

*Repl. by 3A*

**AC NO:** AC 135-3

**DATE:** 2/17/70



# ADVISORY CIRCULAR

---

AIR TAXI OPERATORS AND COMMERCIAL OPERATORS OF SMALL AIRCRAFT

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

Initiated by: FS-340/440

AC NO: AC 135-3

DATE: 2/17/70



# ADVISORY CIRCULAR

## DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

**SUBJECT:** AIR TAXI OPERATORS AND COMMERCIAL OPERATORS OF SMALL AIRCRAFT

---

1. PURPOSE. This advisory circular sets forth guidelines and procedures to assist persons in complying with the requirements of Federal Aviation Regulations, Part 135. Such persons, for the purpose of this advisory circular, will be hereafter referred to as operators.
- ✓ 2. CANCELLATION. Advisory Circular 120-14, Air Taxi and Commercial Operators of Small Aircraft, dated July 6, 1964, is cancelled.
3. REFERENCES. Federal Aviation Regulations, Parts 43, 61, 65, 91, 97, 121, 127, and 135.
4. BACKGROUND. Amendment 135-12 to FAR 135 introduces new and additional requirements, together with Amendments 91-70, 121-54, and 127-13.
5. COMPLIANCE DATES. All existing Air Taxi Commercial Operators (ATCO) certificates expire May 31, 1970. If an operator wishes his certificate to remain in effect, it is his responsibility to make application for renewal before the expiration. When this is done, the certificate will remain in effect until the Administrator either issues or denies a new certificate.

*Edward C. Hodson*  
*acting* Director,  
Flight Standards Service

---

Initiated by: FS-340/440

INDEX

<u>Paragraph No.</u>		<u>Page</u>
1.	Application for Certificate.	1
2.	Preliminary Discussions.	1
3.	Eligibility for Certificate and Operations Specifications. (FAR 135.19)	1
4.	Amendment of Certificate.	1
5.	Amendment of Operations Specifications (FAR 135.19).	2
6.	Aircraft Requirements.	2
7.	Applicable Rules (FAR 135.3 and 135.141).	3
8.	Certificate Holder's Manual.	3
9.	Flight Locating Requirements (FAR 135.29).	9
10.	Aircraft Proving Tests (FAR 135.32).	9
11.	Business Office and Operations Base (FAR 135.41).	10
12.	Recordkeeping Requirements.	10
13.	Pilot and Flight Attendant Crewmembers Training Programs and Testing (FAR 135.55, 135.137, 135.138, and 135.139).	10
14.	Mechanical Reliability Reports (MRR).	10
15.	Mechanical Interruption Summary.	11
16.	Approved Aircraft Inspection Program.	11
17.	Exception to Second-in-Command Requirements -- Limited IFR Operations (FAR 135.75).	19
18.	Approval for Use of an Autopilot System (FAR 135.77).	22
19.	Icing Conditions (FAR 135.85).	22
20.	VFR Minimum Altitude (FAR 135.91).	22
21.	Visual Reference Required -- Helicopter (FAR 135.95).	23
22.	VFR Over-the-Top Carrying Passengers -- Operating Limitations (FAR 135.99).	23
23.	Pilot-In-Command -- Route and Airport Qualifications, Instrument, Initial, and Recurrent Checks (FAR 135.122, 135.131, 135.138).	25
24.	Equipment -- General Requirements (FAR 135.143(b)).	26
25.	Performance Requirements -- Aircraft Operated Over-the-Top or in IFR Operations (FAR 135.145).	26
26.	Fire Extinguishers -- Passenger Carrying Aircraft (FAR 135.61).	30
27.	Emergency Equipment.	30
28.	Weather Reports and Forecasts.	30
29.	Empty Weight and Center of Gravity.	31

APPENDIX 1.	Air Taxi Certification.	(12 pages)
APPENDIX 2.	Pilot Proficiency.	(2 pages)
APPENDIX 3.	Weather Information.	(2 pages)
APPENDIX 4.	Operator's Manual Outline.	(3 pages)
APPENDIX 5.	Pilot Training Curriculum Outline.	(4 pages)
APPENDIX 6.	Sample List of Aircraft Used or Available for Use in ATCO Operations.	(1 page )
APPENDIX 7.	Sample Aircraft Daily Record.	(1 page )
APPENDIX 8.	Sample Operations Specifications - Aircraft Maintenance: Requiring Operator to Develop Approved Aircraft Inspection Program.	(2 pages)
APPENDIX 9.	Sample Operations Specifications - Aircraft Maintenance: Approved Aircraft Inspection Program.	(2 pages)
APPENDIX 10.	Sample Operations Specifications - Aircraft Maintenance: Weight and Balance System.	(2 pages)
APPENDIX 11.	Sample Instructions and Procedures for Conducting the Approved Aircraft Inspection Program.	(17 pages)
APPENDIX 12.	Sample Format for Performance of the Approved Aircraft Inspection Program.	( 4 pages )

