

## Flight Workshop 1—Controlling Your Aircraft

### Scenario

*VFR local flight 1.0 to 1.5 hours*

### Plan

Plan and execute this flight as a local flight or as a short cross-country flight to a nearby airport if it is better suited to practice takeoffs and landings. However, the focus of this lesson is not cross-country operations. Select the area to practice the maneuvers based on the following factors:

- Expected traffic in the area
- Location of airspace
- Terrain
- Obstacles
- Time of day
- Availability of emergency landing sites

### Maneuvers

Use the following guidelines to plan and execute the flight:

- **Steep turns.** Discuss circumstances under which controlling the aircraft proficiently in a steep bank might be necessary, such as to avoid traffic. Practice rolling out of the steep turn at different times to simulate real situations.
- **Maneuvering during slow flight.** As you transition to slow flight, maintain several different airspeeds that might be used in the traffic pattern, during instrument approaches, or while executing landings.
- **Power-off stalls.** Set up a traffic pattern at a safe altitude and simulate conditions during which an inadvertent stall may occur, such as turning base to final or performing a power-off approach and landing.
- **Power-on stalls.** At a safe altitude, configure the aircraft for an initial climb after takeoff or for a go-around to simulate a situation in which a distraction or an attempt to clear terrain could lead to a stall.
- **Takeoff and landings.** Decide what type of takeoff and landing (normal, short- or soft-field) to perform based on the scenarios your instructor proposes which specify a normal or emergency situation and the runway criteria, such as runway length and conditions.

- **Flaps-up landings.** Always verify that the flaps have extended when you move the flap handle and be prepared to recognize a flap malfunction and perform a flaps-up landing.
- **Power-off landings.** If your instructor sets up a power-off landing in the traffic pattern, make sure you inform ATC or other traffic of your intentions. *Note: For training purposes, power-off landings should always be made with full flaps.*
- **Go-around.** Automatically perform a go-around if you have not established a stabilized approach by 500 feet AGL. In addition, perform a go-around in the appropriate situations, such as realizing that touch-and-go traffic ahead is making a full stop.

## System Safety

Use the following tools to manage risk and make effective decisions.

### Managing Risk

Even though this is a local flight, you still need to assess risk prior to and during the flight using the 5Ps.

### Using Single-Pilot Resource Management (SRM) Tools

- **PIC responsibilities.** Designate pilot and copilot responsibilities for tasks such as ATC communication and taking control of the aircraft in an emergency. In addition, demonstrate the positive exchange of flight controls with your instructor.
- **Resource use.** Enlist your instructor as a resource to watch for traffic in the practice area and traffic pattern.
- **Workload management.** Use the most effective methods (do-lists or flow patterns) to perform tasks on paper or electronic checklists during different phases of flight based on the SOPs.
- **Effective communication.** Perform passenger, takeoff, and approach briefings to communicate your intentions.
- **Situational awareness.** Maintain situational awareness in the practice area and in the traffic pattern by using tools such as visual scanning techniques, SOPs, and the MFD.

## Using the Aeronautical Decision-Making (ADM) Process

Make decisions regarding an appropriate location and altitude to practice maneuvers. In addition, choose the proper takeoff and landing procedures to use based on the scenarios your instructor proposes.

- **Effective Communication.** Set up standard communication frequency configurations so you can quickly respond on the correct frequency.
- **Situational Awareness.** Use normal flight procedures that include avionics and aircraft configurations and flow patterns to ensure that you have completed the necessary tasks for each phase of flight.

### Using the Aeronautical Decision-Making (ADM) Process

Discuss how the mission purpose affects decision making before and during the flight. For example, if it is important to attend a business meeting and the weather is marginal at the destination, you might choose to divert to a nearby airport and drive rather than return to the departure airport.

## Flight Workshop 2—Exploring Equipment Operating Levels

### Scenario

*VFR (IFR Option) three-leg cross-country flight 2.0 to 2.5 hours*

### Plan

The skills you develop in this workshop provide the foundation for you to effectively control the aircraft in a variety of situations, manage equipment failures in the future, and feel comfortable shedding equipment when you become overloaded.

