

open book exam 2012

AIRMAINTENANCE UPDATE is Transport Canada-approved for recurrent training. This is our 10th exam, published annually in our June-July anniversary issue, in accordance with our agreement with Transport Canada. The exam consists of questions based on articles appearing in all six issues from the past year: June-July 2011, Aug.-Sept. 2011, Oct.-Nov. 2011, Dec.-Jan. 2012, Feb.-March 2012, and April-May 2012. You will require all six issues in order to write the exam. If you are missing any issues, call us at (604) 214-9824 or email us at amu.magazine@telus.net, and we will mail them to you at a cost of \$6.95 per magazine postpaid.

A 75% pass rate is required in order to qualify for your 16 hours toward RT. The questions in the exam are arranged in order of their appearance in AirMaintenance Update according to issue and individual article. The exam can also be downloaded as an Adobe Acrobat PDF file via our website: www.amumagazine.com. Answers should be printed in the spaces provided and must be drawn directly from the text of the articles in order to be considered correct. All questions requiring a longer answer than the space allowed must be typewritten on a separate sheet of paper. Completed exams should be submitted to: AirMaintenance Update, Suite 2 – 203, 4360 Agar Drive, Richmond, BC, V7B 1A3.

The exam must be postmarked no later than October 31, 2012. We will mark your test and return it along with documentation supporting your submission. We will keep a copy of your written test and results on file for future reference, and a copy will be forwarded to Transport Canada. Once again, good luck to all participants!

Your Contact Information

For a prompt and accurate response to your 2012 Exam answers, please fill in the following information (print clearly)

Name

Address

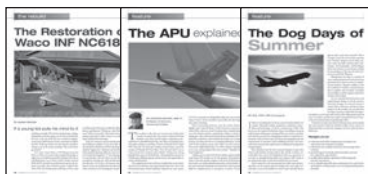
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Phone

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June – July 2011 (Volume 10/Issue 1)



The Dog Days of Summer

1) Name five signs of heat-associated problems a person might see/feel.

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2.
3.
4.
5.

The APU Explained

2) What are auxiliary power units?

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3) When are APUs most extensively?

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4) If an APU equipped aircraft has self-contained airstairs is ground support required for its operation?

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5) Is a constant speed drive required on an APU to maintain a steady 400 Hz electrical output?

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6) Name two disadvantages to using a main engine to provide electrical power during ground operations.

1.
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2.
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7) Why, in some cases, can an APU be used to power an aircraft's entire electrical system on the ground but only a portion of it in flight?

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Aug. – Sept. 2011 (Volume 10/Issue 2)



Got a Good Line?

1) Name two types of aircraft lines.

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2) Name three things that determine the type of line that will be used in a particular aircraft system.

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3.
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3) Name two materials that hard lines may be made of.

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2.
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4) Are flexible lines life limited?

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5) Why do flexible lines require a more detailed inspection than rigid lines?

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6) Who determines line life limits?

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7) Name five maintenance procedures that are critical to ensuring reliability and durability of hose assemblies.

1.
2.
3.
4.
5.

8) Name two sources of maintenance data for hoses if the manufacturer's data cannot be found.

1.
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2.
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9) Name 11 inspection points for a flexible hose.

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2.
3.
4.
5.
5.

- 7.
- 8.
- 9.
- 10.
- 11.

10) If the manufacturer’s recommendations are not available, how often must flammable fluid carrying hoses in and engine compartment be replaced?

11) How often must the above hoses be replaced if they are installed in an airframe?

Cockpit Flight Instruments Explained

12) What is used to measure the air pressures outside of an aircraft?

13) What term is used for the pressure of the still, ambient pressure outside an aircraft?

14) What term is used for the dynamic, ram air pressure?

15) What two basic instruments use only static pressure?

16) Which basic instrument uses both pitot and static pressure?

17) Which mechanical instrument is used as a stable source of heading indication?

18) The addition of what device turns a compass system into a slaved compass system?

19) What type of gyro is used in an attitude indicator?

20) What type of gyro does a turn and bank instrument use?

21) If the ILS needles are deviated UP and to the LEFT, where is the aircraft?

