

PAVE Risk Management Checklist

Pilot/Passenger		
Aeromedical Factors		
IMSAFE	Illness / Injury	<ul style="list-style-type: none"> - Sinus - Middle Ear - Cold, Sore Throat - Disqualifying conditions (ask AME) - Injury that could affect operational capability
	Medication	<ul style="list-style-type: none"> - Must be approved by FAA
	Stress	<ul style="list-style-type: none"> - Are you stressed at work or in your personal life?
	Alcohol	<ul style="list-style-type: none"> - No alcohol in the last 8 hours - Below 0.04% limit - No hangover, no impairment, no drugs
	Fatigue / Food	<ul style="list-style-type: none"> - Are you well rested? Nourished and hydrated?
	Emotion	<ul style="list-style-type: none"> - Positive or negative (won the Powerball, team lost the big game?)
Oxygen	Hypoxia	<ul style="list-style-type: none"> - Causes and symptoms - Prevention / recovery
	Regulations	<ul style="list-style-type: none"> - Above 12,500 for more than 30 min for pilots - Above 14,000 all the time for pilots and crew - Above 15,000 for passengers
Heater	Carbon Monoxide poisoning	<ul style="list-style-type: none"> - Causes and symptoms - Prevention / recovery
Night Flying	Night Vision	<ul style="list-style-type: none"> - 30-60 min for eyes to get used to the dark - Avoid looking into bright light - Use peripheral vision and don't look at a fixed object - Rods = black and white only - Cones = blind spot at night - Night illusions (ICEFLAGGS)
Scuba Diving	Recent scuba?	<ul style="list-style-type: none"> - For non-controlled ascent wait 12 hours to 8000' - For controlled ascent or flights above 8000' wait at least 24 hours
Legal		
Recency of experience	Check your logbook Recency vs. proficiency	<ul style="list-style-type: none"> - Flight review? - Endorsements and training? - Required ratings? - 3 takeoffs / landings in the preceding 90 days to take passengers? - Night flying? 3 takeoffs / full stop landings in the preceding 90 days? - Tail dragger? 3 takeoffs / full stop landings in the preceding 90 days? - Wings program credits
Documents	Must be on board:	<ul style="list-style-type: none"> - Pilot certificate - Valid medical certificate (class, expiration, privileges, temporary disqualification?) - Valid government photo ID
Privileges and Limitation		<ul style="list-style-type: none"> - What can I fly? - Can I receive money or compensation of any kind?

Aircraft/Airworthiness		
Documents		
ARROW	Airworthiness	<ul style="list-style-type: none"> - Does not expire if all required maintenance, inspections and Airworthiness Directives are complied with and logged, must be displayed
	Registration	<ul style="list-style-type: none"> - Renewed every 7 years
	Radio Station License	<ul style="list-style-type: none"> - International flights only
	Operating Limitations	<ul style="list-style-type: none"> - AFM/POH, placards, instrument markings
	Weight & Balance	<ul style="list-style-type: none"> - Current data

AV1ATE-AD	Annual	- Preceding 12 calendar months, signed by A&P with IA
	VOR check	- Preceding 30 days (for IFR ops)
	100-hour Inspection	- Aircraft operated for hire or airplane provided by flight instructor or school
	Altimeter and Static	- Preceding 24 calendar months (for IFR ops)
	Transponder	- Preceding 24 calendar months
	ELT	- Preceding 12 calendar months (function test). Additionally, replace / recharge battery when half the useful battery life is used or more than 1 hour of cumulative use.
	AD compliance	- One time and recurring (interval specified in AD, may not be overflowed)

Equipment/Systems

91.205	Day VFR	Airspeed indicator
		Tachometer
		Oil Pressure Gauge
		Manifold Pressure Gauge for Altitude Engines
		Altimeter
		Temperature Gauge (liquid cooled engines)
		Oil Temperature Gauge
		Fuel Gauges for each tank
		Flotation Devices (for hire, if beyond power off glide distance from shore)
		Landing Gear Position Indicator (if retractable)
		Anti-Collision Lights (if aircraft certificated after 3/11/96)
		Magnetic Direction Indicator
		ELT
		Seat Belts/Shoulder harnesses
91.205	Night VFR	Fuses (one spare set or 3 of each kind)
		Landing Light (for hire)
		Anti-Collision Light
		Position Lights
		Source of Power (alternator/generator)
91.213	Inoperative Equipment	Is it safe? PIC responsibility and authority
		Is it required?
		- MEL
		- Regulation – 91.205, 91.209?
		- Equipment List / Kinds of Operations List
		- Type Certificate Data Sheet
Aircraft Systems	Fuel, oil and hydraulics	
	Electrical	
	Pitot-Static, Gyros and associated flight instruments	
	All systems required by ACS for your aircraft	
	Possible failures and what to do for each	

Emergencies

Scenarios	Engine failure after takeoff	
	Loss of oil pressure during flight	
	Lost communications	
Stalls & Spins	Spin Recovery	P – Power to Idle A – Ailerons to neutral R – Rudder full opposite the direction of rotation E – Elevator briskly forward to break stall When spin stops – rudder neutral, then easy pull to straight and level

