember. Additionally, pilots who perform non- Air Methods flying for compensation or hire will ensure that these activities do not interfere with his/her ability to perform his/her duties.

Under normal situations Air Methods only schedules its pilots for duty in accordance with Part 135.267(c) (This regulation eliminates the requirement for a 24 hour "look back"). Pilots will not plan to exceed the one or two pilot crew flight time limits of 8/10 hours respectively. When the 8/10-hour flight time limit is exceeded during a regularly scheduled 14-hour duty day, compensatory rest, per 135.267(e), must be taken. Each Air Methods' pilot shall have at least 13 rest periods, of 24 consecutive hours, during each calendar quarter.

Pilots are authorized to perform non- Air Methods flying for compensation or hire. However, pilots will ensure that any non- Air Methods flying does not interfere with the base duty schedule or with their ability to perform their duties. Other non- Air Methods commercial flight time will be documented in the Air Methods' 411 system.

For operations with Air Methods' employees on board:

FAR 135.267(d), which states in part, "must provide for at least 10 consecutive hours of rest during the 24-hour period that precedes the planned completion time of the assignment", must be understood. The completion of the assignment occurs when the patient is deplaned at the destination hospital. The ferry flight to return the aircraft to its appropriate base changes the specific purpose to repositioning the aircraft under Part 91. The flight conducted for the purpose of repositioning the aircraft under Part 91 after the completion of an assigned flight conducted under Part 135 cannot be considered a new assignment under Part 135 and, therefore, would not be subject to the flight time limitations and rest requirements of Part 135. The FAR 135 rest period would begin after the aircraft was returned to original base of departure and all post flight duties had been completed.

If it becomes evident that an air medical assignment will exceed a 15-hour duty period or a Part 91 ferry flight will exceed a 15 hour shift because of circumstances beyond control of the certificate holder or the Pilot in Command when the flight was planned to be completed within the 14-hour duty period, the following procedure will be utilized:

Notify the appropriate Aviation Services Manager/Program Aviation Manager as soon as it becomes apparent that 15 hours may be exceeded. The Aviation Services Manager/Program Aviation Manager will then discuss the situation with the pilot or pilots involved and together will determine an appropriate course of action.

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FLIGHT TIME AND DUTY TIME (continued)

For operations with non- Air Methods' employees on board:

FAR 135.267(d), which states in part, “must provide for at least 10 consecutive hours of rest during the 24-hour period that precedes the planned completion time of the assignment”, must be understood. The completion of the assignment occurs when the aircraft arrives at its original base of departure. The FAR 135 rest period would begin after the aircraft was returned to original base of departure and all post flight duties had been completed.

If it becomes evident that an air medical assignment will exceed a 15-hour duty period because of circumstances beyond control of the certificate holder or the Pilot in Command when the flight was planned to be completed within the 14-hour duty period, the following procedure will be utilized:

Notify the appropriate Aviation Services Manager/Program Aviation Manager as soon as it becomes apparent the 15 hours may be exceeded. The Aviation Services Manager/Program Aviation Manager will then discuss the situation with the pilot or pilots involved and together will determine an appropriate course of action.

FUELING PROCEDURES

[135.23]

NOTE: For additional guidance, reference the Air Methods Fuel Quality Control Manual and the Air Methods Training manual. Medical Personnel that have completed the Air Methods Refueling Training can perform the “Trained Medical Person/ Personnel” functions in this section; they may also refuel the aircraft if the engines are shut down.

It shall be the responsibility of the Pilot-in-Command to check the amount of fuel and correlate this amount with the total fuel as reported by the servicing agent and as indicated by the fuel gauges and by a visual tank check when tank openings can be readily reached. Additionally, he/she must confirm, by color and tank marking, that the fuel is of the correct grade and obtain a fuel sample as outlined in the Aircraft Flight Manual.

When receiving fuel services away from home, the Pilot-in-Command will supervise the refueling process and will verify that the proper grade of fuel is being dispensed for the aircraft. Pilots should provide extra vigilance at facilities where both turbine (jet) fuel and gasoline are dispensed to ensure the appropriate fuel is utilized.

The flow of jet type fuel creates more static electricity than other types of fuel; therefore extreme caution must be used during this potentially dangerous operation.

During the refueling of an aircraft, the concentration of fuel vapor in the area surrounding the aircraft varies with the wind velocity and the rate of fueling. These invisible vapors are too often ignored, are heavier than air, and tend to settle and spread. It should be remembered that when fuel is pumped into the aircraft tanks, it displaces an equal volume of vapor, which is discharged into the atmosphere. When sufficient vapor accumulates so that an odor is present, conditions are good for a fire and explosion. Most importantly, concentrations are dangerously increased by fuel spills. Spills are the greatest hazard. All that is needed is a source of ignition, such as a static discharge, lighting of a cigarette, or the pilot light of a gas heater nearby. Therefore, the Pilot-in Command will protect the aircraft and persons by observing procedures to minimize fuel contamination, protection against fire, prevent spillage and other potential hazards.

Safety Precautions (All Refueling)

- No smoking and no flames or fires shall be permitted within 50 feet of an aircraft while refueling.
- In the event of spillage, all pumps and electrical equipment will be shut down. Refueling may be restarted after spillage has been removed.
- Line personnel will remove any loose objects from their person that could possibly enter a fuel or oil service port.
- Fire extinguisher will be available.
- The aircraft will be grounded for all refueling operations and engines shut down, except where authorized in this chapter, see “Rapid Refueling with Rotors Turning.”
- Strobe Lights should be turned off and radio transmissions restricted until fueling is completed.
- The refueling unit/truck will remain outside the rotor arc.
- Refueling operations shall not be conducted during periods of active thunderstorms and detected lightning, within 5 miles of the fueling operations.
- **Aircraft maintenance is not allowed during refueling, including servicing of oxygen, LOX or batteries.**
- Aircraft ground-power units should be located as far away from the fueling point as practicable and neither connected or disconnected during fueling.
- Electric tools, such as drills or buffers, shall not be used in or near the aircraft during refueling.
- Aircraft radios, portable radios, or cell phones shall not be operated in the vicinity of any aircraft refueling operation.
- Use caution in removing the fuel tank cap and place the tank cap where it will not get contaminated.
- Make sure the nozzle is properly bonded to the aircraft and placed in the filler neck.
- Don't block the nozzle trigger in the open position unless the nozzle is of the type that shuts off automatically and then only use the system provided on the nozzle handle.

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FUELING PROCEDURES (continued)

- Never leave the nozzle unattended.
- Make frequent visual checks of the amount of fuel in the tank and take extreme care to prevent spills and over-filling of the tanks.
- Upon completion of the refueling, close the filler cap properly, disconnect all grounding and bonding cables, remove the hose and cables from the vicinity of the aircraft.
- If an aircraft fuel apparatus or spilled fuel catches fire, engage all fuel shut-offs. Notify the Fire Department immediately. If possible and without endangering self or others, fight the fire with all means available.

Additional Procedures for Fueling with Patient Onboard. (Cold Refueling)

- The PIC will conduct an exit briefing before exiting the aircraft.
- A Trained Medical Person with a fire extinguisher, will remain onboard the aircraft with the patient. The patient will be prepared for rapid evacuation.
- The second Trained Medical Person will position himself/herself, with a fire extinguisher (if available) in a position that will allow monitoring of the refueling operation and the onboard attendant simultaneously, so as to be able to coordinate emergency evacuation / fire fighting assistance as necessary.

Rapid Refueling with Rotors Turning without Medical Personnel or Passengers

- The aircraft will be grounded for all refueling operations.
- Aircraft power will be reduced to ground idle or a reduced power setting as specified in the Rotorcraft Flight Manual, controls positively locked or friction applied to prevent movement. Force trim shall be on (if installed), autopilot turned off (if installed), and the rotor disc level.
- The pilot may go beyond the rotor arc of the aircraft to retrieve the fuel nozzle, grounding cables or secure the previously mentioned items.
- Fire extinguisher will be accessible near fueling port.
- If an aircraft fuel apparatus or spilled fuel catches fire, engage all fuel shut-offs, shut down the aircraft if possible. Notify the Fire Department immediately. If possible and without endangering self or others, fight the fire with all means available.

Rapid Refueling with Rotors Turning with Medical Personnel

- Aircraft power will be reduced to ground idle or a reduced power setting as specified in the Aircraft Flight Manual, controls positively locked or friction applied to prevent movement. Force trim shall be on (if installed), autopilot turned off (if installed), and the rotor disc level.
- The pilot may go 30 feet beyond the rotor arc of the aircraft to retrieve the fuel nozzle, grounding cables or secure the previously mentioned items.
- All Medical Personnel will exit the aircraft. One Trained Medical Person will position himself / herself, with a fire extinguisher in a position that will allow monitoring of the refueling operation, to lend fire fighting assistance as necessary. The other Trained Medical Person will act as tail rotor guard.
- A Fire extinguisher will be accessible near fueling port.
- If an aircraft fuel apparatus or spilled fuel catches fire, engage all fuel shut-offs, shut down the aircraft if possible. Notify the Fire Department immediately. If possible and without endangering self or others, fight the fire with all means available.

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FUELING PROCEDURES (continued)

Rapid Refueling with Rotors Turning with Medical Personnel and Patient

It is Air Methods policy that no one should be onboard the aircraft during refueling, with the following exception: on rare occasions it may become necessary while en route to a hospital with a critically ill or injured patient to stop for fuel. In this case refueling with the patient onboard is permitted. The patient will be prepared for rapid evacuation and attended by a Trained Medical Person. It should be emphasized that the Pilot-in-Command will make every reasonable effort in his flight planning to avoid fueling with a patient onboard. The refueling may be done by FBO refueling personnel. The PIC may brief a medical crewmember on supervising the refueling personnel during rapid refueling at an FBO. Refueling information for a specific aircraft make and model can be found in the appropriate Aircraft Flight Manual and must be adhered to.

- The PIC will conduct an exit briefing before allowing the Trained Medical Personnel to exit the helicopter.
- The Trained Medical Personnel will exit the helicopter and post in a position that will allow them to guard the tail rotor and monitor the pilot.
- The PIC will conduct an exit briefing before exiting the aircraft.
- Engine/rotor RPM shall be set to the lowest appropriate setting, the force trim shall be on (if installed), the **autopilot turned off** (if installed) and the rotor disc level.
- A Trained Medical Person with a fire extinguisher, will remain onboard the aircraft with the patient. The patient will be prepared for rapid evacuation.
- The second Trained Medical Person will position himself/herself, with a fire extinguisher (if available) in a position that will allow monitoring of the refueling operation and the onboard attendant simultaneously, so as to be able to coordinate emergency evacuation / fire fighting assistance as necessary.
- Fuel Truck will be placed a minimum of 30 feet beyond the rotor arc.
- If an aircraft fuel apparatus or spilled fuel catches fire, engage all fuel shut-offs, shut down and evacuate the aircraft. Notify the Fire Department immediately. If possible and without endangering self or others, fight the fire with all means available.

FUEL SUMPING – ALL-AIRCRAFT

Aircraft will be sumped in accordance with the approved Rotorcraft/Airplane Flight Manual. The aircraft may be sumped by either the pilot or mechanic, but the Pilot retains the responsibility.

If no specific guidance is provided in the RFM/AFM, then the following guidance will be followed:

At the beginning of each shift the pilot conducting the preflight will perform the following:

- Aircraft fuel system: SUMP to collect a fuel sample and check for proper type and contaminants.
- If fuel sample is contaminated, contact maintenance for further guidance.

NOTE: For all Aircraft the two most recent fuel samples will be kept:

After required periods, fuel samples shall be discarded appropriately.

HAZARDS MAP – LOCAL AREA

The base Lead Pilot/Aviation Services Manager shall be responsible for the development and maintenance of the base “Local Area Hazards Map.”

NOTE: Fixed wing programs are not required to develop a Local Area Hazards Map.

At the discretion of the base Lead Pilot/Aviation Services Manager, a sectional or a Class B airspace map may be used to fulfill this requirement. The edges of the map may be trimmed as long as the entire local area is depicted. All pilots are required to immediately annotate new hazards on the map and bring these new hazards to the attention of their fellow pilots.