Use the following guidelines to plan and execute the flight:

- Plan a cross-country flight with legs long enough to complete the normal flight procedures for each phase of flight and to have sufficient time to improve your manual flying skills and to practice using a variety of avionics resources (at least 30 to 45 minutes).
- Be prepared to perform the proper procedures for each situation and to make and implement decisions regarding the flight.
- Keep in mind the mission purpose assigned by your instructor when making decisions throughout the flight lesson. Mission purposes include:
  - Business trips.
  - Family vacations.
  - Pleasure flights with friends.
  - Flights with another pilot to maintain proficiency.
  - Training flights with an instructor.
- Take into account the following variables that your instructor specifies for the scenario when managing risk and making decisions:
  - Weather conditions enroute, at the destination, or at possible diversion airports.
  - Airport environment, such as runway length and conditions, as well as services.
  - Availability of ATC services.
  - Terrain in the area.

## Leg 1–VFR or IFR

### Equipment Operating Level 1:

- Fly the aircraft manually and use basic avionics features, such as the MFD Map and Engine pages and the GPS Active Flight Plan page.
- Use the data blocks on the PFD and MFD to monitor system status and the MFD Map page to keep track of flight progress.
- Gain proficiency in manually controlling the aircraft and using alternate resources, such as paper charts, so you are comfortable in the event of an autopilot or other avionics equipment failure.
- If you are instrument-rated, perform an instrument approach manually at the destination.

## Leg 2–VFR or IFR

### Equipment Operating Level 2:

- Make decisions regarding what automation and avionics equipment to use in specific situations.
- After landing and during taxi for takeoff, use the airport diagram on the MFD Chart page for situational awareness.
- Choose times to use the autopilot to help manage workload or ease fatigue.
- If you are instrument-rated, use the autopilot while preparing for an approach but practice flying the approach procedure manually.
- Locate basic flight information on the PFD and MFD, such as:
  - Groundspeed.
  - ETA or ETE.
  - Fuel left at the destination.
  - Airspace along the route.
  - Runway lengths and current weather conditions at the destination.
  - Altitude and relative position of the nearest traffic.

## Leg 3–VFR or IFR

### Equipment Operating Level 3:

- Perform all operations using the autopilot including climbs and descents to capture an altitude.
- If you are instrument-rated, perform an autopilot-coupled instrument approach.
- Use a wide variety of avionics tools, including:
  - The MFD TAWS page for terrain awareness.
  - The MFD Nearest page to locate information about an airport along the route.
  - The GPS VNAV feature to plan and execute the descent.
  - The timer on the transponder to time an instrument approach.

## System Safety

### Managing Risk

If you correctly perform the normal flight procedures for each phase of flight, including the associated flow patterns, you are reviewing the 5Ps to help identify risks at the same time.

### Using Single-Pilot Resource Management (SRM) Tools

- **PIC Responsibilities.** If you are not proficient at performing the normal flight procedures and the associated flow patterns, spend some time in the aircraft on the ground or in a simulator to review the tasks associated with each procedure and flow.
- **Resource Use.** Use resources at the proper time and if you don't know how to use an avionics tool properly, remember it might become a distraction and impair flight safety.
- **Workload Management.** Use specific equipment operating levels based on the situation and recognize when to shed tasks, such as programming the autopilot to climb and capture an altitude, if you are overloaded.

- **Workload Management.** Use the autopilot during abnormal and emergency situations to reduce workload and allow yourself freedom to perform such tasks as programming the GPS for a diversion.
- **Effective Communication.** Communicate the problem to your passengers and ATC.
- **Situational Awareness.** Although you are busy managing an abnormal or emergency situation, you must continue to monitor terrain, weather, traffic, and aircraft performance to maintain situational awareness.

### Using the Aeronautical Decision-Making (ADM) Process

Follow the ADM process, including defining the problem and monitoring the situation after managing the emergency and implementing your decision.

## Flight Workshop 3—Managing Abnormal and Emergency Situations with Automation

### Scenario

*VFR (IFR Option) three-leg cross-country flight 2.0 to 2.5 hours*

### Plan

Use the following guidelines to plan and execute the flight:

- Plan a cross-country flight with legs long enough to complete the normal flight procedures for each phase of flight and to have sufficient time to practice abnormal and emergency procedures on each leg (at least 30 to 45 minutes).
- Be prepared to perform the proper procedures for each situation and to make and implement decisions regarding the continuation of the flight. For example, you might choose to divert or execute a simulated forced landing.
- Keep in mind the mission purpose assigned by your instructor when making decisions throughout the flight lesson. Mission purposes include:
  - Business trips.
  - Family vacations.
  - Pleasure flights with friends.
  - Flights with another pilot to maintain proficiency.
  - Training flights with an instructor.
- Take into account the following variables that your instructor specifies for the scenario when managing risk and making decisions:
  - Weather conditions enroute, at the destination, or at possible diversion airports.
  - Airport environment, such as runway length and conditions and services.
  - Availability of ATC services.
  - Terrain in the area.

