Flightfax

ARMY AVIATION RISK-MANAGEMENT INFORMATION

Number 58 August 2017

When conducting aviation planning and risk assessments, many factors are in place to ensure the mitigation of potential risks, prior to the aircrew lifting off the ground. The primary base for this premise is the established three-step mission approval process. When a crew heads out to their aircraft, a systematic review of the mission is completed and the potential risks addressed. What happens after takeoff is what the crew deals with in a dynamic fashion to changes in the plan.

Several factors can change a plan. Weather changes can occur that require deviations from the flight route and planned parameters. Instead of flying above the ridgelines at 1000 feet AGL you are now ducking under lower-than-expected ceilings and operating more in the terrain flight mode. This scenario brings new hazards into play such as wires and increased power requirements, none of which were in the original plan. The crew and/or the flight should initiate in-flight mission planning to adapt to the changing environment. An individual aircraft crew, in conjunction with the flight air mission commander (AMC), should chart new courses of action to complete the mission in the safest manner. At this point, while changing the plan, is often where the start of a mishap sequence begins. Just as the flight planning changed en route, so must the accompanying risk assessment. A less-experienced crew placed to lead the formation and gain experience may not be the crew to lead in making dynamic route changes to circumnavigate through unknown and unplanned areas or low-weather conditions. It is important to maintain the standards established in the mission brief and approved by the risk approval authority. Those standards were set based on the planned mission, selected aircrews and anticipated risk. Remember, when working in-flight changes to a plan, it is vital to keep the briefed parameters in place and reassess the risk level associated with the changes.

Sometimes it is not as dramatic as scud running. The briefed loads for an insertion could suddenly change (usually an increase) when you arrive at the PZ. Or the environmental conditions may have changed and it is warmer than what was initially planned. All of these factors are now a performance planning math problem; increased weight and temperature will decrease your safety margins. How high is that LZ? What were the winds and landing direction again?

This issue of Flightfax touches some of the aspects associated with performance planning. The Blast from the Past discusses settling with power and there are some archived findings associated with performance planning. ■

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The JAGIC Broken Arrow

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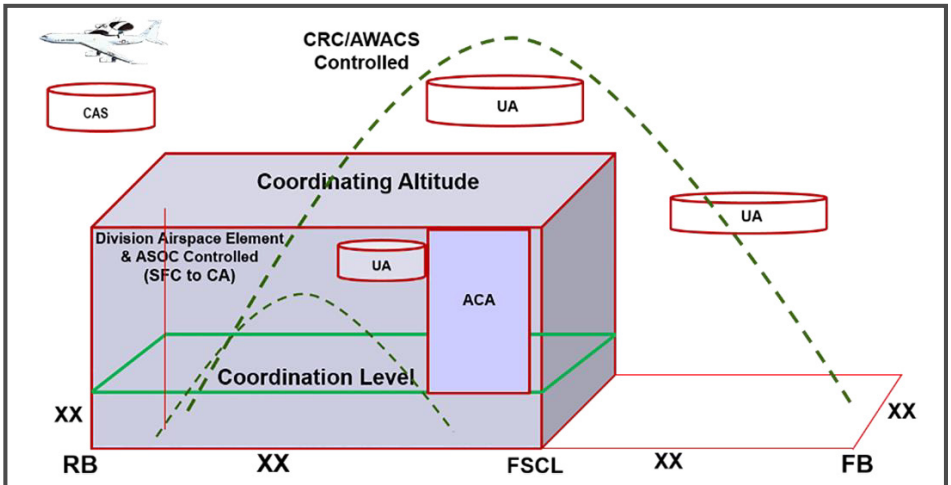
Do you remember the scene from "We Were Soldiers" when LTC Hal Moore (played by Mel Gibson) called for a "Broken Arrow" after his battalion was being overrun by the enemy? Moore's young forward air controller (FAC) coordinated with all available aircraft to attack the enemy with bombs and machine gun fire. He separated the aircraft by altitude, stacking them on top of each other above the battlefield. When he was ready, the FAC provided grid coordinates for the pilots to direct their fires. Do you remember the part when the FAC directed air support that inadvertently killed friendly forces? Could this incident have been avoided? What if there were a JAGIC available? What would have been the JAGIC's role in the Battle of Ia Drang?