The Local Area Hazards Map is not intended to be used for navigational use. It is intended to provide additional and meaningful information to the pilots in their local area of operations.

The following is a list of potential hazards that, depending upon their location, may need to be annotated on the map. Annotation is only necessary if they present a hazard to normal operations:

- Towers that are under construction, and not already depicted on the map.
- Power lines (high voltage), and other wires and cables that are under construction, and not already depicted on the map. Additional marking over existing map detail may be appropriate where long wire spans cross over canyons, rivers, highways, or near known landing areas.
- High buildings or structures under construction that may be a new hazard during approach or departure from an existing helipad; or create a hazard to normal helicopter traffic routes and operating areas.
- TFRs.
- Low-level Military Routes that are not already on the map and create a hazard to normal flight operations.
- Airports that are not already on the map and create a hazard to normal flight operations.
- Special event skydiving areas and regular skydiving areas that are not already on the map and create a hazard to normal flight operations.
- Special event glider areas and regular glider areas that are not already on the map and create a hazard to normal flight operations.
- Ultra-light areas, hang glider areas, and VFR practice areas that are not already on the map and create a hazard to normal flight operations.
- Remote control airfields that create a hazard to normal flight operations.
- Preferred VFR routes that are not already depicted on the map.

NOTE: The intent of the Local Area Hazards Map is to flag items that are not already shown on the map and at the discretion of the base Lead Pilot/Aviation Services Manager, to indicate unique features including those already on the map. The map will be reviewed and updated periodically; replacement of the map should occur when major changes have occurred. Updates/changes to the map will be logged next to the map to facilitate other pilot’s awareness of the information. The existence, maintenance, and periodic review of the map will be confirmed during staff visits and base audits.

INSTRUMENT FLIGHT RULES – GENERAL (All Aircraft)

Approved sources of weather for IFR operations are listed in Paragraph A010 of the Operations Specifications. Unless otherwise authorized by the Operations Specifications Paragraph A005, weather observations made and furnished to pilots conducting IFR operations at an airport/heliport must be taken at the airport/heliport where those IFR operations are conducted.

IFR ALTERNATE REQUIREMENTS AND FUEL REQUIREMENTS

[135.209]

IFR alternate requirements and fuel requirements shall adhere to the FARs and appropriate Operations Specifications Paragraphs.

If an alternate is required, the following criteria apply:

- Airplanes: Reference Operations Specifications Paragraph C055.
- Helicopters: Reference Operations Specifications Paragraph H105

IFR AND OVER THE TOP LIMITATIONS.

IFR and over-the-top operations shall be conducted per FAR 135.181, 135.211 and Operations Specifications Paragraph A046 as appropriate.

IFR DEPARTURES

No pilot may depart on an IFR or a VFR-over-the-top flight unless the latest weather reports or forecasts, or any combination thereof, indicate that the weather conditions at the estimated time of arrival at the airport/heliport of intended landing will be equal to or greater than the ceiling (expressed as HAT or HAA) and landing minimum (visibility), specified in the instrument approach procedure to be flown.

Helicopter instrument departures from hospital heliports/helipads are prohibited unless specifically authorized by the Operations Specifications.

Lower than standard takeoff minimums may be published in the Operations Specifications Paragraphs C057, C079, and H116.

In accordance with Operations Specifications Paragraph C057, pilots of multiengine airplanes may takeoff from an airport where straight-in approaches are authorized in weather conditions less than standard IFR takeoff minimums if an approved weather source indicates the weather is at or above the lowest straight-in landing minimums. Such operations will be undertaken only if the wind direction and velocity at the time of takeoff allow a landing on the runway served by the straight-in instrument approach and the facilities serving that approach are operational.

In accordance with Operations Specifications Paragraph H116 helicopter crews consisting of at least two pilots may takeoff with less than standard visibility, provided they meet the requirements and visibility minimums listed in that paragraph.

Controlled airspace, to the surface, is required for the departure airport/heliport, unless otherwise authorized in the Operations Specifications. IFR departure requirements for Class G airspace can be found in Operations Specifications Parts C and H.

IFR DESTINATION REQUIREMENTS

[135.225]

Instrument approaches require controlled airspace to the surface of the destination airport/heliport, unless otherwise authorized in the Operations Specifications. IFR arrival requirements for Class G airspace can be found in Operations Specifications Parts C and H.

Air Methods pilots shall use an instrument approach procedure prescribed by FAR Part 97 or authorized by Operations Specifications Paragraph H122.

Pilots shall comply with the highest DH or MDA for the procedure, PIC qualifications, or aircraft equipment as appropriate. Pilots shall not operate below the MDA or continue an approach below DH unless in a position to make a normal descent to the intended runway, the flight visibility is not less than prescribed and the visual cues of FAR Part 91.175 are visible.

Pilots will not commence an instrument approach, or begin the final approach segment of an approach, to an airport unless that airport has an approved source of weather, unless otherwise approved by the Operations Specifications Paragraph A005. Additionally, the latest weather report must indicate the weather is at or above the authorized IFR landing minimums per Operations Specifications Paragraphs C053, C074, C075, H103, and H117.

Pilots may continue an approach if after commencing the final approach segment, a later weather report indicates the weather is now below minimums provided the aircraft is:

- On an ILS final approach and past the final approach fix.
- On an ASR or PAR approach and they have been turned over to the final approach controller.
- On VOR, NDB, or similar approach and the aircraft has passed the final approach fix, or if a final approach fix is not specified, procedure turn inbound and within the distance prescribed for that approach.

In the above situation, the pilot may continue the approach to the missed approach point. Upon arriving at the MDA the pilot may land if they find the actual weather to be at or above the prescribed landing minimums.

When being radar vectored to an approach, and when cleared for an approach, pilots will comply with Part 91.177 minimum altitude and maintain the last assigned altitude until established on a segment of a published route or the approach.

Pilots will not execute a procedure turn unless authorized to do so by ATC when being radar vectored to final approach, from a timed holding pattern, or when an instrument approach procedure specifies "NoPT."

Once cleared for an instrument approach procedure, pilots will comply with all procedural tracks and/or ATC instructions unless adverse weather, such as moderate/severe icing or thunderstorms, is encountered.

Unless, at the time an instrument approach is initiated, the reported weather is better than 1000 feet and 5 miles visibility, pilots will remain on an IFR clearance until in a position to commence a normal approach and landing. It should be understood that being in a position to make a normal approach and landing does not include any unusual maneuvering and the approach will remain stabilized.

Pilots may execute an instrument approach to one airport/heliport and proceed visually to another airport/heliport not served by an instrument approach. However, all cloud clearances required by FAR 91.155, minimum altitude requirements for FARs 91.119 and 135.203, and in uncontrolled airspace the weather minimums on page BA-8 of this manual must be adhered to. A VFR flight plan will be filed or flight locating as outlined in this Manual will be utilized.

Contact approaches are not authorized.

PICs of turbine powered airplanes that do not possess 100 hours in type will increase landing minimums by 100 feet and ½ mile respectively. However, adjusted minimums need not exceed the ceiling and visibility required for that airport to be used as an alternate.

IFR DESTINATION REQUIREMENTS (Eligible On-Demand Operations)

[135.4,135.95,135.225,135.243]

A pilot conducting an eligible on-demand operation may begin an instrument approach procedure to an airport that does not have a weather reporting facility operated by the U.S. National Weather Service, a source approved by the U.S. National Weather Service, or a source approved by the Administrator if:

- An alternate airport that has a weather reporting facility operated by the U.S. national Weather Service, a source approved by the U.S. National Weather Service, or a source approved by the Administrator; is designated on the flight plan and
- The latest weather report issued by the weather reporting facility includes a current local altimeter setting for the destination airport. If no local altimeter setting for the destination airport is available, the pilot may use the current altimeter setting provided by the facility designated on the approach chart for the destination airport.

An “eligible on-demand operation” is an on-demand operation conducted under part 135 that meets the following requirements:

- Two pilot crew; the flight crew must consist of at least two qualified pilots employed or contracted by Air Methods.
- Flight crew experience; the flight crewmembers must have met the applicable requirements of Parts 61 and 135 and have the following experience and ratings:
 - Total time for all pilots:
 - PIC – A minimum of 1500 hours.
 - SIC – A minimum of 500 hours.
 - For multi-engine turbine powered aircraft, the following FAA certification and rating requirements:
 - PIC – Airline Transport Pilot and applicable type rating.
 - SIC – Commercial Pilot and instrument ratings.
 - For all other aircraft, the following FAA certification and rating requirements:
 - PIC – Commercial Pilot and instrument ratings.
 - SIC – Commercial Pilot and instrument ratings.
- Pilot operating limitations; if the SIC of a fixed-wing aircraft has fewer than 100 hours of flight time as SIC flying in the aircraft make and model and, if a type rating is required in the type aircraft being flown, and the PIC is not an appropriately qualified Check Pilot, the PIC shall make all takeoffs and landings in any of the following conditions:
 - The prevailing visibility for the airport is at or below $\frac{3}{4}$ mile.
 - The runway visual range for the runway to be used is at or below 4000 feet.
 - The runway to be used has water, snow, slush, ice, or similar contamination that may adversely affect aircraft performance.
 - The braking action on the runway to be used is reported to be fair or nil.
 - The crosswind component for the runway to be used is in excess of 15 knots.
 - Windshear is reported in the vicinity of the airport.
 - Any other condition in which the PIC determines it to be prudent to exercise the PIC’s authority.
- Crew pairing; either the PIC or the SIC must have at least 75 hours of flight time in that aircraft make and model and, if a type rating is required, for that type aircraft, either as PIC or SIC.

IFR ENROUTE REQUIREMENTS

IFR enroute operations shall comply with applicable FARs and Operations Specifications Paragraphs B031, B032, B034, B035, and B050, as applicable.

IFR LIMITATIONS

Flight is prohibited under IFR in Class G airspace unless Operations Specifications Paragraphs A014, C064, or H113 (as appropriate) have been issued and complied with.

INADVERTENT INSTRUMENT METEOROLOGICAL CONDITIONS (IIMC) RECOVERY PROCEDURES

The Base Lead Pilot, at helicopter bases of operations, with the assistance of the Program Aviation Manager or Aviation Services Manager will develop an IIMC recovery procedure and complete an IIMC Procedure Template (reference pages Y-11 and Y-12). This procedure will be posted at the respective base and available to the pilot in the aircraft. The pilot shall become knowledgeable with the procedure. The plan will be reviewed with each pilot on an annual basis and will be evaluated by the Check Airman conducting the annual checkride required by 135.293. The procedure will include at least the following information:

- The priority and most important aspect of an IIMC procedure is to maintain aircraft control. Positive control of the aircraft with reference to instruments must take priority over all other duties.
 - Attitude (Level)
 - Heading (Turn only to avoid known obstacles)
 - Power (Adjust to climb power)
 - Airspeed (Adjust to climb airspeed)
- Climb to the minimum safe altitude (MSA) to clear all obstacles in the area.
- De-goggle when safely able (if appropriate).
- Make all turns no greater than standard rate.
- Contact appropriate Approach Control/Center and Declare an Emergency. Squawk 7700 when able. Report location, altitude, heading, fuel status, and number of persons on board. State that you are inadvertent IMC and request assistance.

The following procedures shall be utilized in following order of preference:

1. Radar vectors to VMC conditions.
2. Vectors to the closest approach.

- Complete the approach procedure to landing or entering VMC conditions. Maintain VMC and land.

For the local area determine the most likely airports and approaches for an IMC procedure and complete the IIMC Procedure Template. Ensure these approaches are available on the aircraft and reviewed with each pilot on an annual basis and evaluated by the Check Airman conducting the annual checkride.

Coordinating with the air traffic control (ATC) facility that is responsible for the area of operation of the base can be productive. If able, meet with the manager of the ATC facility and have them review the procedure so that they are familiar.