## Legs 1, 2, and 3 (VFR or IFR)

### Alternator 1 Failure:

- Monitor the annunciator panel as well as the avionics during the flight so you can recognize warning lights and advisories indicating malfunctions.
- Use resources such as the MFD Checklist page to ensure you accomplish all the steps in the abnormal procedure.
- Use the autopilot to ease workload when dealing with an abnormal situation.
- If alternator 1 does not reset, you must implement a decision about what equipment to switch off and whether to continue to the original destination or divert based on the weather conditions and available alternate airports.
- In addition to performing the correct emergency procedure, make and implement a decision regarding whether to continue to the original destination or divert based on the weather conditions and available alternate airports.
- Follow the aeronautical decision-making (ADM) process including correctly defining the problem, and continuing to monitor the situation after you implement a decision.

### Inadvertent Entry into IFR Conditions:

- Pay close attention to the actual weather conditions or those provided by your instructor and be alert for signs of deteriorating weather.
- If you are instrument-rated, you can request a pop-up clearance from ATC if you are about to enter IFR conditions. However, you must consider your personal limitations, instrument proficiency and currency, as well as the severity of the weather as you make this decision.

### Inadvertent Icing Encounter:

- Be alert for icing conditions if you enter IFR conditions.
- Turn on the pitot-heat when you enter IFR conditions and use the alternate static source if you suspect a static failure due to ice accumulation.

- Follow the procedure to exit the IFR/icing conditions by using the autopilot and turn on the ice protection system, if applicable.
- The situation does not end when you have exited the IFR/icing conditions; you must continue to implement your decision by diverting or returning to the departure point.

### PFD Failure:

- Pull the PFD circuit breakers as part of the procedure to continue using the autopilot.
- If you are instrument-rated in IFR conditions, take advantage of a GPS approach using the autopilot.
- In addition to performing the correct emergency procedure, you must make and implement a decision regarding whether to continue to the original destination or divert based on the weather conditions and available alternate airports.
- Follow the ADM process including correctly defining the problem, and continuing to monitor the situation after you implement a decision.

## System Safety

### Managing Risk

As you make decisions that change the dynamics of the flight, such as diverting, you must continue to identify and manage risks for the new situation.

### Using Single-Pilot Resource Management (SRM) Tools

- **PIC Responsibilities.** Since abnormal and emergency procedures are not practiced on most flights, review these procedures on a regular basis after your transition training is complete.
- **Resource Use.** Don't forget to use ATC as a resource. Advise controllers of the situation and request assistance, such as priority handling, traffic advisories, or vectors.

## System Safety

### Managing Risk

As you make decisions that change the dynamics of the flight, such as diverting, you must continue to identify and manage risks for the new situation.

### Using Single-Pilot Resource Management (SRM) Tools

- **PIC Responsibilities.** Make sure you consider their personal limitations when assessing weather prior to and *during* the flight if the weather begins to deteriorate.
- **Resource Use.** During abnormal and emergency operations, use ATC as a resource by advising controllers of the situation and requesting assistance such as priority handling, traffic advisories, or vectors.
- **Workload Management.** While automation can help, you must have the ability to perform abnormal and emergency procedures without the autopilot, if necessary.
- **Effective Communication.** When you simulate a CAPS procedure in the air or on the ground, practice explaining the situation to passengers, including how to assume the emergency landing position.
- **Situational Awareness.** Research the causes of CFIT by reviewing accident reports. Discuss with your instructor how to use resources in the aircraft, such as weather data, the moving map, and TAWS displays to avoid situations that put you at risk of CFIT.

### Using the Aeronautical Decision-Making (ADM) Process

Follow the ADM process, including defining the problem and monitoring the situation after managing the emergency and implementing your decision.