"The Joint Air Ground Integration Center (JAGIC) integrates an air support operations center (ASOC) and tactical air control parties (TACPs) with division fires, airspace, air and missile defense (AMD), and aviation personnel to enable the simultaneous execution of surface-to-surface fires, aerial delivered fires and aviation maneuver" (JAGIC Handbook, 2017). The JAGIC is a collection of subject matter experts (SMEs) executing preplanned and immediate operations. The primary objective of the JAGIC is to conduct and respond to real-time missions and ensure they are executed while mitigating the risk of fratricide.

Who are the SMEs in the JAGIC?

On the Army side, there are representatives from the fires elements. Other interested parties could include legal, intelligence, and special operations forces. The U.S. Air Force (USAF) provides an ASOC and TACP in direct support of the division. The Airmen within the ASOC are responsible for the coordination and control of air component assets operating short of the fire support coordination line (FSCL). TACPs are the single points of direct USAF interaction with the supported ground commander's fires cells and airspace elements by assisting in the planning and coordinating of airspace needed to integrate air-ground operations. This collection of Soldiers and Airmen allow the JAGIC to execute operations within the division-assigned airspace.



ACA	airspace coordination area	FB	forward boundary
ASOC	air support operations center	FSCL	fire support coordination line
CA	coordinating altitude	RB	rear boundary
CAS	close air support holding area (ROZ)	ROZ	restricted operating zone
CRC/AWA/ACS	control and reporting center/airborne warning and control center	SFC	surface
		UA	unmanned aircraft (ROZ)

NOTE: A ROZ is not an airspace coordinating measure (ACM) or fire support coordination measure (FSCM); it is a mapped usage that includes 15 different ACMs reserved for specific purposes.

(U/FOUO) Figure 2-1. Airspace control authority delegated airspace (division-assigned airspace) established by division planning. (Mission Command Training Program workshop briefing)

What do I need to do in order to get my JAGIC started?

Simply put … a plan. Now keep in mind, the JAGIC is a center that executes; very little planning is conducted once the JAGIC is operational. Prior to the mission, a well-organized plan involving all of the primary players in a JAGIC must be accomplished. This gathering of airspace users, known as the airspace control working group, helps formulate a unit airspace plan that takes into consideration the many operations that will occur within the airspace. It is imperative that all applicable users participate in this working group to ensure the airspace required is available. When considering artillery, fixed-wing, rotary-wing, unmanned aircraft, and AMD, the airspace below the coordinating altitude from the division rear boundary to the FSCL can get congested, very quickly. The unit airspace

"The JAGIC is a collection of subject matter experts (SMEs) executing preplanned and immediate operations."

plan, published within the airspace control order (ACO) assists in the execution of these operations in the safest manner possible.

How does the JAGIC mitigate risks?