INTERNATIONAL OPERATIONS

The PIC will be the final authority for operations of Air Methods' aircraft in foreign airspace. They will be required to abide by the rules and regulations of the country they are operating in or the FAR, whichever is most stringent. They will also follow all Air Methods' policies and procedures regarding maintenance, refueling, and general operation. Each aircraft operating internationally will have an International Flight Information Manual (IFIM) or its equivalent on board. The policies and procedures presented in the IFIM will be used for entry and exit requirements in the country of operation. Each Air Methods' base which anticipates international operations shall maintain a current IFIM.

Pilots will ensure:

- That all flight crewmembers and medical personnel are in possession of current and valid passports.
- Each aircraft has a Radio Station License.
- Each pilot is in possession of a Radio Telephone Operator Permit.
- Blank General Declaration Forms (Customs Form 7507) are carried on board and completed prior to entry into United States airspace.
- CBP eAPIS (Advanced Passenger Identification System) requirements are met. <https://eapis.cbp.dhs.gov/>.
- That a copy of Air Methods Customs Bond is carried on-board the aircraft.
- That any load manifest required by US Customs are prepared and presented upon request.
- That required advance Customs notification is made prior to re-entry into the United States. The requirements for notifications are not negated because of medical missions, arrivals on holidays, or arrivals that take place after normal US Customs duty hours.
- That an IFR or DVFR flight plan is filed.
- For IFR operations; pilots will not initiate instrument departures from foreign airports with less than the minimums prescribed by the controlling authority or 1SM, whichever is higher.
- For IFR operations; when operating into a foreign airport, pilots will comply with the approach minimums prescribed by the controlling authority but will not accept minimums lower than ½ SM.

MAINTENANCE INSPECTION AFTER OCCURRENCE OR INCIDENT

At any time that safety of flight or airworthiness is in question; the pilot will discontinue the flight. A log book entry will be made and maintenance will be contacted. The aircraft will not be flown until maintenance has inspected and released the aircraft for flight to include a log book entry. Pilots who make an unscheduled landing for the purpose of securing a door, a seatbelt or to investigate a bird strike to non rotating parts are authorized to resume flight if no damage has occurred.

MAINTENANCE OPERATIONAL CHECK – POST MAINTENANCE

Prior to any maintenance performed on Air Methods' aircraft, the duty pilot must be verbally informed as to the area affected and the maintenance that is to be performed.

Any maintenance performed must be entered in the Air Methods' Record of Maintenance. All maintenance that is performed shall be checked by a certificated mechanic that did not perform the maintenance action. If a certificated mechanic is not available, then the pilot in command shall preflight the work performed and review the approval for return to service to make final airworthiness determination.

The Post Maintenance Check shall consist of a face-to-face briefing with the person conducting the post maintenance inspection of the work area. The briefing will include the maintenance task that was performed, any cowlings/panels that were opened/removed and any components/lines that were repositioned or removed in order to facilitate maintenance. The Post Maintenance Check must be performed before the aircraft is returned to service.

The Post Maintenance Check should include, at a minimum, a thorough pre-flight/visual check for:

- Loose or missing hardware in the area of maintenance.
- Obvious defects in the area of maintenance.
- Tools, loose hardware, rags, or foreign objects left on the aircraft.
- Proper safeties and cotter pins in the area of maintenance.
- The proper servicing of components that may have been affected by the maintenance task.

MALFUNCTION/FAILURE OF REQUIRED EQUIPMENT

[135.23]

If any item of equipment required by FARs 91.205 (b) through (e), 135.149, 135.159, 135.161, and/or 135.163 becomes inoperative or unserviceable enroute, the PIC shall comply with the Aircraft Flight Manual procedures and FARs as applicable and discontinue the operation.

All mechanical irregularities discovered during the course of a flight will be brought to the attention of the maintenance department after the flight.

Pilots shall comply with the "Mechanical Interruption Summary Report (MIS)" and "Service Difficulty Reports" procedures listed in the Maintenance Section of this Manual.

MEDICAL OXYGEN TANKS – FILLING AND CHANGING

[135.91]

When necessary, Air Methods' pilots may be authorized to fill and change out medical oxygen tanks in the company aircraft after they have been trained, qualified, and authorized to do the task with the Air Methods' Preventive Maintenance and Servicing Training Program. A record of this training and qualification will be kept in the pilot's file with the Chief Pilot.

OPERATING NEAR OTHER AIRCRAFT

Air Methods' pilots will not routinely operate aircraft in formation flight. However in certain instances, such as photo flights or memorial services may warrant doing so. In those cases, only necessary pilot flight crewmembers will be on board the aircraft. In all cases, formation flights will not be conducted with passengers on board or in such a manner as to create a collision hazard.

All parties involved in formation flight will only conduct the operation after an extensive briefing. Under no circumstances will aircraft be operated closer than five rotor discs or wing-spans. The Chief Pilot or Director of Operations must grant approval prior to any such operations.

OVERDUE/MISSING AIRCRAFT

[135.79]

Air Methods has an overdue/missing aircraft policy, which all personnel will follow in the event of an overdue or missing aircraft.

- Any Air Methods' aircraft on an IFR flight plan that is reported by the Flight Service Station as being overdue or missing and the Pilot-in-Command has not called in by telephone as required will be considered overdue or missing.
- Any aircraft on a VFR flight which fails to arrive at any given destination within a 15 minute time factor of the most recent estimated time of arrival (ETA), or fails to communicate with the Communication Center within 15 minutes of an unscheduled landing, or fails to communicate with the Communication Center for 15 minutes after the last required position report will be considered overdue or missing.
- Upon expiration of the 15-minute time factor without communication, the communicator is to initiate the lost communications/overdue aircraft procedures.
- The lost communications/overdue aircraft procedures will be followed step by step and all times and information will be filled in appropriately. These steps include:
 - Calling the referring and receiving hospitals or agency to confirm the aircraft is not there. Contact should be made to the FBO of the intended landing airport, if applicable. Ask if they have been in radio contact with the aircraft and if so, the approximate time an ETA reported to their facility. Also, have the facility try and make radio contact with the aircraft.
 - Make at least two attempts to call the aircraft on the appropriate frequency.
 - Notify the appropriate Air Methods' officials per the Air Methods' PAIP program.
 - Contact the Operational Control Center at 866-676-3442 to confirm that they do not know the status of the aircraft.
- If the Communications Specialist is still unable to locate the aircraft, the following procedure should be followed:
 - Compute, with the latest available information, the last known location of the aircraft.
- If the aircraft has not been located within 30 minutes of the initial expiration of the 15 minutes allotted time, the aircraft should be considered "Missing". Only an Air Methods' official can declare the aircraft officially "Missing".
- At the time of declaring the aircraft missing, the Flight Service Station (FSS) or the Denver FSDO will be notified by the Director of Operations or Chief Pilot of Air Methods. The following information will be supplied:
 - Tail number of the aircraft,
 - Number of persons on board,
 - Route of flight and common paths taken,
 - Destination and ETA to destination, and
 - Last known computed location of the aircraft.
- If applicable, additional company aircraft will be placed out-of-service for utilization of search and assist. If any of those aircrafts are on an assignment, they will complete their assignments first.
- The communication specialist should notify the receiving and sending facilities and speak with the Director of Nursing. The following information should be given:
 - "At the present time the Air Methods' aircraft that
 - was on the way to your facility or
 - departed your facility for (receiving hospital) is overdue".
 - Provide the patient's name for clarification.
- After the aircraft has been located, all persons or agencies notified on the Communication Flow Sheet will be notified.

OVERWATER / EXTENDED OVERWATER OPERATIONS

Overwater and extended overwater operations shall be conducted per FARs 91.205, 135.165, 135.167, and 135.183 as applicable.

Additional requirements for extended overwater operations:

- Each flight crewmember, medical personnel/crewmember, and passenger shall wear an approved life preserver equipped with a locator light.
- Each aircraft shall maintain two-way radio communications with an appropriate Air Traffic Control facility.
- Each aircraft shall be equipped with a functioning GPS meeting the requirements of TSO C-129 or equivalent. Each GPS unit shall be equipped with a current database.
- During daylight hours, operations shall be conducted on either a VFR/DVFR or IFR flight plan.
- Operations conducted at night as defined by FAR Part 1.1 will be conducted on an IFR flight plan.

All survival equipment required by the FARs for overwater and extended overwater operations shall be maintained in accordance with applicable FARs and appropriate maintenance documentation.

PASSENGER BRIEFING

[91.517, 91.519, 135. 23, 135.117, 135.127]

When any conscious and coherent patient/passenger or a non- Air Methods' employee is being transported, the pilot-in-command will be responsible to ensure that he/she or a trained medical person will orally brief them.

The Pilot-in-Command shall ensure that the briefing is completed prior to taxi or takeoff. The briefing shall be supplemented by the Air Methods' approved passenger briefing card for the make and model of aircraft operated and shall be available to each passenger. The following items shall be briefed:

- No smoking.
- Use of seatbelts.
- If available, all seat backs should be in an upright position before takeoff and landing.
- Location and operation of passenger entry doors and emergency exits.
- Location of survival equipment.
- Location and operation of fire extinguisher.
- Ditching procedures and use of required flotation equipment, if the flight involves extended over water operation.
- Normal and emergency use of oxygen, if the flight is above 12,000 feet MSL.

**PASSENGER OCCUPANCY OF A PILOT SEAT AND MANIPULATION OF FLIGHT
CONTROLS**

[135.75, 135.113, 135.115]

The PIC will not allow persons other than a pilot employed by Air Methods Corp. who is qualified in the aircraft or an authorized safety representative of the administrator who, is qualified in the aircraft and is checking flight operations, to manipulate the controls of an aircraft during flight. At the discretion of the PIC, a pilot seat may be occupied by a medical person/crewmember or a passenger.

Whenever an FAA inspector who is performing the duties of an Aviation Safety Inspector presents FAA Form 110A to the PIC that inspector will be given free uninterrupted access to the pilot compartment of that aircraft. This does limit the emergency authority of the pilot to exclude anyone from the pilot compartment in the interest of safety. A seat on the flight deck with a headset will be provided to the Administrator while conducting en route inspections.

A PIC may allow a passenger to occupy a pilot seat in concurrence with the medical personnel/crewmembers. Passengers may include a family member of the patient being transported, ride-along program participant, emergency medical service personnel, or law enforcement personnel. Passengers must be properly briefed before flight operations begin.

PERSONNEL QUALIFICATION(S)

[135.247]

All flight crewmembers are charged with the responsibility for maintaining their qualifications in keeping with the requirements outlined in the FARs for their assigned position. Each crewmember shall keep a personal account of the due date(s), as appropriate, for all required; checks, training, recency of experience requirements, and flight physicals. Additionally, each crewmember will comply with all flight time and rest requirement as prescribed by the FARs. Whereas the company desires to keep its employees current, and will make every attempt to do so, lapses in qualification will be viewed primarily as the fault of the person whose qualification lapsed if the Director of Operations, Director of Maintenance, and/or Chief Pilot was not made aware of the pending lapse in advance.

POST ACCIDENT/INCIDENT PLAN (PAIP)

The Regional Aviation Director in conjunction with the Aviation Services Manager/Program Aviation Manager at each Program shall develop a PAIP. The Aviation Services Manager/Program Aviation Manager will coordinate with their respective communications center to ensure the PAIP provides timely notification to Air Methods' Part 135 certificate management and other key Air Methods' personnel. The PAIP will indicate who is to be notified and who is responsible to make the notification. The Accident Notification Requirements on page B-3 of this manual will be used to determine notification requirements.

The following are the minimum required checklist items to be included in the PAIP:

- Medical emergencies/problems – Requiring an unscheduled landing.
- Weather or mechanical difficulties – Requiring an unscheduled landing.
- Overdue aircraft – When an aircraft fails to reach its destination within 30 minutes of estimated time of arrival or overdue in-flight reports by 30 minutes.
- Actual emergency – Either reported via radios or notification from ATC.
- Post crash – Notification from another party that the aircraft has crashed.
- Procedures on how to notify the Operational Control Center of an accident, incident or occurrence which affects or could affect safety of flight. The 24-hour contact number for the Operational Control Center is (866) 676-3442. Upon notification the Operational Control Center will contact the appropriate Air Methods personnel. Notification of the Operational Control Center is mandatory following an accident or incident.
- The notification to the OCC shall include but not be limited to
 - a. PIC of the aircraft
 - b. Tail Number and Program Call Sign
 - c. Souls on board and if carrying a patient
 - d. Current location
 - e. Nature of the PAIP
 - f. Any damage or injuries
- Procedures to alert program security and public relations personnel, if necessary.
- Procedures to request assistance from law enforcement and other emergency programs.
- Procedures to perform an annual review of the PAIP to ensure changes in personnel and contact information are updated.
- At a minimum the plan shall be tested and evaluated annually.