EnVironment

Operations

Airspace	Types	<ul style="list-style-type: none"> - What classes of airspace are we flying through? Know your VFR weather minimums, procedures, and special use airspace.
	Procedures	<ul style="list-style-type: none"> - Clearance before entering Class B - Establish communication before entering Class C, D - Stay out if flying close! - Required equipment on board?
	Restrictions	<ul style="list-style-type: none"> - Prohibited areas - Restricted areas
	Hazards	<ul style="list-style-type: none"> - MOAs <ul style="list-style-type: none"> - Times, altitudes and frequencies - Warning areas - Alert areas

Airport Concerns	Runway Incursion	<ul style="list-style-type: none"> - How do we avoid runway incursion?
	Hotspots	<ul style="list-style-type: none"> - What are hot spots? Where do we find them? Where do we find their explanations of what to avoid?
	LAHSO	<ul style="list-style-type: none"> - Land And Hold Short Operations (see KAPC)
	Runway signs & markings	<ul style="list-style-type: none"> - Know them!
	Light gun signals	<ul style="list-style-type: none"> - Keep on kneeboard
	Wake turbulence	<p>How do we avoid wake turbulence?</p> <ul style="list-style-type: none"> - Wait for heavy aircraft's wake to dissipate (best option) - Don't fly below the other aircraft's flight path.
	Crosswind factor	<ul style="list-style-type: none"> - Within or close to limits (personal / aircraft)? - Best runway to use - Crosswind takeoff and landing procedure

CFIT	Controlled Flight Into Terrain	<ul style="list-style-type: none"> - Accidental flight into IMC conditions - Mountain obscurations - False horizons/no horizon/illusions - Over high terrain check altitude and keep altimeter updated. - TAA: Technically Advanced Aircraft - Over-reliance on technology
Special VFR		<ul style="list-style-type: none"> - What are the minimums? - Hazards: Wire-strike, tower strike, scud running, CFIT

Performance

Density Altitude		<ul style="list-style-type: none"> - How to determine - Effects of temp & pressure on aircraft performance (POH)
Weight & Balance	POH	<ul style="list-style-type: none"> - Effect of weight on performance? - Effect of CG location on performance and stability? - How much fuel can we carry? - Concerns with: <ul style="list-style-type: none"> - Over gross - Exceeding CG limits
NAVLOG & Performance		<ul style="list-style-type: none"> - Course and altitude selection - True course to compass heading calculation - Time / speed / distance calculations - Fuel requirements (POH) - Takeoff and landing distance requirements (POH) - TAS calculation

Weather

Reports and Forecasts	METARS & PIREPS	<ul style="list-style-type: none"> - Standard and SPECI METAR (look at past reports for trend) - Consider type of aircraft in PIREP (i.e. turbulence report from 737 vs 150)
	TAF	<ul style="list-style-type: none"> - Forecast period - FM, BECMG, TEMPO, PROB30/40
	AIRMETS	<p>Tango – moderate turbulence, sustained surface winds above 30 kts, low level wind shear</p> <p>Sierra – IFR, mountain obscuration</p> <p>Zulu – Icing, freezing levels</p>

	SIGMETS	<p>Convective SIGMETS (Thunderstorm related weather)</p> <ul style="list-style-type: none"> - Line of thunderstorms - Embedded or severe thunderstorms - Wind gusts at the surface more than 50 kts - Tornadoes - Hail - Any convective SIGMET implies severe or greater turbulence, severe icing, and low-level wind shear. <p>SIGMETS (Not thunderstorm related)</p> <ul style="list-style-type: none"> - Severe icing - Severe or extreme turbulence - Sandstorms, dust storms, volcanic ash
	Weather Charts	<p>Surface Analysis Chart and Prog Chart</p> <ul style="list-style-type: none"> - High/Low pressure - Cold/Warm fronts - Stationary/Occluded Fronts - Squall Line - Trough <p>Graphical Forecasts for Aviation (GFA)</p> <ul style="list-style-type: none"> - Ceiling and Visibility - Clouds - Turbulence <p>Winds and Temperatures Aloft Forecast</p> <p>Severe Weather (Convective) Outlook Charts</p>
TFRs / NOTAMS	Departure, En route, Destination, Alternates	<ul style="list-style-type: none"> - Where can you find altitudes and active times? - What happens if you fly through a TFR?
Meteorology		<ul style="list-style-type: none"> - Atmospheric stability - Fronts - Windshear and mountain wave activity - Fog formation - Icing and frost

External Pressures		
Purpose of the Flight	Deadlines	<ul style="list-style-type: none"> - Have you given yourself an allowance for delays? - How critical is it to maintain the schedule
	Promise to friends/family	<ul style="list-style-type: none"> - Have you briefed your friends/family that a diversion or cancellation may be necessary? - Is the trip worth the risks?
Trip Planning	Diversions or Cancellations	<ul style="list-style-type: none"> - Have you given yourself a window of time? - Have you arranged alternate transportation?
	Unplanned Weather	<ul style="list-style-type: none"> - Have you factored in headwinds that may delay you?
Alternate Plans	Personal Equipment	<ul style="list-style-type: none"> - Do you have funds for alternate plans or transportation? - In the event of an unexpected stay do you have extra clothing and an overnight kit?