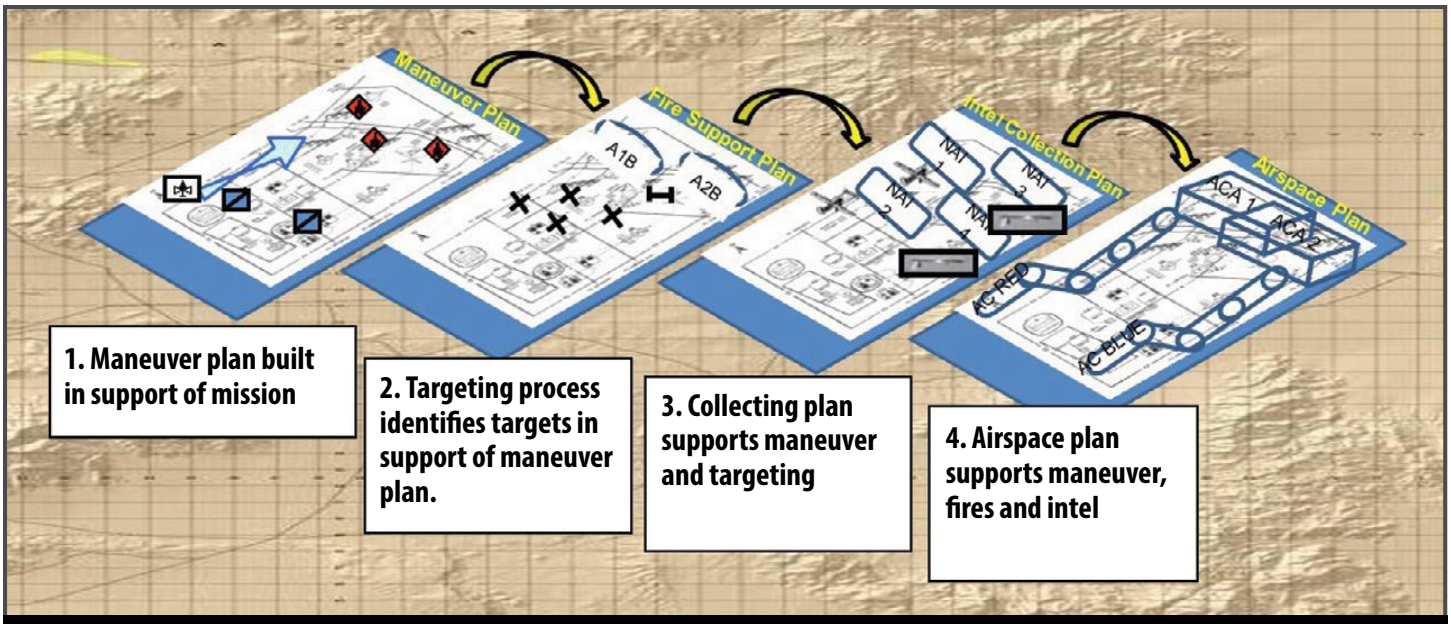
The JAGIC mitigates risks by having the right people in the right place, using the right procedures and systems. When the JAGIC is operational, it uses Army mission command systems (AMCS) and USAF systems such as Theater Battle Management Core Systems (TBMCS) and Joint Deep Operations Control System (JADOCS) to execute preplanned battle drills ensuring all applicable sections have situational awareness of ongoing missions. These sections are then able to implement actions that will assist in the coordination and integration of multiple airspace users. Even if the AMCS and TBMCS are unavailable, the JAGIC has the right SMEs to follow the battle drills and primary, alternate, contingency, and emergency (PACE) plan to continue operations while communications are degraded. The JAGIC has the ability to direct service members, artillery and aircraft, in real-time, so as to prevent fratricide.

How could the JAGIC have helped in the "Broken Arrow" as depicted in the movie "We Were Soldiers"?

With the systems we have now, we obviously have the capability to coordinate that operation more effectively and safer than what was available to the Soldiers in 1965; but let's take a "what if" look at the JAGIC's role in this battle. The ASOC would coordinate with the air component assets directing all available aircraft to the objective. Airspace personnel, both Army and USAF, would ensure coordinating measures were in place to separate airspace users and coordinate with controlling agencies. The AMD element would maintain the systems to provide a near-real time common operational picture. TACPs would help synch the operations to ensure the FAC was aware of the available aircraft. Although fires were not depicted in the "Broken Arrow" scene, the fires cell would coordinate artillery and rocket fires as additional support to LTC Moore's battalion. The collaboration within the JAGIC allows multiple operations to occur with all of the principle parties seated at the same table.

How can I find out more information about the JAGIC?

There are a number of ways to learn more about the JAGIC. The JAGIC ATP is ATP 3-91.1 and is available on the Army Publications Directorate website. In January 2017, the Center for Army Lessons Learned (CALL)



(U/FOUO) Figure 2-2. Division planning planning inputs to JAGIC.

published the JAGIC Handbook; a collection of lessons learned and best practices. In March 2017, the Airspace Control Proponent Office (ACPO) published the JAGIC Systems Handbook. It is a collection of tactics, techniques and procedures (TTPs) for connecting AMCS to send and receive information. In July 2017, the ACPO also published JAGIC Training Support Package (TSP). The TSP provides a collection of lessons to help staffs better understand the purpose and function of the JAGIC. The JAGIC Handbook, Systems Handbook and TSP are all available on the Airspace Control page on milSuite.

There are also a number of ongoing efforts. The Army Joint Support Team is developing an Echelons above Brigade Airspace Course and a JAGIC Mobile Training Team. Several pilot courses have been conducted thus far. In addition, once FM 3-0, Operations and ATP 3-91, Division Operations have been updated, the ACPO will begin updating the ATP 3-91.1, The JAGIC. ■

Are you familiar with these terms?

