

**SECTION 15****PO 130 – PARTICIPATE IN AVIATION ACTIVITIES**

1. **Performance:** Participate in Aviation Activities
2. **Conditions:**
  - a. Given:
    - (1) Model airplane template,
    - (2) Thumbtack,
    - (3) Small bull clip,
    - (4) Scissors,
    - (5) Glue,
    - (6) Markers,
    - (7) *On Canadian Wings* DVD,
    - (8) Supervision, and
    - (9) Assistance as required.
  - b. Denied: Nil.
  - c. Environmental: Classroom or training area large enough to accommodate the entire group.
3. **Standard:** The cadets will participate in aviation activities, to include:
  - a. identifying aircraft as military, civilian and cadet aircraft,
  - b. describing the main components of an airplane,
  - c. constructing a model airplane, and
  - d. discussing aviation history by watching *On Canadian Wings*.
4. **Remarks:** Nil.
5. **Complementary Material:**
  - a. Complementary material associated with PO 130 is designed to enhance the cadets' knowledge of aviation through a number of activities:
    - (1) EO C130.01 (Participate in a Walk-Around Aircraft Inspection),
    - (2) EO C130.02 (Identify International Aircraft),
    - (3) EO C130.03 (Watch an *On Canadian Wings* Segment),
    - (4) EO C130.04 (Tour a Local Aviation Museum), and
    - (5) EO C130.05 (Attend a Local Air Show); and
  - b. Complementary training under PO 130 is limited to a total of nineteen periods; squadrons are not required to use all nineteen periods.

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**EO M130.01 – IDENTIFY AIRCRAFT AS MILITARY, CIVILIAN AND CADET**

1. **Performance:** Identify Aircraft as Military, Civilian and Cadet
2. **Conditions:**
  - a. Given:
    - (1) Supervision, and
    - (2) Assistance as required.
  - b. Denied: Nil.
  - c. Environmental: Classroom or training area large enough to accommodate the entire group.
3. **Standard:** The cadet shall identify examples of military, civilian and cadet aircraft.
4. **Teaching Points:**

TP	Description	Method	Time	Refs
TP1	Identify types of Canadian military aircraft, to include: <ol style="list-style-type: none"> <li>a. Canadian carriers;</li> <li>b. Canadian fighters;</li> <li>c. Canadian helicopters;</li> <li>d. Canadian trainers; and</li> <li>e. Canadian patrol.</li> </ol>	Interactive Lecture	15 min	A3-007
TP2	Identify civilian aircraft, to include: <ol style="list-style-type: none"> <li>a. Cessna 172;</li> <li>b. Piper PA-28 Cherokee;</li> <li>c. Boeing 737;</li> <li>d. Airbus A320; and</li> <li>e. Bombardier 415.</li> </ol>	Interactive Lecture	5 min	A3-007
TP3	Identify cadet aircraft, to include: <ol style="list-style-type: none"> <li>a. Schweitzer – SGS 2-33A Glider;</li> <li>b. Bellanca Scout – 8GCBC;</li> <li>c. L19 Bird Dog – Cessna 305; and</li> <li>d. Cessna 182P.</li> </ol>	Interactive Lecture	5 min	A3-007
TP4	Conduct an aircraft identification game.	Game	25 min	

5. **Time:**

a. Introduction / Conclusion:	10 min
b. Interactive Lecture:	25 min
c. Game:	25 min
d. Total:	60 min

6. **Substantiation:**

- a. An interactive lecture was chosen for TPs 1–3 as it orients the cadets to aircraft, generates interest and presents basic information.
- b. A game was selected for TP 4 as it is a fun and challenging way to confirm the cadets' knowledge of the material.

7. **References:** A3-007 Canadian Forces. (2010). Retrieved October 17, 2011, from <http://www.airforce.forces.gc.ca/v2/equip/index-eng.asp>

8. **Training Aids:**

- a. Presentation aids (eg, whiteboard / flipchart / OHP / multimedia projector) appropriate for the training area, and
- b. Power point / overheads / posters.

9. **Learning Aids:** Aircraft identification matching cards game.

10. **Test Details:** Nil.