A copy of the Program PAIP and annual updates will be sent to the Director of Safety. Assistance with development of the PAIP can be obtained from the Director of Safety.

The Regional Aviation Director will ensure that the PAIP plan for each program under their control is tested and evaluated on an annual basis. The Regional Aviation Director or his designee will be responsible for maintaining the documentation. An actual PAIP will qualify as the test that is required in this section.

PREFLIGHT PREPARATION

[135.23, 135.25, 135.65, 135.71, 135.209]

In making a decision to accept or reject a requested mission, each PIC will consider all relevant factors that might affect the safety of flight. These factors will include (but are not limited to) weather, FAR required fuel requirements, airport/heliport and navigation aid conditions, aircraft equipment and maintenance status, and physical and emotional condition. The pilot will also consider safety recommendations from medical and other involved personnel/crewmembers.

If a pilot is uncertain that a requested flight can be completed according to the requirements of this Manual and of the FARs, they shall notify the medical personnel/crewmembers on board, communications center, and others as appropriate. This notification shall explain the factors included in the pilot's decision making process and provide insight into the pilot's professional judgment. The pilot should give this notice with minimum delay, and include acceptable alternative destinations and/or courses of action. In considering these possibilities, the pilot should seek input from the medical personnel/crewmember, communications center, or others as appropriate. It is the pilot's responsibility to ensure that their decision is made with safety and legality as the ultimate controlling principles.

For operations conducted under VFR, the PIC, in the absence of approved weather sources (reference Operations Specifications Paragraph A010), may use weather information based on their own observations or those of other persons competent to supply them.

As part of their preflight duties, the assigned PIC will note the date and the aircraft flight hours as indicated in the aircraft logbook. The PIC will then compare those times to the scheduled maintenance due times.

The PIC then must determine whether the flight or series of flights can be completed without any required maintenance item coming due before the aircraft returns to home base. If a flight cannot be completed without a maintenance item becoming overdue the PIC will immediately contact the duty mechanic for instructions. Under no circumstances will a PIC commence a flight if any required inspection time will be exceeded.

The PIC will review the aircraft Maintenance Record and aircraft status report in the aircraft to determine whether any discrepancies have been either deferred in accordance with the approved MEL, or corrected. If the PIC finds a mechanical irregularity that has not been either corrected or properly deferred, they will not take off, but will contact the duty mechanic for instructions. Each pilot who finds a mechanical discrepancy or any item related to aircraft airworthiness will document that discrepancy in the aircraft logbook. Once the aircraft is safely on the ground, the "CYCLIC/CONTROL YOKE WARNING COVER" procedure shall be adhered to (reference page B-8).

The PIC will determine that for deferred and corrected mechanical irregularities the aircraft has been certified approved for return to service by an Airframe and/or Powerplant Mechanic (or by the Director of Maintenance). This certification will appear on the aircraft log sheet in the area of the form reserved for remarks and maintenance use.

The PIC shall become familiar with all available information concerning each flight including:

- For IFR flights, or flights not in the vicinity of the airport/heliport (helistop); weather reports, forecasts, alternates, and known air traffic delays.
- For all flights; runway lengths, takeoff and landing requirements as indicated by an approved Aircraft Flight Manual, if a flight manual does not exist, the pilot information manual.
- NOTAMs (FDC, D, and L as applicable), including TFRs.
- Condition of navigation facilities.
- Weather (including hazards).
- Medical control, flight following centers, and medical personnel/crewmembers will be kept abreast of any weather or operational limitations, which may affect medical flights.

PREVENTIVE MAINTENANCE - PILOTS

In certain cases, Air Methods' pilots may be authorized to perform specific preventive maintenance on an aircraft. The pilot will be trained, qualified, and authorized to do the task in accordance with Air Methods' Preventive Maintenance Training Program. The pilot will document any preventive maintenance accomplished in the aircraft maintenance records in accordance with FAR 43.9 and the Air Methods' Preventive Maintenance and Servicing Training Program. A record of this training and qualification will be kept in the pilot's file with the Chief Pilot. Servicing items such as refueling, adding oil to engines and gearboxes are not considered preventive maintenance items

RISK ASSESSMENT PROGRAM

To assist in reducing incidents and accidents, Air Methods has developed and implemented an operational risk assessment program to assist pilots in identifying, assessing, and managing risks and then ensure that they are mitigated, deferred, or accepted.

Description:

The risk assessment matrices (reference page B-34), **must be utilized for each flight assignment** (each mission). **The results of the pilot's risk assessment shall be recorded on the Daily Flight Log (DFL)** in the "remarks" section with the notation "A", "B", "C", or "D" as appropriate.

Risk areas (AIRCRAFT, ENVIRONMENT, and FATIGUE) are listed on the left of the matrix. Use the lowest row applicable. For example, the pilot has an aircraft issue and a fatigue issue; the pilot would then utilize the FATIGUE row. If the pilot has an aircraft and an environment issue, the pilot would then utilize the ENVIRONMENT row.

These matrices are **not** intended to make the decision for the pilot and do not list every possible risk factor that may be encountered for a particular flight assignment, but are to be used as **a tool to assist** the pilot in identifying, assessing, and managing risks. The pilot must then decide to accept or decline the flight assignment.

These matrices must be made available to each pilot and the pilot must utilize them before making a decision to accept or decline a flight assignment. The pilot will advise the communications center of their risk assessment value by phone, in person, or by radio prior to liftoff or as soon as possible after liftoff.

| RISK ASSESSMENT MATRIX: DAY OPERATIONS | | | | |
|--|---|--|---|--|
| APPLY OPERATIONAL FACTORS | APPLICABLE WEATHER FOR FLIGHT | | | |
| | WEATHER: Well above minimums and stable. | CEILING: Within 200 ft of minimums. | VISIBILITY: Within 1 mile of minimums. | CEILING & VISIBILITY: Within 1 mile and 200 ft of minimums. |
| DAY: • NORMAL OPS | GREEN (A) | BLUE (B) | BLUE (B) | YELLOW (C) |
| AIRCRAFT: • PERFORMANCE NEAR MAX • BACK-UP AIRCRAFT • MEL ITEMS | BLUE (B) | BLUE (B) | YELLOW (C) | ORANGE (D) |
| ENVIRONMENT: • EXTREME HEAT OR COLD • HIGH WINDS • STORMS IN AREA • MOUNTAINOUS TERRAIN • UNFAMILIAR LZ/AIRSPACE • TEMPORARY BASE | BLUE (B) | BLUE (B) | YELLOW (C) | ORANGE (D) |
| FATIGUE: • LATE IN SHIFT • CONSECUTIVE SHIFTS | BLUE (B) | BLUE (B) | YELLOW (C) | ORANGE (D) |

| RISK ASSESSMENT VALUE | | |
|-----------------------|-------|------------------------------|
| COLOR | IDENT | DEFINITION |
| | A | NORMAL OPERATIONS |
| | B | CAUTION |
| | C | EXTREME CAUTION |
| | D | CRITICAL DECISION TO BE MADE |

| RISK ASSESSMENT MATRIX: NIGHT OPERATIONS | | | | |
|--|---|--|---|--|
| APPLY OPERATIONAL FACTORS | APPLICABLE WEATHER FOR FLIGHT | | | |
| | WEATHER: Well above minimums and stable. | CEILING: Within 200 ft of minimums. | VISIBILITY: Within 1 mile of minimums. | CEILING & VISIBILITY: Within 1 mile and 200 ft of minimums. |
| NIGHT: • NORMAL OPS | GREEN (A) | BLUE (B) | YELLOW (C) | ORANGE (D) |
| AIRCRAFT: • PERFORMANCE NEAR MAX • BACK-UP AIRCRAFT • MEL ITEMS | BLUE (B) | BLUE (B) | YELLOW (C) | ORANGE (D) |
| ENVIRONMENT: • EXTREME HEAT OR COLD • HIGH WINDS • STORMS IN AREA • MOUNTAINOUS TERRAIN • UNFAMILIAR LZ/AIRSPACE • TEMPORARY BASE | BLUE (B) | BLUE (B) | YELLOW (C) | ORANGE (D) |
| FATIGUE: • LATE IN SHIFT • CONSECUTIVE SHIFTS | BLUE (B) | YELLOW (C) | YELLOW (C) | ORANGE (D) |

| RISK ASSESSMENT VALUE | | |
|-----------------------|-------|------------------------------|
| COLOR | IDENT | DEFINITION |
| | A | NORMAL OPERATIONS |
| | B | CAUTION |
| | C | EXTREME CAUTION |
| | D | CRITICAL DECISION TO BE MADE |

NOTE: The pilot must also consider their (and the medical personnel/crewmembers) experience level with system enhancements (i.e. night vision goggles, autopilot, etc) when performing their risk assessment.

RUNWAY INCURSIONS

The FAA defines *runway incursion* (in part) as, "Any occurrence at an airport involving an aircraft, vehicle, person, or object on the ground that creates a collision hazard or results in a loss of separation with an aircraft taking off, intending to takeoff, landing or intending to land". It is the responsibility of each pilot (PIC or SIC) operating an Air Methods aircraft to prevent runway incursions. The following procedures, though not all inclusive, when utilized will help prevent runway incursions:

- Pilots operating aircraft without a SIC shall review airport diagrams prior to entry into the traffic pattern or prior to hover/taxi operations. Airplane pilots should have the airport diagram out for reference during all taxi operations.
- Pilots operating aircraft with an SIC will have the airport diagram out and available for reference by the pilot not flying during all taxi operations.
- Review all NOTAMs for runway/taxiway closures and construction areas.
- Request progressive taxi instructions when unsure of the taxi route.
- Turn on aircraft lights while taxiing.
- It is advisable to write down taxi instructions so as to not forget instructions and to act as a guide for reading back clearances.
- In a two pilot crew configuration, any disagreement over taxi instructions must be resolved prior to beginning the taxi operation.
- All pilots shall read back all taxi and hold short of runway instructions in the order issued by ATC. Reading back instructions in the order issued by ATC will help prevent "hearback/readback" errors. Standard phraseology will be used to facilitate clear, concise communication between the flight crew and ATC.
- While taxiing, monitor instructions to other aircraft and question ATC as soon as possible if a conflict between your and another becomes apparent.
- Prior to taking a runway for takeoff, scan the full length of the runway and approach paths for other conflicting aircraft.
- Do not hold in position for an extended period of time on an active runway without direct communication with ATC. This is especially important at night.
- Clear the active runway on rollout as quickly as possible, then wait for taxi instructions before further movement.
- When approaching to land, monitor ATC instructions to other aircraft to "taxi into position and hold" for the runway you are cleared to land on. Also be aware of other aircraft being cleared to land on the same runway you have been cleared to land on.
- At uncontrolled airports, or airports without operational control towers:
 - Follow Standard air traffic procedures. Utilize AF/Ds or other similar commercial products to determine if other than standard traffic pattern procedures are dictated for the particular airport where operations are planned.
 - Monitor CTAF or UNICOM as recommended in the AIM.
 - State the name of the airport at the beginning and end of each radio transmission.

Further guidance may be found in the Aeronautical Information Manual.

SAFETY BELTS, CHILD RESTRAINTS, AND CARRY ON BAGGAGE

[91.517]

Each required flight crewmember, occupying a station equipped with a seat belt and/or shoulder harness, shall have that seat belt and (when equipped) shoulder harness fastened at all times when at that station. The shoulder harness may be removed if it inhibits performance of the individual's required duties, except during takeoff, approach, landing, and surface operations.

Each passenger, including medical personnel, who has reached their second birthday, shall occupy an approved seat or berth with a separate safety belt properly secured about them during surface movement, takeoff, and landing.