## Flight Workshop 4– Flight Workshop 4–Managing Abnormal and Emergency Situations Manually

### Scenario

*VFR (IFR Option) three-leg cross-country flight 2.0 to 2.5 hours*

### Plan

Use the following guidelines to plan and execute the flight:

- Plan a cross-country flight with legs long enough to complete the normal flight procedures for each phase of flight and to have sufficient time to practice abnormal and emergency procedures on each leg (at least 30 to 45 minutes).
- Be prepared to perform the proper procedures for each situation and to make and implement decisions regarding the continuation of the flight. For example, you might choose to divert or execute a simulated forced landing.
- Keep in mind the mission purpose assigned by your instructor when making decisions throughout the flight lesson. Mission purposes include:
  - Business trips.
  - Family vacations.
  - Pleasure flights with friends.
  - Flights with another pilot to maintain proficiency.
  - Training flights with an instructor.
- Take into account the following variables that your instructor specifies for the scenario when managing risk and making decisions:
  - Weather conditions enroute, at the destination, or at possible diversion airports.
  - Airport environment, such as runway length and conditions and services.
  - Availability of ATC services.
  - Terrain in the area.

## Legs 1, 2, and 3 (VFR or IFR)

### Open Door:

- If the door opens during the takeoff roll, take the appropriate action by aborting the takeoff. If you are airborne, follow the proper procedures to enter the traffic pattern and land to close the door.

### Autopilot Stall Recovery:

- Follow the normal flight procedures and engage the autopilot for initial climb.
- At cruise altitude, set up situations in which an autopilot stall might occur:
  - Program an excessive climb rate.
  - Reduce the power excessively to slow down and prepare for an approach or to comply with ATC instructions and then become distracted as the autopilot continues to maintain altitude while sacrificing airspeed.
- After you follow the proper procedures to recover from the autopilot stall, continue with the flight operation. For example, if you were given instructions to climb and maintain a specific altitude or slow to a specific airspeed, you need to continue this task manually.

### Autopilot Failure:

- Always monitor your avionics and instruments so you can recognize an autopilot failure and manage the situation.
- Assess the risks of not being able to use the autopilot for the remainder of the flight by considering such factors as the length of the flight and weather conditions.

### Cabin Fire:

- Perhaps the autopilot failure was a sign of a more serious problem so be alert for other electrical problems, including a fire.
- If you smell smoke and do not resolve the problem after switching off the electrical equipment according to the emergency procedure, you might need to extinguish the fire and perform an emergency descent.
- If in IFR conditions, leave battery 2 on for instrument reference on the PFD.

- Consider such factors as the severity of the fire, weather conditions, and terrain and then make a decision to take one of the following actions:
  - Divert to a suitable airport.
  - Simulate a forced landing.
  - Verbally simulate the use of the CAPS system.
- During this scenario, turn on certain electrical equipment as necessary in the interest of safety. For example, keep a radio on to announce intentions and listen for transmissions from other aircraft.

### Low Oil Pressure Annunciation:

- Continue to control the aircraft manually on Leg 2.
- If your instructor indicates that a low oil pressure light is illuminated on the annunciator panel, describe what other advisories would appear in this situation.
- Define the problem by referring to the Engine page which confirms a low oil pressure/high oil temperature situation.
- Consider the imminent engine failure, weather conditions, and terrain and make a decision to take one of the following actions:
  - Divert to a suitable airport.
  - Simulate a forced landing.
  - Verbally simulate the use of the CAPS system.

### TAWS Escape Maneuver:

- Continue to control the aircraft manually on Leg 3.
- Pay close attention to the terrain and weather conditions.
- If you experience a TAWS warning, perform the appropriate TAWS escape maneuver by adding power and pitching up to climb away from terrain.
- Monitor the situation carefully to avoid stalling the aircraft.

### Unusual Attitudes:

- Describe conditions that could lead to an unusual attitude, such as becoming disoriented in the low visibility conditions near rugged terrain or if instrument-rated, flying in and out of clouds and looking outside and then back at the instruments.
- Initiate an unusual attitude by following your instructor's directions to climb, descend, and turn with your eyes closed and your head resting on your shoulder.