11. **Remarks:**

- a. Prior to the lesson, review all aircraft to determine if any have been acquired for / retired from service.
- b. Cadet aircraft in TP 3 refers to aircraft currently owned by the cadet program and does not include other aircraft cadets may use on Power Flying Scholarships (eg. Cessnas, Katanas).

**EO M130.02 – DESCRIBE THE MAIN COMPONENTS OF AN AIRPLANE**

1. **Performance:** Describe the Main Components of an Airplane
2. **Conditions:**
  - a. Given:
    - (1) Supervision, and
    - (2) Assistance as required.
  - b. Denied: Nil.
  - c. Environmental: Classroom or training area large enough to accommodate the entire group.
3. **Standard:** The cadets shall identify and describe the five major components of an airplane, to include:
  - a. fuselage,
  - b. wings,
  - c. empennage,
  - d. landing gear, and
  - e. propulsion system.
4. **Teaching Points:**

TP	Description	Method	Time	Refs
TP1	Define aircraft and airplane. Describe the fuselage.	Interactive Lecture	5 min	A3-001 (p. 9)
TP2	Describe the wings, to include: <ol style="list-style-type: none"> <li>a. the wing root;</li> <li>b. the wing tip;</li> <li>c. the leading edge;</li> <li>d. the trailing edge;</li> <li>e. ailerons; and</li> <li>f. flaps.</li> </ol>	Interactive Lecture	5 min	A3-001 (pp. 10–11)
TP3	Describe the empennage, to include: <ol style="list-style-type: none"> <li>a. horizontal stabilizer;</li> <li>b. elevator;</li> <li>c. vertical stabilizer; and</li> <li>d. rudder.</li> </ol>	Interactive Lecture	5 min	A3-001 (p. 11)
TP4	Describe the landing gear.	Interactive Lecture	5 min	A3-001 (pp. 12–13)

TP	Description	Method	Time	Refs
TP5	Describe the propulsion system.	Interactive Lecture	5 min	A3-001 (p. 12)

5. **Time:**

- |    |                            |        |
|----|----------------------------|--------|
| a. | Introduction / Conclusion: | 5 min  |
| b. | Interactive Lecture:       | 25 min |
| c. | Total:                     | 30 min |

6. **Substantiation:** An interactive lecture was chosen for this lesson as it allows the cadets to identify and describe the major components of an airplane and it generates interest in the subject.

7. **References:**

- a. A3-001 A-CR-CCP-263/PT-001 *From the ground up: Millennium edition*. (2000). Ottawa, ON: Aviation Publishers Co. Limited.
- b. C3-346 Bush-Planes.com. *Best bush planes: flying*. Retrieved December 14, 2011 from <http://www.bush-planes.com/index.html>
- c. C3-347 Free Online Private Pilot Ground School. (2007). *Private Pilot Ground School*. Retrieved December 14, 2011 from <http://www.free-online-private-pilot-ground-school.com/aircraft-structure.html>
- d. C3-348 FAA-Aircraft-Certification.com. *Your complete guide to FAA aircraft certification*. (2007). Retrieved October 17, 2011, from <http://www.faa-aircraft-certification.com/faa-definitions.html#H>

8. **Training Aids:** Presentation aids (eg, whiteboards / flipcharts / OHP / multimedia projector) appropriate for the training area.

9. **Learning Aids:** Puzzles of aircraft parts.

10. **Test Details:** Nil.

11. **Remarks:** Nil.

**EO M130.03 – CONSTRUCT A MODEL AIRPLANE**

1. **Performance:** Construct a Model Airplane
2. **Conditions:**
  - a. Given:
    - (1) Model airplane template,
    - (2) Thumbtack,
    - (3) Small bull clip,
    - (4) Scissors,
    - (5) Glue,
    - (6) Markers,
    - (7) Supervision, and
    - (8) Assistance as required.
  - b. Denied: Nil.
  - c. Environmental: Classroom or training area large enough to accommodate the entire group.
3. **Standard:** The cadets shall construct a model airplane, to include:
  - a. fuselage,
  - b. wings,
  - c. empennage,
  - d. landing gear, and
  - e. propeller.