Airspace control order (ACO):
An order implementing the airspace control plan that provides the details of the approved requests for airspace coordinating measures.

Airspace control plan (ACP):
The document approved by the joint force commander that provides specific planning guidance and procedures for the airspace control system for the joint force operational area.

Air Tasking order (ATO):
A method used to task and disseminate to components, subordinate units, and command and control agencies projected sorties, capabilities and/or forces to targets and specific missions.

Special instructions (SPIN):
Specific airspace and usage procedures published in addition to the ATO. These typically include rules of engagement, missile procedures, and personnel recovery procedures, and are published daily and weekly.

Aviation professionals can refresh on these by checking out the JAGIC Handbook at https://www.milsuite.mil/book/docs/DOC-394866.

Mishap Review: *CH-47 Power Management*

While conducting a hasty air assault at night in low illumination conditions, with the pilot in command (PC) on the flight controls, he maneuvered the aircraft into an unperceived out of ground effect hover condition at a low torque setting with an excessive upward pitch attitude. The aircraft descended rapidly and impacted the ground in a nose high attitude and a significant right roll. The impact caused minor injuries to the crew and aircraft damage.

History of Flight

Aircraft departed a location in Afghanistan ISO a special operations elements insertion into two separate LZs. The first element was inserted without issue at 2343 hours and the second insertion also happened without incident. Following refuel, the aircraft staged for a 0330 target time to extract the first element. After hitting the SP, the aircraft were delayed while their attack escort responded to a TIC during which time they conducted an aerial laager. They were subsequently cleared to continue the extraction with AC-130 support. At 0358, approximately 1 NM short of the PZ, one of the insertion aircraft impacted the ground, heavily damaging the right side of the aircraft, and shearing the aft pylon. The crew received minor injuries.

Crewmember Experience

The pilot in command (PC) had 639 hours total time and 555 hours in series. The pilot had 2,080 total hours and 1,989 hours in series.

Commentary

Human error was present and contributing to the mishap. While conducting a hasty air assault at night in low illumination conditions, the crew of the CH-47F, trail of a flight of two, failed to maintain a proper scan. That is, the PC and air mission commander/pilot (AMC/PI) became fixated on lead and the ongoing actions near the pick-up zone. This is in contravention of the Training Circular (TC), Aircrew Training Manual, Task 1058, Perform Visual Meteorological Conditions Approach. As a result the PC, on the flight controls, maneuvered the aircraft into an unperceived out of ground effect hover condition at a low torque setting with an excessive upward pitch attitude. The aircraft descended rapidly and impacted the ground in a nose high attitude and a significant right roll. The impact caused minor injuries to the crew and separated the aft pylon from the aircraft.

The human error failure occurred during the approach to landing with the pilot on the controls becoming side-tracked with the lead aircraft and the actions near the LZ. This fixation caused him to fail to recognize his aircraft's power setting and attitude, resulting in the aircraft settling rapidly and impacting the ground. Although an individual failure was identified, the additional factor of crew coordination must be understood. In demanding flight regimes executed over long duty periods, crew coordination is paramount in cross checking and alerting other crewmembers to perceived lapses in situational awareness and operational limitations of the aircraft. Fatigue affects all aircrew members, usually at varying rates, so the reinforcement of crew coordination actions during missions is a must to prevent mishaps. ■

Mishap Review: *UH-60L Power Management/Mountain Operations*

While conducting tactical operations, the crew initiated an approach to a ridgeline that was at an altitude of over 9,000 feet MSL. As the aircraft slowed below effective transitional lift (ETL), both engines reached their temperature and power limits causing the rotor to droop. The aircraft experienced a hard landing causing significant damage.

History of Flight

The mission was a daytime tactical insertion of ground forces as part of a larger air assault in a mountainous region. All aircraft involved in the assault dispersed to individual LZs; the approach by the accident aircraft was a single ship approach. The planned LZ was at an altitude of 8,800 feet MSL. The weather briefed for the planned LZ prior to takeoff was clear sky conditions with a temperature of 16 C, visibility of 5 statute miles with haze, and winds from the northwest at 5 knots. There were no adverse weather condition briefed for the mission.

