

Guidance Note

INTEGRATED COMMERCIAL PILOT TRAINING

TOPIC: Dangerous Goods

One of the required areas to be addressed in a flight training operations manual is dangerous goods. This amounts to little more than a clear direction not to carry dangerous goods that could take this form:

Flin Flon Flight Training Inc. does not have approval under the *Transportation of Dangerous Goods Regulations* for the carriage of dangerous goods.

It is a responsibility of the pilot-in-command of each flight to ensure that no dangerous goods are on board.

However, for training your commercial pilot students, one of the knowledge areas identified in the inventory of commercial pilot skill and knowledge is the handling of dangerous goods.

Commercial pilots need to be aware of dangerous goods hazards. They need to know about explosives, compressed gases, flammable liquids and other flammable hazards, oxygen rich material, oxidizers and organic peroxides, material affecting health, poisons and infectious substances, radioactive material, corrosive material, and miscellaneous hazards, such as magnetic materials.

To say that pilots need to be aware of all these hazards is not to say that they need to be experts in this area. But they do need a certain basic level of knowledge and, if they will be carrying dangerous goods, they must complete the training required under the *Transportation of Dangerous Goods Regulations*.

One of the most useful basic references on the subject of dangerous goods has been developed by the International Air Transport Association (IATA). This organization offers a “Dangerous Goods Primer” on its web site at this address:

<http://www.iata.org/cargo/dg/dgintro.htm> This primer can be downloaded and reproduced for your own use. IATA cautions that the primer “is only intended to introduce the concept of dangerous goods in transportation, the main requirements and the consequences....It is not a training course in dangerous goods.”

It is not a training course, but it is a very useful reference for helping build awareness about this important subject.

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TOPIC: Student Evaluation of Ground School

Given some guidance, students can provide useful feedback about the quality of instruction they are receiving. As adult learners, most of whom have a lot of recent experience in educational settings, this feedback can be important. It can help measure the quality of the training and the quality of the training service being provided. There are many ways to obtain this feedback. Here is an example of a simple numerical rating.

Rating Scale

1. *No improvement needed.*
2. *Very little improvement needed.*
3. *Improvement needed.*
4. *Considerable improvement needed.*

Rating	Does the instructor
	– make effective use of class time?
	– make clear the purpose of each class session and learning activity?
	– adjust the rate at which ideas are covered so you can understand them?
	– clarify the material that needs explanation?
	– wrap things up before moving on to a new topic?
	– assign useful reading?
	– maintain an atmosphere that encourages learning?
	– display enthusiasm in teaching the subject?
	– respond to questions raised by students?
	– inspire interest in the content of the course?
	– use a variety of teaching techniques?
	– ask thought-provoking questions?
	– get students to participate in class discussions or activities?
	– explain what is expected from each student?
	– make clear how student performance is to be evaluated?
	– keep you informed about how well you are doing?

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TOPIC: Flight and Duty Times

The issue of flight time and duty time limitations and rest periods is complex. Aspiring commercial pilots must learn about the limitations that apply to commercial air service operations and they must learn to operate within these limitations. For a flight training unit looking to establish a policy in this area, the first objective will be to prevent accidents due to fatigue. A second objective will be to ensure good teaching and learning. After all, an exhausted instructor is not an effective teacher, and a tired student is not an effective learner.

One of the requirements of an integrated program training manual is a statement of program constraints in terms of:

- maximum student training times
- restrictions in respect of duty periods for trainees
- duration of dual and solo flights at various stages
- maximum flying hours in any day/night period
- maximum number of training flights in any day/night
- minimum rest periods between duty periods

Any attempt to set out policy regarding flight and duty times would do well to stay within established and recognized definitions for such terminology as flight time, flight duty time, minimum rest, time free from duty, and split duty day. Some flight schools might wish to shape their own policies to better fit a flight training environment. As well, whatever system a school might want to use, it is important to have a system of record keeping to ensure that all trainees are operating within the school policy.