A child who has not reached their second birthday may be held in the lap of an adult. The adult and child may not share a restraining device.

Any child seat utilized must conform to all applicable motor vehicle standards and have on it, in red letters, the following statement: "THIS RESTRAINT IS CERTIFIED FOR USE IN MOTOR VEHICLES AND AIRCRAFT." Children's seats not bearing the above statement must bear a label showing conformity with a foreign government or United Nations Standard. Children will not be placed in a booster type seat. All pilots must ensure to the extent possible that passengers and cargo (including carry-on baggage) are checked and found free of hazardous material and unauthorized weapons.

Cargo (including carry-on baggage) shall be carried in an approved rack, bin, or compartment. All cargo (including carry-on baggage) shall be secured by seat belt or approved tie down device, which will provide strength to eliminate shifting under normal anticipated flight and ground conditions.

All cargo and carry-on baggage shall be stored so:

- As to not impose loads on seats or structures which would exceed certificated load limits.
- That it is placed or covered so as to prevent injury to occupants.
- That it is located so as to not block aisles between crew and passengers, emergency or regular exits, seat belt, and no smoking signs.

SEARCH/RESCUE FLIGHT LIMITATIONS

Air Methods does not engage in search and rescue operations since its primary function is medical transportation. A search assistance operation is defined as a flight operation conducted to assist in a search. Pilots may accept requests for search assistance for the sole purpose of locating what is being searched for. Pilots will relay the position to the appropriate agency or communication center. **Under no conditions will Air Methods' pilots conduct rescue operations.**

The following operations are prohibited:

- Participation in any rescue operation.
- External load operations of any kind.
- One skid landings.
- Jumping or rappelling from the aircraft.
- Sling loading personnel or equipment with the aircraft.
- Dropping objects such as survival kits from the aircraft.
- Open doors during flight.
- Out of ground effect hovering.

These prohibited operations are not inclusive of every type of rescue. Due to the broad scope of what constitutes a rescue, it is impractical to attempt to list every possibility here. It is incumbent upon the pilot to determine that the flight operation is, in fact, not a rescue of any type. If a request for search assistance contains an element of a rescue, the pilot will not accept the flight request. If a search assistance flight in progress appears that it may involve any element of a rescue, the flight will be aborted. Search assistance requests from law enforcement agencies to help locate criminals or fugitives will not be accepted. Any operation other than normal "on scene" operations are prohibited. Pilots will maintain minimum altitude for VFR as specified in the Operations Manual. Except for takeoff and landing, the minimum airspeed for search operations is the aircraft's V_y . Pilots will fly the aircraft only and will not participate in the search effort. The medical crew or passengers such as law enforcement officers will be the primary searchers.

Pilots may accept requests for search assistance once they have determined that the request does not constitute a rescue or include any elements of a rescue operation. If the pilot has any doubt concerning the request, he or she will not accept the request or contact the base ASM or PAM for guidance. **Prior to departing on a search assistance flight, the pilot shall notify the Operational Control Center 866-676-3442 of intentions.**

Note: The Regional Aviation Director may request to be notified prior to their pilots accepting a search and assist request.

SECURING OF CARGO AND AIRCRAFT

[135.87]

The loss of the smallest items from the cabin or baggage area, such as a rag or tie-down rope, can result in the loss of a tail rotor, aircraft, life, and/or property, therefore:

- The loading and unloading of the aircraft shall be at the discretion of the pilot in command and under his/her supervision whenever possible.
- The pilot shall brief personnel on securing of cargo, emphasizing the importance of proper tie-down.
- All containers shall have lids or covers to prevent small objects from being sucked out. Lids must be securely fastened in a manner that will prevent opening in flight.
- All sharp cutting tools or objects will be secured in a manner that will prevent injury to passengers or the damage to the aircraft.
- The pilot must explain to ground crew personnel and off-loading passengers, that all light weight objects on the ground near the take-off area must be secured to prevent being blown into rotor blades or causing injury to personnel.

SHIFT CHANGE AND POST MISSION BRIEFINGS

At the change of each shift the PIC will conduct a briefing of the duty medical personnel/crewmembers and any others that might be appropriate. As a minimum, the topics discussed will be weather for the duty period, mechanical issues with the aircraft (including the medical interior and upcoming aircraft maintenance/inspections), public relations events, “third” riders (or “ride-alongs”), scheduled training, and any other events the may impact that duty period’s operation.

Post flight mission debriefings will also be completed. Items for discussion will include but not be limited to: safety issues, communications problems (with aircraft, portables, or other communications equipment), weather concerns, aircraft issues, and any other noteworthy items.

STABILIZED APPROACH CONCEPT

Pilots of both airplanes and helicopters will adhere to the stabilized approach concept which involves maintaining:

- The aircraft on the correct flight path (\pm one dot for localizer courses and $\frac{1}{2}$ scale for non-precision approaches).
- Only small changes to pitch and roll to maintain the approach.
- The aircraft is on speed (speed as briefed for fixed wing aircraft, constant power setting for helicopters).
- A stable descent rate (\pm one dot of glide slope for precision approaches and stable rate for non-precision approaches).
- A stable aircraft configuration (landing gear, flaps, etc.).
- Checklist completed.

If the approach becomes unstable at any point, a missed approach will be executed. The basic tenets of a stabilized approach are early planning, and once the approach is initiated, use of constant power settings while using pitch to maintain rates of descent or glide slope.

Stabilized approaches must be established before descending below the following altitudes:

- HAA +500 feet during VFR or visual approaches and during instrument approaches when VMC.
- HAA +500 feet or MDA (whichever is lower) when a circling maneuver is to be conducted after the instrument approach.
- HAA or HAT +1000 feet during any straight-in instrument approach conducted in IMC.

STERILE COCKPIT

[135.100]

FAR Part 135.100 prohibits any activity during a critical phase of flight which could distract any flight crewmember or interfere with the performance of their duties. It defines "critical phase" of flight as all ground operations including taxi, takeoff, landing, and all other flight operations below 10,000 feet, except cruise flight.

When medical personnel are not trained crewmembers, the Air Methods' crew coordination management philosophy values their input, especially during takeoff, landing, and scene operations. Pilots must engage the medical personnel in a continuous, diplomatic, educational effort to make them aware of the need to limit conversations on the ICS during critical phases of flight to topics related to the conduct of the flight.

When medical personnel have a patient onboard whose care required their voice interaction, the resulting conversation is essential to patient care but not to the conduct of the flight. As a result, the pilot may have to isolate the medical personnel on the ICS.

It is essential that medical personnel understand that they must limit the use of the call button during these times to urgent situations requiring immediate response from the pilot. It is essential that strict adherence to the sterile cockpit concept be maintained, i.e. the pilot will make every reasonable effort to eliminate cockpit distractions to include light from the cabin and medical intercom traffic that could result in less than full attention to operating the aircraft.

TEMPORARY FLIGHT RESTRICTIONS (TFRs)

Air Methods' pilots shall check NOTAMs so as to maintain awareness of Temporary Flight Restrictions and coordinate with the controlling agency when operating within them. Active TFRs should be noted on the Local Area Hazards Map. Additionally, the pilot will notify the Communication Center of TFR's that may impact a flight.

VOR EQUIPMENT CHECKS

[91.171]

All Air Methods' aircraft operated under IFR will receive a VOR operational check at intervals not to exceed 30 days. VFR aircraft will receive a VOR operational check every 6 months. Any method described in FAR 91.171 may be used to complete the check. A logbook entry showing completion will be made to include:

- Date completed.
- Bearing error.
- Place.
- Method(s) of compliance.
- Signature/certificate type/certificate number.

Discrepancy: 30 Day VOR check due.

Corrective action:

DATE: _____

Complied with 30 Day VOR Operational Equipment Check in accordance with the Air Methods Operation Manual and FAR 91.171. Frequency used _____, indicated bearing error of _____. VOR Equipment is within limits.

SIGNATURE: _____

CERTIFICATE # and TYPE _____

WEIGHT AND BALANCE CONTROL

[135.23, 135.185]

Determining Aircraft Operational Empty Weight (OEW):

Prior to being placed into service, it shall be determined that each Air Methods' aircraft has current weight and balance data available in the appropriate approved Aircraft Flight Manual (AFM). If the information is found to be out-dated and/or inaccurate, the aircraft will be weighed and the empty weight and CG location established. Aircraft will be weighed per the appropriate AFM or Maintenance Manual (MM) for that make and model aircraft. The weight and balance record will be kept in the approved AFM and shall be on board the aircraft during all operations.

In addition to the guidance given in the aircraft MM, the following equipment (as appropriate) shall be included in the OEW:

- Stretcher or litter
- Secondary stretcher or litter
- Full and operational ready O2 system
- Full E-bottle
- Duals removed and dual covers installed
- Other medical equipment as appropriate

FAR 135.185 requires all Air Methods' multi-engine aircraft be weighed every 36 calendar months. Aviation personnel may determine whether an aircraft complies with this regulation by checking the aircraft maintenance logbook in the aircraft. All single engine aircraft will be weighed when a major alteration has appreciably changed empty weight and CG.

Pilot-In-Command (PIC) Responsibilities:

Before takeoff, the PIC will be responsible for the proper loading of passengers (including medical personnel), carry-on baggage, and cargo in the aircraft. Items placed in the baggage compartment of helicopters shall be loaded from front to back and secured in accordance with the aircraft flight manual. The PIC shall complete the required sections of the load manifest form before takeoff, as appropriate to multi engine or single engine operations.

The PIC will utilize at least one of the following methods for computing weight and balance data:

- The PIC will use the manufacturer's supplied weight and balance data; including loading charts, graphs and supplemented by current alterations and changes; to calculate and account for all loading conditions and interior configurations as per the applicable approved aircraft flight manual and approved Preventive Maintenance Program. The calculations may be completed by a computer program, an approved plotter and graph system, or chart.

Patient/passenger weights will be determined by one or a combination of the following:

- On inter-facility flights (one hospital to another), the sending facility will obtain the patient/passenger weight.
- On trauma call flights (accident scene), the trained and experienced ground and/or medical personnel will estimate the patient/passenger weight when lifting the victim.
- If the patient/passenger is conscious and coherent, they will be asked their weight.
- In any case the pilot may use the standard average passenger weights as listed below.

CONTINUES NEXT PAGE

WEIGHT AND BALANCE CONTROL (continued)

| STANDARD AVERAGE PASSENGER WEIGHTS (passenger weights do not include carry-on baggage) | |
|---|----------|
| Average passenger weight | 189 lbs. |
| Average adult male passenger | 199 lbs. |
| Average adult female passenger | 178 lbs |
| Child (2 to 12 years) | 81 lbs |
| “Plane-side” loaded baggage | 20 lbs |

Figure 1

Removable medical equipment (bags, monitors, etc) shall be weighed every 6 months and recorded in a reliable record. The PIC shall use these weights when computing weight and balance data.

The use of “standard average weight” figures does not authorize the PIC to exceed the weight and balance limitations as outlined in the appropriate approved aircraft flight manual.

When medical personnel or passenger(s) board the aircraft, they will immediately notify the PIC of any carry-on equipment/baggage, the desired placement of each item, and the weight of each item. If the actual weight is not able to be determined, the PIC may use the “plane-side” loaded baggage weight found in Figure 1. The PIC shall adjust the weight and balance computations as required to ensure that the aircraft remains within the weight and balance limitations as outlined in the appropriate approved AFM. If the PIC determines that the carry-on items or portions of them can not be carried safely, the affected item(s) will not be carried on board the aircraft.

For multiengine aircraft, each PIC is responsible for the preparation and accuracy of a load manifest in duplicate containing information concerning the loading of the aircraft. The PIC will record the results of these computations on the Air Methods’ load manifest form (DFL). The PIC will leave a copy of this form in the aircraft until arrival at the final destination of the flight. Air Methods will keep a copy of this form on file at its respective bases for a minimum of 30 days after the completion of the flight.

WIND LIMITATIONS

Pilots shall comply with any wind limitations as listed in the appropriate aircraft flight manual.