The accident crew started their duty day at 0300 local. The crew conducted preflight with no issues, and departed the airfield as Chalk 3, in a flight of three at approximately 0500 local. The accident aircraft departed the formation at the release point and proceeded to its LZ.

As the aircrew approached the planned area to land, they had some confusion on the exact location of the LZ. After a brief discussion, the crew collectively chose the wrong LZ and initiated an approach at a 90 degree angle to a saddle on the ridgeline. The temperature at the time of the approach was 24 C; 8 degrees hotter than briefed prior to takeoff. The aircraft slowed below 30 knots indicated airspeed, and the rotor began to droop. With the rising terrain off of the nose and no escape route, the pilot in command (PC) increased collective in an attempt to reach the landing area. This increase caused the rotor to droop further and the aircraft to yaw to the right. As the aircraft settled onto the up-sloping terrain, the PC lowered the collective and corrected the right yaw. The aircraft sustained significant damage to the underside of the transition section and the tail rotor pylon. There were no injuries.

Crewmember Experience

The PC had 788 total hours and 628 in the UH-60, with 129 as a PC and 418 combat hours. The PC had completed High Altitude Environmental Training (HAMET) prior to the deployment. The pilot (PI) had 426 total hours and 349 in the UH-60, with 95 as a PC and 67 combat hours. One crew chief (CE) had 759 total hours all in the UH-60, with 200 combat hours. The other CE had 250 total hours all in the UH-60 with 109 combat hours.

Commentary

Army aviators conducting combat operations have to manage complex missions that are ever-changing. Flying in mountainous terrain magnifies those complexities and requires us to operate at the limits of our airframes. The High Altitude Training Site Student Handbook states "Situational awareness is the key to all areas of aviation safety and is paramount to success in aviation operations in the mountains." Aircrews must have an understanding of the hazards present in mountain operations and how they affect the performance of their airframe.

The importance of pre-mission planning is not lost on most Army aviators. However, we tend to get complacent when we are operating in environments where power management is not an issue. There is no place for complacency in Army aviation, especially when operating in the mountains. Often you will encounter takeoffs and landings where an out of ground effect (OGE) hover capability doesn't exist. This is why it is required that crews verify their weight and balance, prepare a performance planning card (PPC), and determine dynamic inflight performance. The UH-60 series, Aircrew Training Module (ATM), Task 1028 (Hover Power Check) states "The PC will determine whether the aircraft is capable of completing the assigned mission and will ensure that aircraft limitations will not be exceeded." Having a good understanding of your aircraft's performance before you take off will ensure you know where you can land and what type of approach will get you safely on the ground. Once you determine your power and depart, a dynamic inflight update, as part of the before landing checks, is critical to verify you still have the needed power to land at your LZ.

"Army aviators conducting combat operations have to manage complex missions that are ever-changing. Flying in mountainous terrain magnifies those complexities and requires us to operate at the limits of our airframes."

If mission permits, map and photo recons, rehearsals, and detailed briefings should be conducted to ensure all phases of the flight (especially the LZ) are understood by the crew. When selecting an LZ, hasty or planned, the aircrew must consider winds and use them to the aircraft's advantage to minimize the power required to land. Even if we get all of the planning correct, calculate accurate performance data, and have a suitable LZ, we all make mistakes. This is why it is so important to have a plan for aborting the approach; an escape route. We have all been known to fly an approach a little too fast or slow. It doesn't matter if you shoot the approach perfectly, an unexpected wind shift could put your aircraft into a bad situation within seconds. ■

Archive Accident Findings

Finding (Present but not Contributing):

Performance planning cards (PPC) were not being completed prior to flight in contravention to TC 3-04.63, MQ-1C Gray Eagle Aircrew Training Manual (ATM), Task 1010, prepare a PPC. The ATM requires the aircraft commander (AC) to compute or direct other crew members to compute the PPC to verify the aircraft meets the performance requirements necessary to complete the mission. Based on aircraft operator interviews, the board concluded that crewmembers were not trained sufficiently on the importance of completing PPCs prior to flight and nor on the application of PPCs during flight operations. Failure of ACs to properly prepare and apply performance planning could contribute to future accidents.