Flight Time

Every air operator is required to establish a system that monitors the flight time, flight duty time and rest periods of each of its flight crew members and to include in its company operations manual the details of that system. A flight school looking to establish its own limits would do well to start with CAR 700.15, that sets out broad limits for flight crew along the following lines:

- 1,200 hours in any 365 consecutive days;
- 300 hours in any 90 consecutive days;
- 120 hours in any 30 consecutive days;
- 60 hours in any 7 consecutive days; and
- 8 hours of flight time in any 24 consecutive hours when conducting single-pilot IFR flights (comparable to IFR instructing)

Flight Duty Time

"Flight Duty Time" means the total time that starts when a pilot

- reports for a flight;
- reports for standby that has a reporting time of one hour or less;
- performs any duty required by the company; or
- performs any duty delegated by the Minister of Transport; and
- finishes when the engine is turned off at the end of the final flight.

No air operator can assign a flight crew member for flight duty time, and no flight crew member can accept such an assignment, if the flight crew member's flight duty time will, as a result, exceed 14 consecutive hours in any 24 consecutive hours. For a flight training operator building a policy for the training manual, this is an example that is in place for other commercial air services.

Minimum Rest

"Minimum Rest" is a period of time in which the pilot is free from all duty, is not interrupted by the company, and is provided an opportunity to obtain not less than eight consecutive hours sleep, time for meals and personal hygiene, and time to travel to and from the rest facility.

Time spent completing any duties required by the company following flight duty time is not considered to be part of the minimum rest period.

Time Free From Duty

Time free from duty is an important element of any policy on duty time. For example, an air operator conducting aerial work or air taxi operations is required to provide pilots with at least one period of at least 24 consecutive hours free from duty as follows:

- 3 times within each 30 consecutive days; and
- 13 times within each 90 consecutive days.

Split Duty Day

Split duty days can happen in flight training operations. For example, a ground school class in the morning, or an early training flight, could be followed much later in the day by a night trip or a late ground school class. Operators will want to be on guard for this and set out a clear policy to guide students and staff. Making sure the pilot knows in advance about a split duty day is important. The "split" should give an opportunity for at least four hours of rest without interruption from the operator. Finally, the minimum rest period following the split duty day should be increased by an amount equal to the amount that the flight duty time was extended on the split day. When these conditions are met - in the case of an air operator - the flight duty time can be extended by one-half of the length of the required rest period to a maximum of three hours.

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TOPIC: Sightseeing Flights

CAR 700.02(4) allows the holder of a flight training unit operator certificate to conduct sightseeing flights under certain conditions. The pilot-in-command must hold a valid flight instructor rating in the appropriate category of aircraft. The sightseeing must be conducted in day VFR flight using a single-engined aircraft and there must be no more than nine passengers on board. An air operator offering sightseeing flights is subject to far more requirements (such as annual training and PPCs for flight crew) than a flight training operator, but this “let” is given on risk management principles.

A flight training unit that seeks to enhance its own safety management of sightseeing flights through a company directive would certainly want to call attention to the requirements of CAR 700.02(4) and to consider the procedures an air operator would apply to sightseeing and ensure that staff know the company expectations for passenger comfort.

A flight training unit directive on sightseeing might look like this:

1. The pilot-in-command shall be the holder of a valid flight instructor rating.
 2. The pilot-in-command shall meet all of the applicable recency and company training requirements.
 3. The aircraft shall be a single-engine aircraft.
 4. The entire flight shall be conducted within Canadian airspace.
 5. The point of departure shall be the normal base of operations, an approved sub-base or satellite base.
 6. The flight shall be restricted to Day VFR flight only.
 7. A load control form (weight & balance) shall be left at the base.
 8. A manifest listing the passenger names and a contact telephone number shall be left at the base.
 9. Flight watch/flight following shall be maintained by:
 - a duty person remaining at the base from the departure time until the flight has returned; or
 - filing a flight plan with ATS.
-
1. The flight shall return to the point of departure with no intermediate stops.

Passenger Comfort

The following safety and customer comfort measures are examples of conditions a flight school could apply to all sightseeing flights:

- Restrict sightseeing flights to smooth air or conditions no worse than light turbulence
- One person per seat-belt, including small children
- Passenger safety briefing completed
- Adequate supply of motion sickness sacks on board
- Employ good public relation skills and smooth aircraft control and handling to make the flight a pleasant experience
- Watch for signs of passenger anxiety, fear and motion sickness.

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TOPIC: Supervision

A flight training unit offering an integrated program of pilot training needs a system of quality management that can be counted on to deliver consistent training results and to provide for improving those results over time. By developing operations manuals and training manuals, the company will have in place well-documented operational control procedures and training practices. A good system of supervision is needed to ensure that these procedures and practices are understood and applied every day.