## Flight Workshop 5—Reviewing Abnormal and Emergency Procedures

### Scenario

*VFR (IFR Option) three-leg cross-country flight 2.0 to 2.5 hours*

### Plan

Use the following guidelines to plan and execute the flight:

- Plan a cross-country flight with legs long enough to complete the normal flight procedures for each phase of flight and to have sufficient time to practice abnormal and emergency procedures on each leg (at least 30 to 45 minutes).
- Be prepared to perform the proper procedures for each situation and to make and implement decisions regarding the continuation of the flight. For example, you might choose to divert or execute a simulated forced landing.
- Keep in mind the mission purpose assigned by your instructor when making decisions throughout the flight lesson. Mission purposes include:
  - Business trips.
  - Family vacations.
  - Pleasure flights with friends.
  - Flights with another pilot to maintain proficiency.
  - Training flights with an instructor.
- Take into account the following variables that your instructor specifies for the scenario when managing risk and making decisions:
  - Weather conditions enroute, at the destination, or at possible diversion airports.
  - Airport environment, such as runway length and conditions and services.
  - Availability of ATC services.
  - Terrain in the area.

- **Situational Awareness.** You should be proficient in:
  - Explaining the causes of CFIT and how to use resources in the aircraft to avoid CFIT situations.
  - Using SOPs that include avionics and aircraft configurations, flow patterns, and risk assessment checks.
  - Monitoring techniques that help you prevent complacency and maintain situational awareness.

### Using the Aeronautical Decision Making (ADM) Process

You should be proficient in using SRM tools and the aeronautical decision making process to make and implement effective decisions under normal circumstances during each phase of flight and while executing abnormal and emergency procedures.

## Legs 1, 2, and 3 (VFR or IFR)

### Problem Solving

Be prepared to make effective decisions regarding situations that are not as clear-cut as abnormal and emergency operations. The following are examples of situations that you should be able to manage safely:

- Subtle changes in weather conditions occur, such as a gradual lowering of the ceiling and visibility, strong surface winds, or increasing turbulence and wind shear.
- The destination runway is closed due to a disabled aircraft.
- An increasing headwind or diversion around weather might lead to a fuel-critical situation.
- The PFD is flickering and at times is unreadable.
- The oil temperature is slowly rising.
- The engine is running rough.
- You are unable to contact ATC.
- A passenger is feeling ill.

### Abnormal and Emergency Procedures

Be prepared to make a decision and possibly implement a diversion in the following situations:

- PFD failure
- Inadvertent IMC encounter
- ALT 1 failure
- Inadvertent icing encounter
- Low oil pressure annunciation
- In-flight cabin fire

Consider CAPS deployment as an option in the following situations:

- A mid-air collision or airframe structural failure prevents control of the aircraft.
- Loss of control, such as from entering a spin.
- Executing a forced landing over rough or mountainous terrain, over water beyond gliding distance to land, in ground fog, or at night.

## System Safety

### Managing Risk

You should be proficient at identifying and managing risk under normal circumstances during each phase of flight and while executing abnormal and emergency procedures.

### Using Single-Pilot Resource Management (SRM) Tools

- **PIC Responsibilities.** You should be proficient in:
  - Evaluating your own performance and determining personal limitations.
  - Designating pilot and copilot responsibilities for tasks.
  - Explaining the importance of scheduling time after training to increase their pilot knowledge and skills.
- **Resource Use.** You should be proficient in:
  - Operating the aircraft's equipment, including all the essential avionics features.
  - Using tools, such as Internet weather services, electronic charting, and flight planning programs to effectively prepare for flights.
  - Using external resources, such as ATC, for weather information and assistance in abnormal and emergency situations.
- **Workload Management.** You should be proficient in:
  - Determining the most effective methods (do-lists or flow patterns) to perform tasks based on the SOPs during each phase of flight.
  - Engaging the autopilot to effectively accomplish tasks during periods of high workload.
  - Using the equipment operating levels effectively for specific situations and recognize when to shed tasks when overloaded.
- **Effective Communication.** You should be proficient in:
  - Setting up standard radio configurations.
  - Performing passenger, takeoff, and approach briefings.
  - Keeping a sterile cockpit while involved in taxi, takeoff, landing, and all flight operations except cruise flight.