Finding (Present and Contributing: Human Error - Individual and Training Failures):

While conducting an ATLS aborted landing at Kandahar Airfield with an MQ-1C Gray Eagle UA, the standardization instructor operator (SO) failed to inflight plan. That is, the SO failed to recognize the aerodynamic effects of disengaging the ATLS, lowering the landing gear, and increasing the commanded airspeed on an aircraft with a known, power limiting mechanical failure. As a result, the aircraft was unable to climb and perform a second ATLS landing attempt. The actions of the SO caused the unmanned aircraft to descend prematurely and crash, prior to the runway, causing civilian property damage and total destruction of the aircraft.

Finding (Present but Not Contributing):

During the course of the investigation, the board determined the accident aircraft weighed 5,253 pounds at takeoff. This is in direct violation of Technical Manual (TM) 1-1520-248-10, Chapter 5, which lists the maximum allowable gross weight for the OH-58D(R) as 5,200 pounds. At the time of the accident, the aircraft weighed 5,179 pounds, under the maximum allowable gross weight. If this practice goes uncorrected, it can result in premature failure of the airframe and components.

Finding (Present and Contributing: Individual Failure):

The IP used improper power management technique while attempting to takeoff in a blowing dust environment. The IP attempted a takeoff while simultaneously applying left pedal to align the aircraft with the wind, and had insufficient power to climb out of the dust cloud. Unable to climb, the IP lost spatial orientation in the dust cloud and the aircraft impacted the ground.

Class A –C Mishap Tables

	Manned Aircraft Class A – C Mishap Table									as of 28 Aug 17
	Month	FY 16					FY 17			
		Class A Mishaps	Class B Mishaps	Class C Mishaps	Fatalities		Class A Mishaps	Class B Mishaps	Class C Mishaps	Fatalities
1st Qtr	October	1	3	7	0		0	0	7	0
	November	2	1	2	6		1	0	4	0
	December	1	1	4	2		1	0	2	2
2nd Qtr	January	0	0	5	0		1	0	2	0
	February	1	1	3	0		0	1	3	0
	March	1	3	2	0		0	1	5	0
3rd Qtr	April	0	1	4	0		1	0	6	1
	May	0	1	7	0		1	0	6	0
	June	1	0	3	0		0	3	4	0
4th Qtr	July	0	0	9	0		0	3	3	0
	August	1	1	5	0		3	1	2	5
	September	1		3						
	Total for Year	9	12	54	8	Year to Date	8	9	44	8
	Class A Flight Accident rate per 100,000 Flight Hours									
	5 Yr Avg: 1.27		3 Yr Avg: 1.32			FY 16: 0.87			Current FY: 1.09	

	UAS Class A – C Mishap Table								as of 28 Aug 17
	FY 16					FY 17			
	Class A Mishaps	Class B Mishaps	Class C Mishaps	Total		Class A Mishaps	Class B Mishaps	Class C Mishaps	Total
MQ-1	12	1	2	15	W/GE	8	2	3	13
MQ-5	2		1	3	Hunter	5		1	6
RQ-7		4	24	28	Shadow		13	38	51
RQ-11			5	5	Raven			1	1
RQ-20					Puma				
YMQ-18									
SUAV					SUAV				
UAS	14	5	32	51	UAS	13	15	43	71
Aerostat	2	1		3	Aerostat	6		1	7
Total for Year	16	6	32	54	Year to Date	19	15	44	78

Blast From The Past: *Nothing new*

*Articles from the archives of past **Flightfax** issues*

VOL 8, NO. 46, SEP 1980

Settling with power is not a new expression. It has been around a long time and alludes to a condition that is taught to every Army aviator during training. Yet, sometimes "true" settling with power is confused with other conditions that mimic it. Basically, for a helicopter to settle with power, the following three conditions must be present simultaneously: The airspeed must be less than 12 knots, at least 20 percent power must be applied, and the rate of descent must reach or exceed 300 to 400 fpm.

As a refresher, look at figures 1, 2, 3 and 4. They illustrate the types of vortex systems present during the different conditions of zero airspeed climb, hover, settling with power, and autorotation.

During a climb, air flows downward through the rotor. Although three distinct vortex systems exist in the wake of any propeller or rotor, the system can be simply depicted as shown in figure 1.

