

SECTION B – FLIGHT OPERATIONS

POST ACCIDENT/INCIDENT PLAN (PAIP) (cont.)

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 or Incident. The 24 hour contact number for the Operational Control Center is (800) 555-1111. 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.
- Procedures to alert program security and public relations personnel, if necessary.
- Procedures to request assistance from other law enforcement and 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 base 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. A real PAIP will qualify as the test that is required in this section.

PREFLIGHT PREPARATION

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, 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.

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PREFLIGHT PREPARATION (cont.)

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-6).

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.

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-27), **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.

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.
- **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.

It is not recommended that the pilot assist in physically loading the patient.

MINIMUM ALTITUDE FOR VFR

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 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-9.

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, 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.

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.