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FLIGHT OPERATIONS – HELICOPTER SPECIFIC

[135.227]

FROST OPERATION – HELICOPTERS ONLY

Light accumulations of frost on the rotor system may be removed by means of the following procedure:

- Follow normal starting and run-up procedures.
- Shutdown the aircraft using normal procedures.
- Visually check all aircraft surfaces for evidence of frost.
- All remaining frost must be removed.
- If no frost is present, the helicopter may continue the assigned mission.

NOTE: This procedure does not apply to icing build-up of any degree.

HELICOPTER NIGHT VISION GOGGLES OPERATIONS (HNVGO)

The following procedures are applicable to all HNVGO conducted under Title 14 CFR parts 91 and 135.

HNVGO will only be conducted in aircraft with an approved Supplemental Type Certificate (STC) authorizing such operations. The RFM Supplement must be current and retained in the RFM.

Aircraft lighting:

- Only the internal aircraft lighting authorized by the STC may be utilized during HNVGO.
- External lighting: Position lights will remain on for all night operations. The aircraft external lights will not be modified, i.e. taped, painted, or an IR filter installed over the light. The anti-collision light and/or strobe light(s) may be turned off when the PIC determined that, because of operating conditions, it would be in the interest of safety to turn the lights off. A landing light, searchlight, and/or night sun will be used for all take-off and landing; blackout operations (all external lights off) are not authorized.

HNVGO are authorized within and outside of the local flying area designated for each base. Weather minimums as listed in this Manual on page BA-8 apply to all HNVGO operations. **At no time will a pilot accept a flight, under NVGs, that they would not accept for unaided flight, given weather considerations.**

Pre-mission planning; aircraft performance requirements: In addition to normal pre-mission planning, terminal and area forecasts should be obtained and analyzed with particular emphasis on temperature/dewpoint spread, cloud cover and visibility, sunset, moon phase, moonrise and moonset for all phases of flight.

During enroute phases of HNVGO no pilot will operate below 500 feet AGL. An aided high reconnaissance may be conducted at 300 feet AGL. An unaided reconnaissance may be conducted at the same altitude if it is preceded by an aided reconnaissance. During HNVGO, only takeoffs and landings are authorized below 300 feet AGL. Before conducting HNVGO below 300 feet AGL, the program must be designated to do so and the pilots and crewmembers trained per the Air Methods' HNVGO Training Program.

Abort/Go-Around Criteria: The decision to go-around should be made before descending below the obstacles or decelerating below effective translational lift. It should also be made if visual contact with the touchdown point is lost.

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HELICOPTER NIGHT VISION GOGGLES OPERATIONS (HNVGO) (cont.)

No pilot or medical crewmember shall conduct HNVGO unless:

- He/she has completed the NVG Initial Qualification Training, Re-qualification, Recurrent and/or Transition training, as appropriate, including required initial and annual flight checks, in accordance with the Air Methods Pilot Training Manual.
- Pilots shall not serve as Pilot-in-Command (including Training Captains and Check Airman), or Second-in-Command of HNVGO operations, in passenger carrying operations, unless within the preceding 90 days, he/she has logged 3 HNVGO operations as the sole manipulator of the flight controls during the period of one hour after sunset to one hour before sunrise. These HNVGO must be performed in the same category, class, and type, if a type rating is required. During these HNVGO the pilot flying must complete the following tasks:
 - For all HNVGO Limited to a Minimum Altitude of 300 feet AGL:
 - Before Takeoff – NVG Check.
 - Arrival – At Objective Area Initial Reconnaissance.
 - Arrival – Transitioning from Aided to Unaided.
 - Departure - Transitioning from Unaided to Aided.
 - HNVGO Below 300 Feet AGL, all the above maneuvers plus the following:
 - Normal Takeoff (clear area).
 - Normal Approach and Landing (clear area)
 - Confined Area Takeoff and Landing.

If a pilot has not performed and documented these tasks, the pilot will be allowed an additional 90 days to perform and document them but will not be allowed to carry passengers using NVGs at this time. If the pilot has still not performed and documented these tasks during the additional follow-on 90 days, the pilot will be required to pass an NVG proficiency check.

The above maneuvers will be in accordance with those stated in the Air Methods HNVGO Approved Training Program.

Pilots shall record flight (unaided night time and aided night time, including HNVGO operations) and duty time on the Air Methods Record of Airman Flight and Duty Time, reference Attachment B of this Manual. The flight time and duty limitations of 14 CFR Part 135.263 and 135.267 apply to all pilots conducting passenger-carrying operations.

Crew Resource Management and Crew Briefings

For HNVGO operations that are authorized below 300 feet AGL at least one other required person shall be equipped with NVGs during the landing to assist in clearing the site. The other required person, when able, will be located on the side opposite the pilot, in either the front or back compartment. The “other required person” referenced in this paragraph must be current and trained in accordance with the approved training program.

Due to the limitations of NVGs, the implementation of CRM during aided operations is paramount to safe and effective operations. Good teamwork requires positive communication between the pilot and medical crewmembers. During flight planning and crew briefings, the pilot will brief the medical crew the following:

- Type of flight; aided, unaided or both.
- Weather for the route
- Illumination
- Lunar position (moon)
- Obstacles along the route
- NVG deficiencies
- Crew experience
- Abort criteria

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HELICOPTER NIGHT VISION GOGGLES OPERATIONS (HNVGO) (cont.)

The pilot will analyze the route of flight; identify aids to navigation, visual navigation cues, potential difficulties and emergency landed areas as needed. When operating close to the ground, the medical crewmember(s) must warn the pilot anytime he/she detects an unexpected deviation from the intended airspeed or altitude. These deviations include aircraft drift, unusual attitude, excessive change in rate of closure, or any unsafe condition.

The pilot will follow the practice of "see & avoid" at all times. The crew will clear the immediate area in all directions during hovering and taxi operations and left, right and overhead before and after takeoff. The crew will use clearing turns to clear the area before making any climbs or descents. Each crewmember is responsible for clearing within their field of view.

Directing Assistance: The pilot will direct the crewmembers when assistance when is needed. Crewmembers will announce when they divert their attention from outside the aircraft to inside the aircraft for more than a few seconds.

Announcing Decisions: Crewmembers will announce decisions anytime actions deviate from the previously briefed procedures or an action of one crewmember affects the performance or responsibilities of another crewmember.

Offering Assistance: Crewmembers will offer assistance when information or assistance is requested, when the pilot deviates from normal or expected actions, and anytime a crewmember sees and/or recognizes anything that could pose a hazard to flight.

Acknowledging Actions: All announcements or directives should be acknowledged by the intended receiver by a short and positive response indicating the message has being received.

Standard or Common Terminology: Using common terms and standard phraseology in the aircraft minimizes confusion and reduces the likelihood of misunderstanding. Use explicit terms and phrases. Use terms that give object, direction and distance (e.g. "tree on the left side", "traffic, 2 o'clock high, 1 mile"). Use prominent terrain features instead of headings (e.g. " Turn left towards the hill at your 2 o'clock position", "straight ahead to the pond").

Example of terms that describe motion:

- Fast
- Slow
- Stop
- Turn
- Hold

Example of terms that describe a direction:

- Forward
- Back
- Right
- Left
- Up
- Down

In the event of an Inadvertent IMC situation pilots will:

The priority and most important aspect of an IIMC procedure are to maintain aircraft control. Positive control of the aircraft with reference to instruments must take priority over all other duties.

- Attitude (Level)
- Heading (Turn only to avoid known obstacles)
- Power (Adjust to climb power)
- Airspeed (Adjust to climb airspeed)

Climb to the minimum safe altitude (MSA) to clear all obstacles in the area.

Degoggle when safely able.

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HELICOPTER NIGHT VISION GOGGLES OPERATIONS (HNVGO) (cont.)

Make all turns no greater than standard rate.

Contact appropriate Approach Control/Center and Declare an Emergency. Squawk 7700 when able. Report location, altitude, heading, fuel status, and number of persons on board. State that you are inadvertent IMC and request assistance.

The following procedures shall be utilized in following order of preference:

- Radar vectors to VMC conditions.
- Vectors to the closest approach.

Complete the approach procedure to landing or entering VMC conditions. Maintain VMC and land.

Maintenance Requirements:

The helicopter will not be used for HNVGO unless it is maintained in accordance with the helicopter Instructions for Continued Airworthiness and/or AAIP as appropriate. The required NVG preflight checks will be completed prior to HNVGO in accordance with manuals TMF4949-10 Section IV and M949 Manual No. D205689-073 Table 2-2. Any NVG that does not pass the required checks is prohibited for use in HNVGO.

Each NVG device shall have a maintenance log, which will be reviewed prior to flight and completed upon completion of each HNVGO. The following will be recorded on this log:

- Unit S/N
- Last and next inspection dates
- Date of use
- Pilot/crewmember name
- Pilot certificate number (pilots only)
- Night (how much time the NVG was operated on this date)
- Cumulative (a running total of operation for that device)
- Remarks (irregularities and discrepancies)

The NVG six month maintenance inspection record will be kept with the NVG maintenance log.

The Program Aviation Manager or Aviation Service Manager at each program utilizing NVG's or has NVG's assigned will be responsible for maintaining the NVG's and to ensure the required inspections are being accomplished. Additionally, the Program Aviation Manager or Aviation Service Manager will input and keep updated the "NVG List" on the "135 Aviation Ops-Air Methods" page of the company internet based portal the make and model, serial number, and the date of the last 180 day inspection of each set of goggle being utilized or assigned to the program.

HELIPORT/LANDING ZONE DIAGRAMS

Each helicopter base will develop, and keep current, books or folders containing information on each heliport or pre-designated landing zone (LZ) from which pilots might reasonably be expected to operate. One book will be maintained as a flight planning device at the base, the other will be maintained in each assigned aircraft.

As a minimum, the base copy of these books or folders will contain a graphic or textual depiction of the heliport/LZ, the municipality and hospital name or pre-designated LZ identifier, the heliport/LZ size, lighting, and obstructions. Other recommended information may include distance and direction from the base location, suggested fuel load for one way or round trip, and closest fuel location.

As a minimum, the aircraft copy of these books or folders will contain the same information as listed above, however the graphic depiction may be replaced by a textual description of the heliport/LZ. Use of these books or folders does not relieve the pilot of the requirement to conduct a reconnaissance to verify the landing area condition and obstructions.

LAHSO (Land and Hold Short Operations) – HELICOPTERS

LAND AND HOLD SHORT: Is the practice of conducting simultaneous operations on two intersecting runways. LAHSO includes landing operations to hold short of an intersecting runway, taxiway, predetermined point, or an approach or departure path.

Air Methods' helicopters are not authorized to conduct Land and Hold Short Operations. It is important for the pilot to know the proper procedures to utilize to not accept a LAHSO procedure.

Active LAHSO operations for a particular airport will be announced on the airport ATIS. This announcement could contain the following information: LAHSO in effect, or Expect landing on Runway 22 to hold short of Runway 27.

When ATIS is acknowledged, PIC will advise ATC that LAHSO cannot be accepted.

NOTE: Refer to the Aeronautical Information Manual, Paragraph 4-3-11.

LANDING ZONE LIMITATIONS

The landing zone will normally be at least twice the overall length and width of the helicopter to be used, and have a reasonable approach and departure path; which will not require exceeding the performance capability of the helicopter used. Landing zones may have any shape.

As a minimum, obstructions shall be cleared by 30 feet during approach and departure. When on the ground there will be a minimum of 15 feet clearance from obstructions.

The pilot must also be able to determine wind direction from a lighted indicator, two-way voice communications, or other reliable means. Downwind approaches and takeoffs shall not be attempted with a tail-wind component exceeding the aircraft manufacturer's flight limitation.

Rates of descent shall be kept below 200 feet per minute when less than 300 feet above the landing surface. Steep approach angles with a rate of descent greater than 200 feet per minute shall be avoided.

For night use, all landing sites (hospital or scene) must be marked by flares, vehicle lights, or by other suitable ground based light sources which will provide adequate illumination of the site and provide adequate marking for obstructions which may create a potential hazard during approach, hover, taxi, and departure operations.

