

**SECTION 18****PO 170 – DISCUSS AIRCRAFT MAINTENANCE AND MANUFACTURING**

1. **Performance:** Discuss Aircraft Maintenance And Manufacturing
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 discuss and participate in aircraft maintenance and manufacturing activities in order to have a general understanding of the aircraft maintenance and manufacturing industry.
4. **Remarks:** Nil.
5. **Complementary Material:** Complementary material under PO 170 is designed to enhance the cadets' knowledge of the aircraft maintenance and manufacturing industry through a number of activities:
  - a. EO C170.01 (Watch *How It's Made* Segments); and
  - b. EO C170.02 (Tour a local Aviation Maintenance Facility).

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**EO C170.01 – WATCH HOW IT’S MADE SEGMENTS**

1. **Performance:** Watch *How It’s Made* Segments
2. **Conditions:**
  - a. Given:
    - (1) *How It’s Made* DVD,
    - (2) Supervision, and
    - (3) Assistance as required.
  - b. Denied: Nil.
  - c. Environmental: Classroom or training area large enough to accommodate the entire group.
3. **Standard:** The cadet shall watch *How It’s Made* segments to stimulate an interest in the aircraft maintenance and manufacturing industry.
4. **Teaching Points:**

TP	Description	Method	Time	Refs
TP1	Discuss major components of the aircraft maintenance and manufacturing industry.	Interactive Lecture	5 min	C3-345 Transport Canada
TP2	Have the cadets watch and discuss <i>How It’s Made</i> segments, to include: <ol style="list-style-type: none"> <li>a. what is involved in the manufacturing of an aircraft; and</li> <li>b. what is involved in the maintenance of an aircraft.</li> </ol>	In-Class Activity	50 min	C3-288

5. **Time:**

a. Introduction / Conclusion:	5 min
b. Interactive Lecture:	5 min
c. In-Class Activity:	50 min
d. Total:	60 min
6. **Substantiation:**
  - a. An interactive lecture was chosen for TP 1 as it allows the instructor to present basic information to the cadets.
  - b. An in-class activity was chosen for TP 2 as it is an interactive way to provoke thought and stimulate interest among cadets.

7. **References:**

- a. C3-288 Production MAJ, *How It's Made* capsules, Canada.
- b. C3-245 Transport Canada. (2011). *Canadian Aviation Regulations 2011-1*. Retrieved October 25, 2011, from <http://www.tc.gc.ca/eng/civilaviation/regserv/cars/part1-subpart1-1104.htm>

8. **Training Aids:**

- a. Presentation aids (e.g. whiteboard / flipcharts / OHP / multimedia projector) appropriate for the training area,
- b. *How It's Made* DVD,
- c. DVD player, and
- d. TV or multimedia projector.

9. **Learning Aids:** Nil.

10. **Test Details:** Nil.

11. **Remarks:** Review the *How It's Made* segments prior to the lesson and determine which ones best meet the training objectives of the squadron.

**EO C170.02 – TOUR A LOCAL AVIATION MAINTENANCE FACILITY**

1. **Performance:** Tour a Local Aviation Maintenance Facility
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 tour a local aviation maintenance facility, to include:
  - a. identifying different components of aviation maintenance; and
  - b. identifying aircraft maintenance careers and opportunities.
4. **Teaching Points:** The following points are to be addressed during the tour, to include:
  - a. aircraft maintenance engineers and technicians and their role at the maintenance facility,
  - b. procedures and daily operation of the facility,
  - c. main components of an airplane,
  - d. career opportunities in the field, to include:
    - (1) training, and
    - (2) local aviation companies and employers.
5. **Time:**

a. Field Trip:	90 min
b. Total:	90 min
6. **Substantiation:** A field trip was chosen to reinforce learning through observing practical application of instructional material previously taught. The cadets participate in a structured and planned activity where they witness the application of the learning objectives with concrete examples.
7. **References:** Nil.
8. **Training Aids:** Nil.
9. **Learning Aids:** Nil.
10. **Test Details:** Nil.
11. **Remarks:** There is no instructional guide for this EO.