4. **Teaching Points:**

TP	Description	Method	Time	Refs
TP1	Construct a model airplane.	In-Class Activity	45 min	C3-017 (pp. 42–45)
TP2	Participate in a group discussion on parts of an airplane and constructing the model airplane.	Group Discussion	5 min	A3-001 (pp. 9–13)

5. **Time:**

- |                               |        |
|-------------------------------|--------|
| a. Introduction / Conclusion: | 10 min |
| b. In-Class Activity:         | 45 min |
| c. Group Discussion:          | 5 min  |
| d. Total:                     | 60 min |

6. **Substantiation:**

- a. An in-class activity was chosen for TP 1 as it is an interactive way to present the content and the construction of a model airplane.
- b. A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge about building a model airplane.

7. **References:**

- a. A3-001 A-CR-CCP-263/PT-001 *From the ground up: Millennium edition*. (2000). Ottawa, ON: Aviation Publishers Co. Limited.
- b. C3-017 ISBN 1-895569-23-0 Schmidt, N. (1998). *Fabulous paper gliders*. New York, NY: Sterling Publishing.

8. **Training Aids:** Completed model airplane.

9. **Learning Aids:**

- a. Model airplane template,
- b. List of instructions,
- c. Thumb tack,
- d. Small bull clip,
- e. Scissors,
- f. Glue, and
- g. Markers.

10. **Test Details:** Nil.

11. **Remarks:** Nil.



**EO M130.04 – WATCH AN ON CANADIAN WINGS SEGMENT**

1. **Performance:** Watch an *On Canadian Wings* Segment
2. **Conditions:**
  - a. Given:
    - (1) *On Canadian Wings* DVD
    - (2) TV,
    - (3) DVD player,
    - (4) Supervision, and
    - (5) Assistance as required.
  - b. Denied: Nil.
  - c. Environmental: Classroom or training area large enough to accommodate the entire group.
3. **Standard:** The cadets shall watch an *On Canadian Wings* segment.
4. **Teaching Points:** Watch one of the following *On Canadian Wings* DVD segments:
  - a. Canada's First Flight,
  - b. Aerial Warfare,
  - c. The Birth of a National Air Force,
  - d. The Aerodrome of Democracy,
  - e. Some of the Few,
  - f. Bombs over Europe,
  - g. Fast Times for the Golden Jets,
  - h. A Time of Transition, or
  - i. There Shall be Wings.
5. **Time:**

a. Introduction / Conclusion:	5 min
b. In-Class Activity:	25 min
c. Total:	30 min
6. **Substantiation:** An in-class activity was chosen as it is an interactive way to present the content.
7. **References:** C3-039 Squires, C. (1999). *On Canadian Wings* [Series]. Winnipeg, MB: PWGSC.
8. **Training Aids:**
  - a. Presentation aids (eg, whiteboard / flipchart / OHP / multimedia projector) appropriate for the training area,
  - b. TV,

- c. DVD player, and
- d. *On Canadian Wings* DVD.

9. **Learning Aids:** Nil.

10. **Test Details:** Nil.

11. **Remarks:**

- a. The instructor shall choose only one segment to watch during the mandatory period.
- b. The instructor may choose to view and discuss additional segments as part of complementary training, C130.03 (Watch an *On Canadian Wings* Segment).

**EO C130.01 – PARTICIPATE IN A WALK-AROUND AIRCRAFT INSPECTION**

1. **Performance:** Participate in a Walk-Around Aircraft Inspection
2. **Conditions:**
  - a. Given:
    - (1) Aircraft,
    - (2) Operator’s manual inspection list for the aircraft type,
    - (3) Supervision, and
    - (4) Assistance as required.
  - b. Denied: Nil.
  - c. Environmental: Training area large enough to accommodate the entire group.
3. **Standard:** The cadets shall participate in a walk-around aircraft inspection, to include:
  - a. identifying components of an airplane; and
  - b. promoting an understanding of aviation safety and procedures.
4. **Teaching Points:**

TP	Description	Method	Time	Refs
TP1	Supervise a walk-around aircraft inspection.	In-Class Activity	20 min	A3-001 (pp. 281–283)
TP2	Lead a group discussion about what the cadets learned and found interesting.	Group Discussion	5 min	

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. In-Class Activity: 20 min
  - c. Group Discussion: 5 min
  - d. Total: 30 min
6. **Substantiation:**
  - a. An in-class activity was chosen for TP 1 as it is an interactive way to present a walk-around aircraft inspection.
  - b. A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge about and experiences with a walk-around aircraft inspection.