Company Indoctrination

All persons who hold operational control duties - chief flight instructors, assistant chief flight instructors, flight instructors, persons responsible for flight following - must know their responsibilities. A company indoctrination program will help them get a good start. At a minimum, company indoctrination will include a detailed review of the flight training operations manual and the training manual. For instructors, it will also include an initial proficiency check in each type of aircraft used in the integrated program and, every 12 months after that, a recurrent company check or in-flight monitoring on one of the aircraft types being used.

Meetings/Communication

Instructors working together for the same flight school, especially those working within the same integrated program, should have regular scheduled meetings to discuss common training issues. These meetings don't have to be long. Special meetings can be called for such special purposes as winter operations, follow-up actions for accidents or incidents, or to meet with the airport manager or ATC personnel. An open-door policy can be encouraged among instructors, chief flight instructors, maintenance staff, and students. Occasionally, instructing staff can get together to talk about ways to standardize their instructional methods for particular lessons or exercises.

Meetings aren't the only way to communicate. Some schools maintain a journal or status board at the dispatch counter to track on-going issues that affect flight operations, such as NOTAMS pertaining to solo cross-country routes, fuel pump unserviceability, etc. Many flight schools use newsletters and some even put their newsletters on their web site for easy access.

Supervision of Instructors

The Chief Flight Instructor is responsible for the supervision of all ground and flight instructors at the flight school. For a big school, that's a big responsibility. To get the job done, the CFI, either in person or through effective delegation, can check PTRs regularly, conduct flight reviews, progress checks, or in-flight monitoring, sit in on a ground school class, monitor preparatory ground instruction, and hold regular meetings. If the CFI does choose to delegate some of the supervision, then it becomes important to ensure that the person receiving the delegation understands what is expected. Then the CFI has to follow up to make sure the delegate is supervising effectively. It sounds like a lot of work, but there are many good examples of CFIs that make it work.

Class 4 Supervision

Class 4 instructors require direct supervision of their training, which is a closer monitoring than the regular supervision that is given to other instructors. To begin with, the Class 4 instructor needs to know who is doing the supervising. It seems obvious, but the name of the supervising instructor isn't always made clear. The supervisor and the Class 4 should get together every work day so the Class 4 can discuss with the supervisor the training proposed for each student. If the Class 4 is teaching ground school, the supervisor should sit in once in awhile and give feedback. The same applies to preparatory ground instruction.

A supervising instructor is a mentor for a Class 4 instructor, someone who helps the Class 4 progress through this "apprenticeship" phase. Something as simple as a review of PTRs can reveal incorrect training practices or unnecessary repetition. A supervising instructor can do an occasional in-flight monitoring of training being given by the Class 4 instructor. If the Class 4 is teaching on the flight training device, observing one of these lessons can show a great deal about teaching techniques and the use of this training tool.

As a "coach" for the Class 4, a supervisor can help them advance their skills and get them on the right track toward more advanced instructor ratings. After all, a Class 4 can quickly rise to a Class 2 level and become a supervising instructor. If they had a good role model, they will likely be good supervisors when it is their turn!

Supervising Ground School Instructors

Ground school is an important element of program quality. Instructors must have appropriate experience in aviation. If they don't hold a flight instructor rating, they should demonstrate proof of their competence to the CFI (or delegate) by giving a test lesson on the subject they are going to teach. The CFI (or delegate) must also brief them on their duties and responsibilities and on the instructional techniques set out in Part I of the Flight Instructor Guide.

Instructors need feedback to help them evaluate their teaching effectiveness. If you are responsible for supervising ground school training, here are some of the ways to get the feedback:

Self-evaluation. This encourages instructors to become monitors of their own performance, but it is biased and can't be used as the only feedback tool.

Classroom observation. Instructor colleagues or supervising instructors (the CFI) can sit in on a ground school class and give direct feedback, perhaps using a check list.

Questionnaires. Student questionnaires and surveys can be useful. Open-ended questions can sometimes give more insight than numerical ratings.

Measures of Student Achievement. Results of internal school examinations and Transport Canada examinations are an important indicator of teaching effectiveness. Transport Canada examination statistics for your school can be obtained through your principal inspector, or district or regional office.

Review of Instructional Materials. A review of such materials as lesson plans, course outlines, examinations, quizzes, assignments, tests, handouts, audio-visual materials, etc. can give valuable insight into what is being taught, and how.