When the helicopter is hovered, the airflow is still downward through the rotor system. However, this air is picked up from a lower level, as shown in figure 2.

When a helicopter settles with power, the usual vortex systems are altered, and a separate one emerges. It lies in the plane of the rotor and is a continually recirculating one. This condition, commonly referred to as the vortex ring state, can cause severe turbulence. It is depicted in figure 3.

The final situation occurs during autorotation, also referred to as the windmill brake state. During descent of the aircraft, the airflow is upward through the rotor system as shown in figure 4.

A look at some examples of mishaps commonly (but erroneously) attributed to settling with power can help you better understand this phenomenon so that you can avoid it.

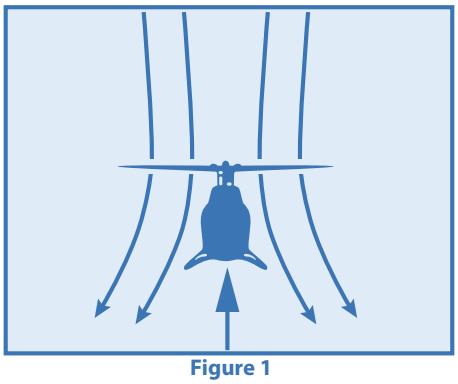


Figure 1

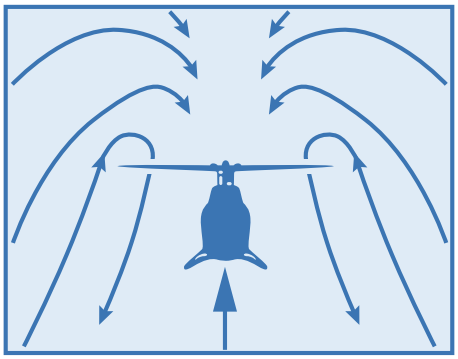


Figure 2

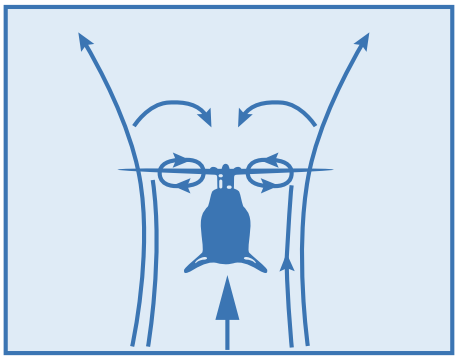


Figure 3

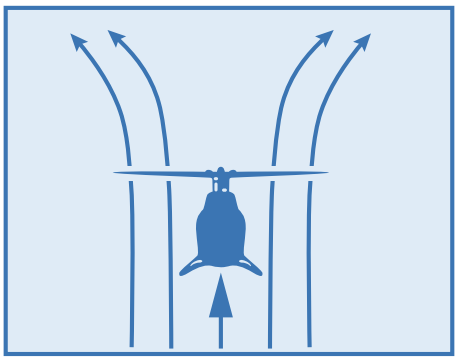


Figure 4

First, consider a helicopter that takes off into a 20-knot headwind on the lee side of a slope. After reaching an altitude of 50 to75 feet and attaining an airspeed of about 50 knots, the pilot begins a 180-degree turn. As he completes the turn, the aircraft begins to lose altitude. The pilot reduces airspeed and applies full power, but the aircraft continues to lose altitude until it finally crashes.

In this example, the pilot made a sharp turn in a known downdraft area. During a turn, more lift is needed to maintain altitude. This can be done either by sacrificing airspeed or by increasing pitch. The pilot tried both but was unsuccessful—because he was operating in a downdraft. Consequently, poor judgment can be blamed for this mishap. The pilot should have reached a safe altitude and built up sufficient airspeed while operating in a known region of a downdraft before attempting a turn. This was not a true case of an aircraft settling with power.

In a second example, we find a pilot performing a test flight to check the effectiveness of the tail rotor. The pilot zeroes the airspeed and enters autorotation at 1,000 feet above the airfield while headed into a 15-knot wind. He then elects to make a series of small turns while traveling backwards over the ground instead of making 360-degree turns. At 400-500 feet AGL, he senses he is falling too fast and applies power. At about 150 feet AGL, he starts to apply pitch. When the aircraft is about 25 feet above the ground, the pilot notes the rate of descent is excessive, and he applies full pitch and power. The aircraft crashes.