7. **Reference:** A3-001 A-CR-CCP-263/PT-001 *From the ground up: Millennium edition*. (2000). Ottawa, ON: Aviation Publishers Co. Limited.
8. **Training Aids:** Small aircraft.
9. **Learning Aids:** Small aircraft.
10. **Test Details:** Nil.
11. **Remarks:** This lesson should be conducted by a qualified pilot / in conjunction with familiarization flying.

**EO C130.02 – IDENTIFY INTERNATIONAL AIRCRAFT**

1. **Performance:** Identify International Aircraft
2. **Conditions:**
  - a. Given:
    - (1) Supervision, and
    - (2) Assistance as required.
  - b. Denied: Nil.
  - c. Environmental: Classroom or training area large enough to accommodate the entire group.
3. **Standard:** The cadet shall identify aircraft, to include:
  - a. American aircraft,
  - b. British aircraft, and
  - c. Russian aircraft.

4. **Teaching Points:**

TP	Description	Method	Time	Refs
TP1	Describe American aircraft.	Interactive Lecture	15 min	C3-009
TP2	Describe British aircraft.	Interactive Lecture	5 min	C3-010
TP3	Describe Russian aircraft.	Interactive Lecture	5 min	C3-011 C3-012

5. **Time:**
  - a. Introduction / Conclusion: 5 min
  - b. Interactive Lecture: 25 min
  - c. Total: 30 min
6. **Substantiation:** An interactive lecture method was chosen for this lesson as it orients the cadets to identify international aircraft and to generate interest and present basic or background material.
7. **References:**
  - a. C3-009 *Official Site of the U.S. Air Force*. Retrieved October 26, 2011, from <http://www.af.mil/information/factsheets/index.asp>
  - b. C3-010 *Royal Air Forces*. (2011). Retrieved October 26, 2011, from <http://www.raf.mod.uk/equipment>

- c. C3-011 *Federation of American Scientists*. (2006). Retrieved March 21, 2006, from <http://www.fas.org/nuke/guide/russia/airdef/mig-29.htm>
  - d. C3-012 *Antonov Airlines*. (2010). Retrieved October 26, 2011, from <http://www.antonov.com/products/index.xml>
8. **Training Aids:**
- a. Presentation aids (eg, whiteboard / flipchart / OHP / multimedia projector) appropriate for the training area, and
  - b. Pictures of international aircraft.
9. **Learning Aids:** Pictures of International aircraft.
10. **Test Details:** Nil.
11. **Remarks:** Nil.

**EO C130.03 – WATCH AN ON CANADIAN WINGS SEGMENT**

1. **Performance:** Watch an *On Canadian Wings* Segment
2. **Conditions:**
  - a. Given:
    - (1) *On Canadian Wings* DVD,
    - (2) TV,
    - (3) DVD player,
    - (4) Supervision, and
    - (5) Assistance as required.
  - b. Denied: Nil.
  - c. Environmental: Classroom or training area large enough to accommodate the entire group.
3. **Standard:** The cadets shall watch an *On Canadian Wings* segment.
4. **Teaching Points:** Watch one of the following *On Canadian Wings* DVD segments:
  - a. Canada's First Flight,
  - b. Aerial Warfare,
  - c. The Birth of a National Air Force,
  - d. The Aerodrome of Democracy,
  - e. Some of the Few,
  - f. Bombs over Europe,
  - g. Fast Times for the Golden Jets,
  - h. A Time of Transition, or
  - i. There Shall be Wings.
5. **Time:**

a. Introduction / Conclusion:	5 min
b. In-Class Activity:	25 min
c. Total:	30 min
6. **Substantiation:** An in-class activity was chosen as it is an interactive way to present the content.
7. **References:** C3-039 Squires, C. (1999). *On Canadian Wings* [Series]. Winnipeg, MB: PWGSC.
8. **Training Aids:**
  - a. Presentation aids (eg, whiteboard / flipchart / OHP / multimedia projector) appropriate for the training area,
  - b. TV,