What Instructors Suggest for “New Hires”

When asked at refresher courses across the country about supervision, flight instructors suggested a number of company practices that would help “new hires” do a good job:

- Work at the dispatch/counter area of the flight school for a week or two
- Sit in on briefings by senior instructors
- Go on a tour of the airport and ATC facility
- Create a binder of standard operating procedures to guide staff
- Go on a familiarization flight with a senior instructor to observe the application of company procedures and become familiar with the local area
- Complete an initial proficiency check
- Complete aircraft type exams
- Complete open book examination on company policies and procedures
- Have a probation period
- Hire some instructors from outside the school to bring new ideas

Standard Operating Procedures

Well-designed and documented standard operating procedures are an essential tool if a flight school wants to have consistent operating practices. Without good SOPs, effective supervision is difficult, if not impossible. Instructors across the country have suggested a need for SOPs in such areas as:

- Weather minima for training (should be the same as the program outline)
- Training of air exercises
- Defect reporting (should be in accordance with MCM) and rectification
- Aircraft handling, such as standard approach speeds, configurations
- Flight watch and company emergency response procedures
- Training areas (location, transiting, noise sensitive areas, altitudes, etc.)
- Signing out procedures, reservations/bookings, etc.
- Operations manual (should include company policies and directives)
- Training manual
- Comments in PTRs - format, content, quality, etc.
- Monthly student performance sheet
- Compliance with approved cross-countries for PPL, night, CPL, IFR

Recurrent Training for Staff Instructors

Recurrent training is an important component of effective supervision of instructors. The CFI is responsible for the quality and content of flight training at the school. This responsibility requires some system to identify any weak areas that may require review or instruction. Weaknesses can be identified through flight test records, review of PTRs, or observation of flight or ground training. Recurrent training itself can take many forms, but briefings on the operations manual and training manual and a review of SOPs would be important. An associated open-book examination would give the CFI some confidence that all instructors understood the necessary material.

As well as conducting recurrent training, the CFI and other senior instructors can help other instructors upgrade by working with them to prepare for any written examinations and flight tests. Many, if not most, flight schools provide their instructors with the aircraft they need for a flight test. Many provide the aircraft for some amount of annual recurrent training, too. This can be as simple as a few circuits to regain night currency, or a more detailed review before starting a phase of training on, say, a complex aircraft or a twin.

Documents

Documents for flight crew and aircraft must be current and valid for every flight. Making sure they are current and valid requires a good system for checking them and good supervision. Here are some things a flight school can do:

- Develop a system to ensure continued validity of staff licences, ratings, and medical certificates
- Develop a checklist to regularly check the staff document validity (i.e. BF or reminders on computer scheduling programs)
- Use a similar system for the student files
- Consider assigning responsibility for an aircraft to one instructor for the purpose of ensuring aircraft documents are always there and valid and to report aircraft general condition and cleanliness to the CFI or maintenance
- Have the students check the documents and airworthiness for **every** flight
- Have the students and rental pilots present their personal documents for **every** flight

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TOPIC: Unsatisfactory Flying Progress

The Integrated Commercial Pilot Program is designed to graduate highly skilled pilots who are ready for the real world of commercial flight operations. The graduates of an integrated program can be confident that they have the skills and the knowledge that industry needs. They can also claim to have demonstrated an ability to acquire these skills at a comparatively rapid rate in a rigorous program. This is an ability needed by commercial air services in an industry that is a continuous learning environment.

To preserve the quality of a flight school's integrated program, a system is needed to measure student progress, to identify performance that falls short of the rate of progress demanded by the program, to help the student get back on track and, if all efforts fail, to take steps to remove the student from the program. An example of such a system is given here.

Before First Solo

If after 6 hours of dual instruction a slow learning rate has been reported, a change of flight instructors may be made, provided that the change is agreeable to both the student and the instructor.

If, after 14 hours of dual instruction the student is unable to solo, a review of flying progress will be conducted. Depending on the results of the review of flying progress, the student may be referred to the CFI, or designated representative for an assessment regarding further flying training or the student may be authorised to complete up to an additional 2 hours of dual instruction.

If, after 16 hours of dual instruction the student is still unable to solo, the student will be referred to the CFI for a PTR review.