1. APPLICATION FOR CERTIFICATE. An application for renewal or for an original issuance is made in triplicate on FAA Form 8000-6, Application For Air Taxi Commercial Operator (ATCO) Certificate Under FAR 135 (BOB: 04-R0171), see Appendix 1. It must be submitted to the FAA district office that has jurisdiction over the area in which the applicant's principal business office is located. Items 1 through 10 will be completed. An organization may operate under more than one business name on a single certificate; however, only one certificate will be issued to any person (definition of person in FAR 1). It is essential that the true name and correct address of the applicant be shown on the application (See Appendix 1, pages 1 through 3).
2. PRELIMINARY DISCUSSIONS. Preliminary discussions between the applicant and the assigned Flight Standards Inspectors may be desirable to expedite the effective processing of the application. During the course of these informal discussions, a mutually convenient time and date should be established after the formal application has been filed for the physical inspection of the aircraft, aircraft equipment, operators manual, training program, facility, and the conduct of any required qualification tests.
3. ELIGIBILITY FOR CERTIFICATE AND OPERATIONS SPECIFICATIONS (FAR 135.19).
  - a. The applicant must hold such economic authority as may be required by the Civil Aeronautics Board. The economic authority for the air taxi operator is contained in an individual exemption and authorization issued by the Civil Aeronautics Board or under the exemption authority of CAB Economic Regulation Part 298.
  - b. To be eligible for an ATCO certificate, a person must show, to the satisfaction of the Administrator that he is able to conduct each kind of operation for which he seeks authorization in compliance with applicable regulations. The requirements to hold a certificate are never less than the requirements for original issuance; therefore, as an example:

If an air taxi operator who is certificated for IFR operations does not have at least one pilot who is current for flight under IFR, including satisfactory completion of the six-month instrument check, that operator does not meet the basic requirements and is no longer eligible to retain the IFR authorization.
4. AMENDMENT OF CERTIFICATE. An operator who desires to change his business name and address should make application for amendment in the same manner as for original certification.

5. AMENDMENT OF OPERATIONS SPECIFICATIONS (FAR 135.19). An ATCO desiring an amendment to his existing operations specifications is required to submit an original and three copies of FAA Form 1014, Operations Specifications (BOB: 04-R075), to the FAA district office having jurisdiction over the area in which the applicant's principal business office is located. Application must be made at least 15 days before the date proposed for the amendment to become effective, unless a shorter filing period is approved by that district office.
- a. The operator must complete only the upper half of the signature side of the form, identifying himself as the applicant in the same name as that under which he is certificated. The request with reasons and supporting data should be given in the space provided.
  - b. To clarify the wording in the preprinted application for amendment portion, the words "appearing on the reverse side hereof" may be struck out since the applicant leaves the reverse side blank. The applicant may, however, type in the wording of the operations specifications, including his desired amendment, on the reverse side, but experience indicates that this usually results in errors causing further correspondence and delay.
  - c. If the application is approved, the district office retains one copy and provides the applicant with the approved original and one copy. He will be asked to sign and date the copy in the space "Received for the applicant" and return it to the district office. The applicant will retain the original.
  - d. If the application is denied, the applicant will be advised in writing of the reasons for denial. He may petition the Administrator to reconsider the denial under FAR 135.19(c) if he does so within 30 days. It is recommended that a petition to the Administrator be forwarded in writing to the local FAA district office who will forward it to the FAA, Flight Standards Service, Washington, D.C., for final decision. The petition should contain reasons and data to support why reconsideration is considered necessary by the operator.
6. AIRCRAFT REQUIREMENTS. The written agreement required under FAR 135.31 should clearly establish who is responsible to see that required maintenance on the aircraft is performed. It is not required to name who will perform the maintenance, unless the owner wishes to put this information into his agreement. A copy of the lease(s) or written agreement(s), including the arrangement for performance of required maintenance, should be included with the application. A current list of all aircraft being used or available for use, including the type of operations for which each is equipped, shall be kept and made available for inspection by representatives of the Administrator (FAR 135.43(a)(3)). The operator may develop any type of list which meets this requirement. A sample format is shown in Appendix 6, page 1.