The facts

Let's examine the facts. At an altitude of 500 feet, the rate of descent was approximately 2,400 fpm. At 150 feet, the rate was the same. This meant the aircraft would

reach the ground in 4 seconds. It is doubtful if any pilot could have made a successful autorotation or power recovery under these circumstances. Beginning the maneuver at an altitude of only 1,000 feet, delaying power recovery, and failing to regain airspeed before reaching a minimum of 500 feet showed poor judgement. However, here again, the true cause was not settling with power.

But didn't the aircraft in both of these examples actually settle with power? In all probability they did shortly before they hit the ground. This is true because the three requirements for settling with power were present in both instances. However, these requirements were not evidenced until just before the aircraft hit the ground. So, settling with power was not the actual cause of these mishaps.

Finally, let's look at a third mishap. This one occurred a number of years ago and involved a Royal Australian Air Force pilot. The importance of this mishap lies in its ability to show the three conditions required for true settling with power, and how readily they can occur simultaneously during flight when pilots fail to remain consciously aware of them.

This pilot was making an approach to a pinnacle. However, this approach was steeper than he intended it to be, and he allowed his airspeed to decrease below 10 knots while the aircraft was still 30 feet in the air. At this time the aircraft began to settle to the ground, and no amount of power could stop its descent. In this instance, two conditions conducive to settling with power were present during the first part of the approach. The rate of descent was more than 400 fpm, and more than 20 percent power was being applied. When the airspeed decreased below 10 knots, the third condition was satisfied, and the aircraft promptly settled with power.

The following is quoted from this mishap report: "The phenomenon of settling with power manifests itself under conditions applying at the time, and involves high vertical rates of descent and reduced cyclic control effectiveness. This condition is entered following a low-speed, partial-power descent where the airspeed is inadvertently zeroed."

"The characteristics of settling are very similar to the feel of stall in a conventional aircraft. The recovery procedure is also approximately the same, i.e., drop the nose and accelerate into forward flight. If this cannot be done, recovery can also be made by reducing the collective pitch to a minimum, which results in considerable altitude loss."

The point is clear. Applied power, airspeed, and rate of descent are the three prime factors associated with the condition known as settling with power. Any time you let your airspeed decrease below 12 knots while you are applying 20 percent, or more, power and you allow your rate of descent to reach or exceed 300 to 400 fpm, you can expect your aircraft to settle—regardless of any remaining power you might then choose to add.

Should you find yourself in this predicament, and your altitude is insufficient for recovery, you can be sure of one thing: You are going to come down, and in all probability, your aircraft is going to be out of commission for repairs. Stay aware of the conditions that lead to settling with power, and avoid this trap. The place for your aircraft is up in the air and in commission—not down and out! ■

Selected Aircraft Mishap Briefs

Utility Helicopter

HH-60

-L Model. Aircraft was landing for a MEDEVAC mission when the crew reportedly experienced DVE (brown-out conditions). Aircraft subsequently overturned upon contacting the ground. *(Class A)*

UH-60

-L Model. Aircraft sustained tip-cap damage upon MRB contact with a light pole during ground taxi to the FARP. *(Class C)*

-L Model. TGT exceedance reported during post-phase GMTF: 12 seconds/926 degrees C. (*Class C)*

-M Model. Aircraft main rotor blades made contact with tail rotor drive shaft cover on touchdown during a dust landing iteration. *(Class B suspected)*

MH-60

-M Model. #1 engine caught fire during a maintenance run-up, resulting in significant damage to the #1 engine. *(Class B suspected)*

-M Model. Aircraft was determined to have gone down over water after visual and audio contact was lost by the sister ship during a training mission. *(Class A)*

UH-72A

-Post-flight inspection revealed damage to the left stabilizer and two main rotor blades. (*Class C)*

Unmanned Aircraft Systems

RQ-7B

During launch, the shuttle released but the forward launch lugs broke and the AV was thrust onto the rails and remained in place. The MX-10 payload was damaged. *(Class C)*

If you have comments, input, or contributions to *Flightfax*, feel free to contact the Aviation Division, U.S. Army Combat Readiness Center at com (334) 255-3530, DSN 558-3530.

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