After First Solo

If post solo progress is reported unsatisfactory a check flight will be conducted. Depending on the results of the check flight, the student may be referred to the CFI, or designated representative for an assessment regarding further flying training. The student may be authorised to complete up to 2 additional hours of dual instruction. If existing deficiencies are not corrected the student will be referred to the CFI for a PTR review; Students will only be authorised to complete a total of 6 hours of additional dual training while in the primary phase of training. Check flights will not be considered as additional dual instruction.

Recommendation for Withdrawal

A Recommendation for Withdrawal from the integrated commercial pilot program will be the responsibility of a Progress Review Committee convened by the CFI, or delegate. If a Recommendation for Withdrawal is approved, the CFI, or delegate will advise the student that he/she must withdraw from the integrated program and arrange an appointment to discuss alternate programs.

PPL Held Before Entry

Previously trained pilots holding a private pilot licence will be given a threshold skill test based on the *Private Pilot Flight Test Standards (TP13723)* following a maximum of 10 hours of dual instruction. If the threshold skill test is reported as unsatisfactory, the student may be authorised to complete an additional 2 hours of dual instruction. If the deficiencies are not corrected the student will be referred to the CFI or designated representative for a flying progress review.

Advanced Training Phases - After PPL

In the event a student is given an unsatisfactory progress report after any dual lesson plan the instructor shall complete the post-flight briefing and ensure that:

1. the student is clearly informed of the exercises or procedures that are unsatisfactory, and the student is shown how to correct each unsatisfactory situation and any questions are answered;
2. the details are recorded in the student's training record and the student signs the unsatisfactory entry; and
3. the student's file is given to the CFI without delay.

A student with an unsatisfactory report must clear that report before any further training may take place.

Action by the CFI

The CFI, upon receiving a student unsatisfactory progress report, shall:

1. take action as soon as practicable to resolve the matter;
2. schedule additional FTD or simulator training as required and a repeat of the unsatisfactory lesson plan with the same instructor, or another instructor, at the CFI's discretion, unless the student has requested an instructor change;
3. if the repeated lesson plan is satisfactory, the student will continue with training;
4. if the repeated lesson plan is unsatisfactory, the instructor shall proceed as in "Advanced Training Phases, After PPL" and the CFI shall conduct a Progress Review Flight;
5. if the Progress Review Flight is unsatisfactory, the CFI shall convene a Progress Review Committee to make recommendations regarding further training for the student;
6. if the decision of the Progress Review Committee is not to continue training, the CFI will advise the student of the need to withdraw from the program; and

7. the student will be offered the option of voluntarily withdrawing from the program.

Progress Review Flights

A Progress Review Flight shall be conducted by the CFI, or a designated Assistant CFI or Check Instructor to assess the present stage of flying progress of a student. The flight is an assessment only and shall not involve dual instruction.

The pre-flight briefing, ground handling and in-flight procedures will be a general review of previous training. The aim is to allow students, without any stress of dual instruction, to demonstrate to the best of their ability, under normal conditions, how they handle normal and emergency flying procedures.

Progress Review Committee

A Progress Review Committee shall consist of the CFI, or delegate, and at least two other senior instructors not recently involved with the student. The student's recent instructors may not serve on the Committee. The Committee will review all pertinent records and shall call the student and the recent instructors to participate, as well as any other relevant individuals. The Committee will render a decision in writing as to whether the student will continue or cease training.

Limitations to Repeated Dual Lesson Plans

While on the Integrated Commercial Pilot Program, a student will be allowed a total of five (5) repeated lessons. If the student receives a sixth unsatisfactory report, the CFI shall convene a Progress Review Committee before any further flying training.

Flight Test Failure Policy

In the event of a failure of a progress test, stage test or licensing flight test, the following guidelines have been established, in order to ensure all cases are dealt with in a fair and consistent manner. This policy is applicable to both written examinations, and practical flight tests that are required to be completed for licensing purposes.

Failures shall be dealt with as follows:

Step 1 — First failure — The student and primary instructor will meet to determine problem areas, and explore solutions. The CFI shall be notified;

Step 2 — Second failure (within the same phase of training) — The primary instructor shall advise the CFI, who will arrange for an interview with the student. The Pilot Training Record, test results, and student file will be reviewed to access the most appropriate course of action.

Step 3 — Third failure (within the same phase of training) — The CFI will convene a Progress Review Committee interview with the student, primary instructor and the CFI. All corrective actions will be explored, up to and including a Recommendation for Withdrawal.