## Flight Workshop 6–Final Evaluation

### Scenario

*VFR (IFR Option) three-leg cross-country flight 2.0 to 2.5 hours*

### Plan

Use the following guidelines to plan and execute the flight:

- Plan a cross-country flight with legs long enough to complete the normal flight procedures for each phase of flight and to have sufficient time to practice abnormal and emergency procedures on each leg (at least 30 to 45 minutes).
- Be prepared to perform the proper procedures for each situation and to make and implement decisions regarding the continuation of the flight. For example, you might choose to divert or execute a simulated forced landing.
- Keep in mind the mission purpose assigned by your instructor when making decisions throughout the flight lesson. Mission purposes include:
  - Business trips.
  - Family vacations.
  - Pleasure flights with friends.
  - Flights with another pilot to maintain proficiency.
  - Training flights with an instructor.
- Take into account the following variables that your instructor specifies for the scenario when managing risk and making decisions:
  - Weather conditions enroute, at the destination, or at possible diversion airports.
  - Airport environment, such as runway length and conditions and services.
  - Availability of ATC services.
  - Terrain in the area.

- **Workload Management.** You should be proficient in:
  - Determining the most effective methods (do-lists or flow patterns) to perform tasks based on the SOPs during each phase of flight.
  - Engaging the autopilot to effectively accomplish tasks during periods of high workload.
  - Using the equipment operating levels effectively for specific situations and recognize when to shed tasks when overloaded.
- **Effective Communication.** You should be proficient in:
  - Setting up standard radio configurations.
  - Performing passenger, takeoff, and approach briefings.
  - Keeping a sterile cockpit while involved in taxi, takeoff, landing, and all flight operations except cruise flight.
- **Situational Awareness.** You should be proficient in:
  - Explaining the causes of CFIT and how to use resources in the aircraft to avoid CFIT situations.
  - Using SOPs that include avionics and aircraft configurations, flow patterns, and risk assessment checks.
  - Monitoring techniques that help you prevent complacency and maintain situational awareness.

### Using the Aeronautical Decision Making (ADM) Process

You should be proficient in using SRM tools and the aeronautical decision making process to make and implement effective decisions under normal circumstances during each phase of flight and while executing abnormal and emergency procedures.

## Legs 1, 2, and 3 (VFR or IFR)

### Alternator 1 Failure:

- Monitor the annunciator panel as well as the avionics during the flight so you can recognize warning lights and advisories indicating malfunctions.
- Use resources such as the MFD Checklist page to ensure you accomplish all the steps in the abnormal procedure.
- Use the autopilot to ease workload when dealing with an abnormal situation.
- If alternator 1 does not reset, you must implement a decision about what equipment to switch off and whether to continue to the original destination or divert based on the weather conditions and available alternate airports.
- Follow the ADM process including correctly defining the problem, and continuing to monitor the situation after you implement a decision.

### Problem Solving:

Be prepared to make effective decisions regarding situations that are not as clear-cut as abnormal and emergency operations. The following are examples of situations that you should be able to manage safely:

- Subtle changes in weather conditions occur, such as a gradual lowering of the ceiling and visibility, strong surface winds, or increasing turbulence and wind shear.
- The destination runway is closed due to a disabled aircraft.
- An increasing headwind or diversion around weather might lead to a fuel-critical situation.
- The PFD is flickering and at times is unreadable.
- The oil temperature is slowly rising.
- The engine is running rough.
- You are unable to contact ATC.
- A passenger is feeling ill.

### PFD Failure:

- Pull the PFD circuit breakers as part of the procedure to continue using the autopilot.
- If you are instrument-rated in IFR conditions, take advantage of a GPS approach using the autopilot.
- In addition to performing the correct emergency procedure, you must make and implement a decision regarding whether to continue to the original destination or divert based on the weather conditions and available alternate airports.
- Follow the ADM process including correctly defining the problem, and continuing to monitor the situation after you implement a decision.

## System Safety

### Managing Risk

You should be proficient at identifying and managing risk under normal circumstances during each phase of flight and while executing abnormal and emergency procedures.

### Using Single-Pilot Resource Management (SRM) Tools

- **PIC Responsibilities.** You should be proficient in:
  - Evaluating your own performance and determining personal limitations.
  - Designating pilot and copilot responsibilities for tasks.
  - Explaining the importance of scheduling time after training to increase their pilot knowledge and skills.
- **Resource Use.** You should be proficient in:
  - Operating the aircraft's equipment, including all the essential avionics features.
  - Using tools, such as Internet weather services, electronic charting, and flight planning programs to effectively prepare for flights.
  - Using external resources, such as ATC, for weather information and assistance in abnormal and emergency situations.