- c. DVD player, and
  - d. *On Canadian Wings* DVD.
9. **Learning Aids:** Nil.
10. **Test Details:** Nil.
11. **Remarks:** One segment will already have been viewed in M130.04 (Watch an *On Canadian Wings* Segment) and squadrons may choose other segments for viewing during complementary training. A thirty-minute period is required for each additional segment selected. To view all segments, eight additional periods are required. It is not necessary to watch all the segments.



**EO C130.04 – TOUR A LOCAL AVIATION MUSEUM**

1. **Performance:** Tour a Local Aviation Museum
2. **Conditions:**
  - a. Given:
    - (1) Supervision, and
    - (2) Assistance as required.
  - b. Denied: Nil.
  - c. Environmental: Training area large enough to accommodate the entire group.
3. **Standard:** The cadet shall tour a local aviation museum, to include:
  - a. identifying different aviation components; and
  - b. promoting an understanding of aviation history.
4. **Teaching Points:** The following points are to be addressed during the tour, to include:
  - a. the aircraft seen (military, civilian or cadet),
  - b. the main components of an airplane, and
  - c. local aviation history, to include:
    - (1) aviation figures,
    - (2) notable aviation events, and
    - (3) aircraft featured.
5. **Time:**
  - a. Field Trip: 90 min
  - b. Total: 90 min

6. **Substantiation:** A field trip was chosen for this lesson as it reinforces aviation history knowledge in a real-life setting.
7. **References:** Nil.
8. **Training Aids:** Nil.
9. **Learning Aids:** Nil.
10. **Test Details:** Nil.
11. **Remarks:**
  - a. There is no Instructional Guide for this EO.
  - b. If there is no aviation museum in your community, check with your local museum or airport authority to determine if they have an aviation history display.
  - c. Cadet squadron personnel are to determine whether a guide will escort the group or if an instructor from the squadron will be responsible for conducting the tour. The tour guide / squadron instructor should address the points outlined in the teaching points.

**EO C130.05 – ATTEND A LOCAL AIR SHOW**

1. **Performance:** Attend a Local Air Show
2. **Conditions:**
  - a. Given:
    - (1) Supervision, and
    - (2) Assistance as required.
  - b. Denied: Nil.
  - c. Environmental: Training area large enough to accommodate the entire group.
3. **Standard:** The cadet shall attend a local air show, to include:
  - a. identifying different aviation components; and
  - b. promoting an understanding of the civilian and military aviation communities.
4. **Teaching Points:** The following points are to be identified, to include:
  - a. the location of major aerodrome components,
  - b. the aircraft seen (military, civilian or cadet),
  - c. the main components of an airplane,
  - d. the use of the phonetic alphabet during communications,
  - e. local aviation history, to include:
    - (1) notable local aviation figures,
    - (2) notable local aviation events; and
  - f. aviation careers present at the air show, and
  - g. if the Snowbirds are present:
    - (1) the type of aircraft (Canadair CT-114 Tutor jet),
    - (2) the official name,
    - (3) the number of aircraft on the team,
    - (4) the pilots and technicians on the team, and
    - (5) interesting facts about their performances.
5. **Time:**
  - a. Field Trip: 180 min
  - b. Total: 180 min

6. **Substantiation:** A field trip was chosen for this lesson as it reinforces aviation and aircraft knowledge in a real-life setting.
7. **References:** Nil.
8. **Training Aids:** Nil.
9. **Learning Aids:** Nil.
10. **Test Details:** Nil.
11. **Remarks:**
  - a. There is no instructional guide for this EO.
  - b. Cadet squadron personnel are to determine an itinerary for the cadets to follow during the air show. The tour guide / squadron instructor should address the points outlined in the teaching points.