The Dope on Fabric

22) State the advantages of Ceconite fabric over earlier cotton and linen fabrics.

23) What is the typical life of cotton aircraft covering?

24) What is used to shrink Ceconite fabric?

25) When covering an older aircraft with a newer synthetic fabric, what legal document is required?

26) How can the system which is presently installed on an aircraft be determined?

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27) What tool should be used to shrink Ceconite fabric?

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28) What device is used to determine the strength of a fabric covering?

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5) Who determines which chemicals can be used to wash a compressor?

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6) Does the approved list of these chemicals vary from manufacturer to manufacturer?

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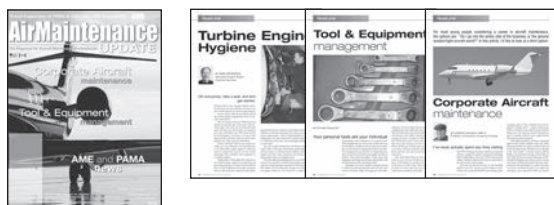
7) Should tap water be used for compressor washes?

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8) What are the three steps of a typical compressor wash?

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Oct. – Nov. 2011 (Volume 10/Issue 3)



Turbine Engine Hygiene

1) State two reasons why compressor/engine washes are necessary.

- 1.
- 2.

2) State the difference between an engine wash and a rinse.

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3) What is the effect of the accumulation of airborne contaminants on turbine engine components?

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4) What can be the effect of this contamination in high salt operating environments?

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9) When should a compressor wash be performed?

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10) Name the two types of cleaning maneuvers.

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Tool and Equipment Management

11) State two things a tool left in an aircraft can interfere with.

- 1.
- 2.

12) Name a good starting point for managing your tools..

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12) What does automatic gain control (ACG) allow?

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Many Hands, One Signature

13) Does a maintenance release release an entire aircraft in terms or the pledge of airworthiness?

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14) What are the two main elements of a maintenance release?

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15) What is a conditional maintenance release?

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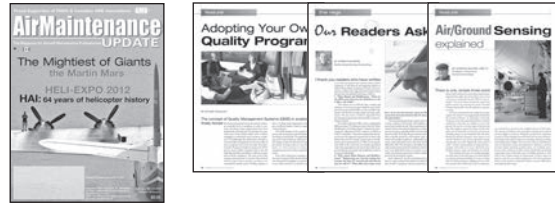
16) In the above situation, what phrase must be entered as an extension or the maintenance release statement?

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17) When is an independent or dual inspection required?

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Feb. – March 2012 (Volume 10/Issue 5)



Air/Ground Sensing Explained

1) If a snag reported by flight crew cannot be duplicated on the ground, what should be checked if the snag could involve wiring or duct work?

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2) How is most air-ground sensing done?

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3) State two names of air/ground sensing switches.

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4) What is the effect of pulling the landing gear lights circuit breaker on an old Boeing?

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5) Could the amount of heat applied to anti-ice systems cause damage if applied on the ground?

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6) Aircraft damage can occur when the aircraft is tricked into flight mode but what can this also pose risk to?

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7) If an aircraft with fly-by-wire technology is tricked into flight mode while the engines are running, what might happen?

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4) The rotor of a gyro is mounted on pivoting rings. What are these rings called?

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5) What moves, in relation to the horizon, when an artificial horizon indicates a change of pitch?

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6) What cockpit instrument uses a gyro with a horizontal spin axis?

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7) How must a DG be periodically reset or corrected if an aircraft has a free compass system?

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April – May 2012 (Volume 10/Issue 6)



The Importance of Accurate Record-keeping

1) Will Transport Canada ever consider a job to be done if it is not recorded in an aircraft logbook?

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Gyroscopic Applications Explained

2) What, basically, is a gyro?

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3) What type of gyro is an artificial horizon?

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8) How is a DG reset if it is a slaved compass system?

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9) Name two ways a gyro may be driven.

1.
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2.
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10) On what type of platform are the accelerometers of an inertial navigation system (INS) mounted?

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11) What new technology is beginning to replace traditional gyro technology?

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