LANDING ZONE SAFETY AND CROWD CONTROL

Landing zones at scenes must be secure prior to commencing an approach. Confirmation of a secured landing zone can be accomplished via two-way radio communication with ground personnel. If two-way radio communication is not available, the pilot shall visually check for landing zone security during the high reconnaissance.

To maintain a safe environment when operating into a landing zone, **one of the following procedures will be utilized:**

- Aircraft will be shutdown. At anytime when the security of the scene is in question, and/or no positive crowd control is actively in place, one crew member shall remain in the vicinity of the aircraft and provide scene security until the pilot shuts down the aircraft.
- Aircraft power will be reduced to ground idle or a reduced power setting as specified in the Aircraft Flight Manual. Attitude / Auto Trim mode shall be off and SAS mode selected if appropriate. Controls will be secured in one of the following manners, positively locked, force trim on or frictioned as not to move. The pilot will get out of the aircraft and guard the area around the aircraft. The pilot shall stay within the rotor diameter of the aircraft.
- Aircraft power will be reduced to ground idle or a reduced power setting as specified in the Aircraft Flight Manual, pilot will stay in seat in cockpit, and a trained crewmember will guard the area around the aircraft.
- Aircraft power will be reduced to ground idle or a reduced power setting as specified in the Aircraft Flight Manual, pilot will stay in seat in cockpit, and a trained crewmember will brief a first responder, such as a law enforcement officer or fireman. After being briefed the person briefed will ensure that no one approaches the aircraft without the knowledge of the pilot. The contents of the briefing that the crewmember will give to the appropriate first responder is as follows:
 - Stay a least 50 feet from aircraft.
 - Do not allow anyone to approach the aircraft without permission from the pilot or a crewmember.
 - Anyone that approaches the aircraft must be accompanied by a crewmember.
 - Crew will assign personnel to help carry the stretcher to the aircraft.
 - Remember to exit in the same direction that you approached the aircraft.

Landing zone debris considerations:

- Approaches will be made to the ground whenever possible.
- Avoid hovering at the scene.
- Takeoffs should be made directly from the ground.

A tail rotor guard may be utilized; this individual will be briefed by the PIC or properly trained medical personnel/crewmembers. However, the PIC retains responsibility for safety around the aircraft, this responsibility cannot be delegated.

LOADING AND UNLOADING PATIENT/PASSENGERS – HELICOPTER OPERATIONS

The loading or unloading of passengers or patients while the rotors are turning is only allowed if the pilot and/or properly trained medical person is outside the helicopter to guide and direct anyone who approaches the aircraft. Ground personnel will not come beneath the rotor disc until directed to do so by the Pilot in Command. The pilot and/or properly trained medical person must be constantly alert to prevent anyone from coming near the tail rotor. The pilot should only be used if flight controls can be locked in place or frictioned so as not to move. Whenever practical, the loading and unloading of passengers or patients will be done with rotors not in motion.

Patient condition and a consensus of the pilot and medical personnel/crewmembers will determine if the helicopter may be enplaned/deplaned with rotors turning. In all cases, the PIC determines whether enplaning/deplaning with rotor turning will or will not be accomplished.

Whenever the helicopter has landed to pick up a passenger(s) or patient(s) and when practical, the pilot shall position the aircraft so that the tail rotor is away from the area that people are expected to approach the helicopter. For aircraft equipped with a rotor system that has a forward tilt, or that has a low clearance at the front; these aircraft shall be positioned so that all personnel movement will be to or from the 3 or 9 o'clock positions.

The Helicopter may be enplaned or deplaned with rotors turning provided:

- The rotor tip path plane is leveled.
- IV poles and other equipment shall be kept at head height or lower.
- The controls are secure.
- The autopilot is off. (If autopilot is installed)
- The force trim is on. (If force trim is installed)
- Engine RPM is at ground idle.
- The pilot will use appropriate hand signals when directing ground personnel to approach the aircraft.

The following terminology shall be utilized:

- **Hot offload/offloading**: Indicates that the helicopter will be deplaned with engines running and rotors turning.
- **Hot onload/loading**: Indicates that the helicopter will be enplaned with engines running and rotor turning.
 - It is recommended that the pilot not assist in physically loading the patient.
- **Cold offload/offloading**: Indicates that the helicopter will be deplaned with engines shutdown and rotors completely stopped.
- **Cold onload/loading**: Indicates that the helicopter will be enplaned with engines shutdown and rotor completely stopped.

MINIMUM ALTITUDE FOR VFR

[135.203]

During all enroute operations, pilots are encouraged to be mindful of the FAA/HAI “Fly Neighborly” program (more information may be found at www.rotor.com). Every effort should be made to fly at altitudes that are not only safe, but also minimize the risk of noise complaints. The minimum altitudes listed below are not intended for routine use.

At all times, with the exception of takeoffs and landings, Air Methods’ pilots will operate at an altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.

While enroute, Air Methods’ helicopter pilots will maintain at least the following minimum altitudes:

- DAY: 300 feet AGL.
- NIGHT: 500 feet AGL.

In all cases, aircraft will not be operated so as to pose a danger to persons or property on the surface.

OPERATIONS ON OR NEAR FROZEN WATERWAYS

If after evaluating possible landing zones, the pilot finds that an ice landing operation best meets the mission requirements, then Ice Landing Operations are authorized.

The following procedures will be utilized when conducting Ice Landing Operations:

- Ice thickness should be 16 inches minimum. This should be verified by a reliable source. (16 inches provides support for 32,000 lbs.)
- Plan the touchdown point at least 100 yards from the shore of the lake.
- Plan the touchdown point at least 100 yards measured perpendicularly from river, stream, or spring inlets/outlets.
- Maintaining 100% NR while on the ice will minimize the weight being supported by the landing gear. At 100% NR, it is also easier to respond rapidly to ice instability. If the pilot elects to load and off-load the helicopter at 100% NR, extra vigilance must be exercised, since the pilot will remain at the controls. A full crew briefing of the operation will be accomplished prior to loading or off-loading at 100% NR.
- Ice landings will not be attempted on rivers, streams, or flowages.

SCENE AND HOSPITAL COMMUNICATIONS PROCEDURES

This procedure applies to operations to or from hospitals and scenes where no established communications procedure exists. Examples of established communications procedures are CTAF, Class B, C, and D airspace or hospitals that have established procedures for operations at their facility.

In the event that an area doesn’t have a designated communications frequency or the frequency is unknown, the pilot will announce in the blind his or her intentions on 123.025. If the frequency is known, the pilot will make the announcements on that frequency.

Pilots will announce their intentions for the following operations when no established communications procedure exists

- Approach
- At five miles from landing
- At one mile from landing
- Upon landing
- Departure
- Upon liftoff
- At one mile from departure
- At five miles from departure

SCENE FLIGHT OPERATIONS

Pilots will not accept flights unless they are reasonably certain of completing the flight safely under VFR conditions (except bases approved for IFR operations) based on all weather information available to the pilot at the time of departure. If deteriorating weather is encountered enroute, comply with the procedures for “Deteriorating Weather Conditions Enroute“ on page B-11.

Prior to landing, if terrain, airspace, or environmental conditions allow, a 360° high reconnaissance will be flown at a hospital or scene. If terrain, airspace, or environmental conditions restrict the 360° high reconnaissance the pilot will use the appropriate means to ensure a safe landing area. An overhead approach out of the high reconnaissance can be performed.

If the aircraft is shutdown at a scene, the pilot shall visually check and confirm the location and height of all obstacles. When the aircraft is not shutdown, the pilot will still be responsible for verifying the location and height of all obstacles that could have an effect on the planned departure path.

The pilot will consider safety recommendations from the medical and ground personnel. Any other safety precautions deemed necessary should be followed.

During the initial portion of the departure, a power check will be made to determine if a 10% power margin below maximum takeoff power or HOGE power exist. If this margin does not exist, aircraft load (fuel, equipment, passengers, etc) will be reduced to meet this requirement.

For all non-airport departures, the pilot shall maintain an appropriate departure profile that will ensure all obstacles are cleared by a minimum of 30 feet. After departure and clear of the obstacles the pilot will accelerate to and maintain best rate of climb speed. A turn on course will not be made until the aircraft has climbed (at a minimum) to 300 feet AGL for day operations and 500 feet AGL for night operations unless rising terrain, obstacles, or local procedures dictate.

SPECIAL VISUAL FLIGHT RULES (SVFR)

Pilots operating in controlled airspace designated to the surface may request a SVFR clearance for operations conducted beneath a ceiling reported as being less than 1000 feet.

Air Methods’ pilots will utilize the following minimum cloud and visibility requirements for SVFR operations:

- DAY: 500 foot ceiling and 1 mile visibility.
- NIGHT: 800 foot ceiling and 2 miles visibility.

VFR WEATHER MINIMUMS – UNCONTROLLED AIRSPACE

In uncontrolled airspace (Class G), the following weather minimums apply for mountainous, non-mountainous, low-light and high-light conditions:

| CONDITIONS | CEILING | VISIBILITY |
|-----------------------|----------------|-------------------|
| DAY – Local Area | 800 feet | 2 miles |
| DAY – Cross Country | 800 feet | 3 miles |
| NIGHT – Local Area | 1000 feet | 3 miles |
| NIGHT – Cross Country | 1000 feet | 5 miles |

Additionally, VFR helicopter pilots will maintain visual surface reference during the day and visual surface light reference at night.

Any flight outside a local area is considered cross-country. The defined local area for each base of operations can be found in Operations Specifications Para.A021. If a base does not have a defined local area in Operations Specifications Para.A021 only cross country minimums are authorized.

VFR WEATHER MINIMUMS – IFR CERTIFIED AIRCRAFT AND CREWS

In uncontrolled airspace (Class G), the following minimums apply if both the aircraft and pilot are authorized to conduct IFR operations under Part H of the Operations Specifications, and the aircraft is operated using the required IFR current and qualified crew, and the stabilization and/or flight control system(s) or system modes required for IFR flight, as appropriate to the flight operating environment. The weather minimums shown on the below chart are only allowed when operating in an area defined as a “local area” in Operations Specifications Paragraph A021. At any other time IFR certified aircraft and crews will utilize the “VFR Weather Minimums-Uncontrolled Airspace” when operating VFR in uncontrolled airspace.

| CONDITIONS | CEILING | VISIBILITY |
|--------------------|----------------|-------------------|
| DAY – Local Area | 700 feet | 2 miles |
| NIGHT – Local Area | 800 feet | 3 miles |

NOTE: All pilots utilizing areas classified as local areas must pass an examination within the previous 12 months to ensure that they are appropriately familiar with the local area to allow for the utilization of the lower VFR operating minima. In cases where there are multiple designated local areas established for a base of operations, the pilot shall be examined on all areas utilized. Pilots who have not passed the local area examination within the previous 12 months must use only the cross country minima. Reference: Operations Specifications Para. A021.

FLIGHT OPERATIONS – FIXED-WING SPECIFIC

AIRPORT SURFACE OPERATION

For single-pilot operations, it is particularly important for the pilot's full attention to remain on controlling the airplane during all movement on the airport surface. The checklists and associated flows for single-pilot airplanes will be designed so that none of them need be done while the aircraft is in motion. For some checklists, such as After Landing, for example, stopping the aircraft may at times offer only minimal total risk reduction. On these occasions, during extended taxi intervals on wide runways or taxiways, in good visibility, a pilot can accomplish some flow items while the aircraft is in motion. These items should be limited to those that can be accomplished with little or no looking inside the cockpit.

Two-pilot operations have additional options. Two-pilot crews can safely conduct flows and checks during aircraft surface movement using one of the following techniques, whenever a checklist or associated flow pattern requires the PF to look inside the cockpit to locate a particular switch or control:

- Ask the PNF to set the switches or controls required by the flow pattern.
- Transfer control of the aircraft to the PNF while the PF accomplishes a necessary flow.
- Request the PNF to delay accomplishment of the checklist until the aircraft has been moved to a position where one of the above three tactics can be adopted.

COLD WEATHER/GROUND ICING OPERATION

[135.227]

It will be the responsibility of the Pilot in Command to determine that the following procedures and checks are accomplished.

1. Preflight Planning.

- Check conditions at departure, destination and alternate airports for depth of snow, ice, slush, breaking action and forecast conditions at ETA.
- Check weather for icing conditions, freezing level, surface winds and general weather information. Determine if ground icing conditions exist.
- Consider the use of engine warmers, preheaters and auxiliary power units before or for engine start.

2. Preflight

- Clear aircraft of ice, frost, or snow by use of mechanical methods, heated hangar and anti-ice/deice fluids.
- Check all anti-ice and deice equipment for proper operation.

3. Before Takeoff

- Check for proper operation of cabin heater, defroster. Adjust as required.
- If ground icing conditions exist, conduct the appropriate pre-takeoff contamination check specific to aircraft type listed in paragraph 4. The check must be completed within 5 minutes prior to beginning takeoff.

4. KingAir/PC-12 Series Pretakeoff Contamination Check

- From the cockpit visually check the following areas and ensure that they are clear of contamination:
 - Upper surface and leading edge of wing and horizontal tail.
 - Engine inlets and nacelles.
 - Windshield and windshield wipers.

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COLD WEATHER/GROUND ICING OPERATION – FIXED WING AIRCRAFT ONLY (Cont.)

NOTE: Hold-over times are not applicable because Air Methods does not have an FAA approved Deicing Program.

5. Pilot actions in the event the airplane does not meet the “clean aircraft” concept following a pre-takeoff contamination check.

- Return to the ramp or FBO for deicing using the following methods:
 - Mechanical methods
 - Heated hangar
 - Deicing/anti-icing fluids

6. En route

- Monitor temperature and flight conditions to determine if icing is likely (temperature freezing or below and visible moisture in the air).
- Coordinate with ATC for best altitude to avoid ice.

7. Terminal

- Ascertain the runway condition including the braking action expected if available.
- Determine that sufficient runway length is available in regard to braking action expected.
- Do not operate from a runway that reports braking action as Nil.
- If not reasonably certain a safe landing can be accomplished select another runway or airport.

8. Post Flight (Away from home base)

- The use of hangars on the road is encouraged if actual or forecasted conditions exist that may adversely affect the “clean aircraft concept” for departure. These conditions may include but are not necessary limited to snow, blowing snow, ice, freezing rain, or extreme cold.

9. General Instructions

- Operation into areas of known or forecast severe icing is prohibited.
- Operations into areas of known or forecast light to moderate icing are permissible providing the ice protection equipment listed in FAR 135.227 is installed and properly operating.

LAHSO (Land and Hold Short Operations)

Land and Hold Short Operations began as simultaneous operations on intersecting runways (SOIR) in 1968. It was a technique to increase airport capacity without compromising safety. Available runways were then, as they are now, the primary restriction to the capacity of the National Airspace System.

LAHSO is an extension of the SOIR program. It includes landing operations to hold short of intersecting taxiways and landing operations to hold short of designated points on the runway, in addition to SOIRs landings to hold short of intersections with other runways.

The FAA, in response to recent recommendations by the NTSB, has restricted air carrier operations (FAR 121 and 135) from accepting LAHASO clearances until those operators develop and receive FAA approval for specific LAHSO procedures and training programs.

Performance: Landing Distance Information

Using the performance data in the appropriate POH/AFM, select the temperature and airport elevation closest to, but greater than, existing conditions at the landing airport. Use the zero wind (0 KTS) numbers when the reported wind yields a headwind component greater than or equal to zero.

LAHSO (Land and Hold Short Operations) (Cont.)

The following procedures and the associated training module will enable pilots to quickly and accurately determine whether aircraft performance, existing weather, and runway conditions permit compliance with a particular LAHSO clearance. The procedures ensure that the LAHSO clearance may be carried out safely and with adequate performance margin.

Planning: Available Landing Distance (ALD) Measured Distance

Determine from the AFD whether the destination airport has a designated LAHSO runway operation. If it does, determine the ALD for the runway most likely in use at the ETA and other possible runways.

Add 1000 feet to the indicated landing distance. A LAHSO clearance may be accepted if the ALD is greater than the resulting distance.

Pilots should be aware of the associated conditions published with the POH/AFM landing performance charts. Sloping runways or faster than published IAS on final will affect landing performance in ways not always specifically described. Pilots should pay special attention to braking action and other runway surface condition reports in order to detect factors that may lengthen the landing distance.

LAHSO clearances may be accepted when wake turbulence considerations demand a long landing. Pilots will determine the available landing distance between the modified touchdown point and the hold short point.

Limitations

- LAHSO clearances may not be accepted when a tailwind exists.
- LAHSO clearances may be accepted only on dry runways.
- LAHSO clearances may not be accepted to wet or icy runways.
- LAHSO clearances may not be accepted to a runway that does not have visual or electronic vertical guidance.
- LAHSO clearances may not be accepted when Windshear has been reported within 20 minutes of the time a landing clearance is issued.
- LAHSO clearances may not be accepted when weather conditions dictate a final approach speed greater than VREF (for actual landing weight) plus 10 knots.
- LAHSO clearances may not be accepted when less than full flaps are to be used for landing.

Airports with LAHSO

The Airport/Facility Directory contains a dedicated section (near the back) which lists airports where LAHSO exists. This section lists the ALD for each LAHSO landing runway. An asterisk following the landing distance indicates the distance from the landing threshold to some combination of hold-short markings, lights, and signs. No asterisk indicates distances measured from the landing threshold to the closest pavement intersection with the hold short runway.

LOADING AND UNLOADING PATIENT/PASSENGERS – FIXED WING OPERATIONS

The PIC will ensure that the engines are shutdown and propellers stopped before allowing passengers/patients or medical personnel/crewmembers to enter or leave the airplane.

The pilot is responsible for managing and directing the loading/unloading process. In single pilot operations, the pilot will determine whether to assist from inside or outside of the airplane. Among other things, the pilot will consider his or her ability to direct the operation and may consider any patient concerns that medical personnel may have. Although the patient's medical concerns are import, the pilot's first responsibility during the loading process, is to ensure the safety of those involved and of the airplane.

OPERATIONS FROM UNIMPROVED AIRPORTS

In general, pilots should choose the best airport for the mission at hand. There are many possible criteria for establishing the suitability of an airport. The first two, which are inviolate, are safety and legality. Neither medical necessity nor enhancement of efficiency can override these two considerations.

Some considerations for determining an airport's suitability are its location relative to high terrain and other obstacles, runway size, runway surface, lighting, radio approach aids and instrument approach procedures. Pilots must not allow proximity to the patient to outweigh the need to maintain safety and legality.

In remote areas, the only airport close enough to meet patient care requirements may be one without a paved runway. This is undesirable, since the condition of the surface is more difficult for the pilot to determine. Grass may be longer than it appears from traffic pattern altitude and it may conceal gullies, holes, or other irregularities that might damage landing gear or propellers. Gravel runways increase the possibility of FOD to turbine engines and of stones being thrown against or through aircraft skin. Airplane operations from unpaved landing areas are not prohibited, as long as they are not contrary to any other guidance in this Manual, Operations Specifications, or FARs. Such operations must also comply with all sections of the appropriate POH or AFM, with special attention to Limitations and Performance sections.

The following are areas of particular concern for operations from unpaved airports, and practices that can mitigate the associated risk of these operations.

Pilots shall derive takeoff and landing performance figures used to determine unimproved airport suitability from the POH or AFM performance charts. To be considered suitable, an unimproved runway/landing area must be at least as long as the longer of the following two distances:

- 1.5 times the all-engine takeoff distance, ground roll only; or
- 1.5 times the normal flap-up, no reverse landing distance.

Braking action may be substantially degraded if the runway surface is other than paved and dry. This may occur with loose gravel or with grass wet with rain or even just early morning dew. POH or AFM data for accelerate-stop distance is often predicated on operation from a runway that is paved, level, and dry. Landing distance data assumes the same conditions, along with maximum braking. Crews considering an operation from an unimproved runway must examine carefully the associated conditions on performance charts and search for any published distance increase factors for degraded surface conditions.

An airport with no hard-surfaced runway is unlikely to be fenced. Combined with infrequency of use, this increases the likelihood of livestock or other large animals being on the landing area. When possible, pilots should request that ambulance crews or other public safety personnel drive the runway/landing area, using lights and sirens to haze animals away from the runway environment.

A gravel runway that is firm during dry conditions may become soft after spring melting or following periods of precipitation. Pilots should expect the surface to be more variable than a paved one. Even when the runway/landing area has been constructed in a manner to reduce these effects, off-runway movement and parking areas may not be as well prepared and should be used with caution.

An unimproved airport is often without lighting. Crews need to be aware of the requirements of FAR 135.229. The runway or landing area must be marked with boundary or runway marker lights. Vehicle lights at the runway ends are not sufficient. Air Methods has no approval to use flare pots or lanterns for night illumination of runway/landing areas. After landing on an unlighted runway near the end of the day, a pilot may want to consider making a special arrangement with the medical personnel/crewmembers if they cannot return with the patient in time to depart before dark. This would probably involve repositioning to a lighted airport.

OPERATIONS FROM UNIMPROVED AIRPORTS (cont.)

As with all flights, the pilots need to gather all information required to conduct the proposed operation safely. Each base can compile a list of contacts, including airport managers or other people who live near the airport and could provide preflight information on airport conditions. Law enforcement, fire, or EMS personnel may be instructed on how to make such observations. Pilots can ensure the quality of information obtained from non-aviation personnel by asking specific questions that elicit quantitative, rather than qualitative answers. In any case, pilots need to remember that information from non-aviation personnel may be distorted by the sources' lack of familiarity with aviation concerns and by a high level of commitment to complete the mission. Pilots must, therefore, regard such information as general in nature, only, and verify it with more reliable sources whenever possible.

Entering the traffic pattern on an upwind leg abeam the runway will give more time to detect visually any surface problems. If necessary, this can be augmented with a low pass down or immediately adjacent to the runway/landing area. Pilots will comply with the minimum altitude requirement of 91.119 during this operation. The pilot will also employ the practices of the circling maneuver (as delineated in the Training Program); in order to ensure maintenance of safe altitude and airspeed while maneuvering clear of obstacles and traffic.

When contemplating an operation to an unimproved airport for which a base has no information, a pilot can conduct an advanced ground inspection of that airport. This can precede a PR or training mission. In some cases, the Aviation Services Manager or other management personnel may want to specify that each pilot must receive training at a particular unimproved airport before flying a mission there.

Aviation Service Managers should consider seasonal inspections of anticipated unimproved airports. At a minimum, they should evaluate snow depth and mud conditions during winter months. In spring/summer months, they should initiate surveys for mud, ruts, potholes, and grass length.

In order to reduce the chance of FOD to turbine engines, propeller blade erosion or aircraft skin damage, crews should avoid static run-ups, or systems checks, on unpaved surfaces. For similar reasons, pilots should consider when runway length is sufficient. When available, and when aircraft performance allows it and if the POH or AFM permits it, pilots should deploy ice vanes or inertial separators for ground operations, takeoff and landing, in order to reduce further risk of FOD. Pilots should use propeller reversing sparingly.

Instructors will review soft field takeoff and landing procedures during training of pilots assigned to bases where use of unpaved runway/landing surfaces is likely.

SPECIAL VISUAL FLIGHT RULES (SVFR)

Airplane pilots may conduct SVFR operations in conditions lower than those contained in FAR 91.155, subject to the following requirements and weather minimums:

- Pilots must conduct SVFR operations below 10,000 feet MSL.
- A pilot must receive an ATC clearance before conducting an SVFR operation.
 - Note, however, that the SVFR clearance is effective only within the airspace contained by the upward extension of the lateral boundaries of the controlled airspace designated to the surface for an airport. After an aircraft leaves the Class B, C, D, or E surface area, ATC provides no separation and the flight must observe the visibility and cloud requirements of 91.155.
- Pilots must conduct flight under SVFR clear of clouds and with a minimum flight visibility of one statute mile. For takeoff and landing, reported ground visibility must be at least one statute mile.
- From sunset to sunrise, airplane operations under SVFR require the airplane and pilot to be equipped and qualified for flight under IFR.

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