7. APPLICABLE RULES (FAR 135.3 and 135.141). FAR 135 has been limited to those rules particularly applicable to operations conducted under it. It does not repeat rules of a general nature such as those contained in FARs 43, 61, 65, and 91, nor does it relieve the operator from compliance with rules of general applicability contained in other Parts of the Federal Aviation Regulations. Likewise, FAR 135 does not relieve an operator from compliance with Annex 2, Rules of the Air, to the Convention of International Civil Aviation or the regulations of any foreign country when operating outside the United States.
  
8. CERTIFICATE HOLDER'S MANUAL. The purpose of this manual is to advise persons connected with the air taxi operations of the policies and procedures of the operator. It is a management device that contributes to the orderly and safe conduct of operations. It is not necessary that the manual be voluminous and pretentious, rather it should be a practical document commensurate with the size and complexity of the operation it describes. The local FAA district office may authorize a deviation from the manual requirements by issuing an amendment to the operations specification when they determine that all or any part of the manual is not required. However, when an approved aircraft inspection program is utilized, it will always become the certificate holder's manual even though the other elements may not be required by the district office. The elements of the manual are described in FAR 135.27(b)(1) through (14). Although flexibility concerning format and the method or means of obtaining compliance with the manual requirements of section 135.27 is encouraged, considering the types of equipment used, type of operations conducted, and geographical factors which may influence the conduct of a particular operation, the outline and related questions contained in Appendix 4 and the following information may be helpful in developing an Operator's Manual.
  - a. Weight and Balance Procedures. The operator's manual is required to have a section which will describe his procedure for ensuring proper loading of aircraft. There are many different procedures that may be used to comply with this provision, and they will vary due to the size and load-carrying capability of the aircraft involved.
    - (1) A separate procedure may be necessary for each type of aircraft used by the operator unless it can be shown that a single procedure will adequately provide compliance.
    - (2) The operator may elect to develop his own procedure or use one furnished by the manufacturer of the aircraft being used.
    - (3) Other acceptable procedures may be found in Advisory Circular 43.13-1, Acceptable Methods, Techniques, and Practices--Aircraft Inspection and Repair, or Advisory Circular 135-1A, Air Taxi Aircraft Weight and Balance Control.


- (4) The procedure should provide for blocking off seats or compartments and adjusting fuel loads when necessary to remain within center of gravity limits. An effective means should be provided to assure that those seats and compartments are not used during the operations specified.
- (5) The procedure should also provide crewmembers, cargo handlers, and other personnel concerned, complete information regarding distribution of passengers, fuel, and other items, and the distribution and security of cargo to prevent the shifting of weight in flight.
- (6) Irrespective of the procedure developed, it should be written up and identified with the operator's name.
- (7) The operator's manual will contain a procedure that will ensure that the empty weight and center of gravity for multiengine aircraft will be calculated by actual weighing of the aircraft within the preceding three years.
- (8) For new aircraft, the three-year period will be calculated from the date the aircraft was originally certificated for airworthiness.
- (9) For other aircraft, the data will be calculated from the date of the last actual weighing of the aircraft.
- (10) Operators having a fleet weight and-balance system required by their operations specification shall comply with the reweighing requirements called out in that system.
- (11) Advisory Circular 135-1A shows one acceptable type of fleet weight control system. The procedures are applicable to any aircraft being used by the operator, even those that he may occasionally lease.
- (12) The procedures prepared by the operator should make provision for obtaining the information necessary to determine that this requirement has been met or needs to be met before operating these aircraft under his ATCO certificate.



- b. Accident Notification. The National Transportation Safety Board Investigation Regulations Part 430 require the operator to immediately, and by the most expeditious means available, notify the nearest NTSB Bureau of Aviation Safety field office of aircraft accidents, incidents, and overdue aircraft. The operator should, therefore, develop a procedure to ensure that he will be immediately notified and furnished information in sufficient detail to comply with this notification responsibility.
- c. Required Airworthiness Inspections.
- (1) Procedures must be developed which ensure that the pilot-in-command can determine that required airworthiness inspections have been made. These inspections could be any of the following that may be applicable:
    - (a) 100-hour inspection (FAR 91.169(b)).
    - (b) Annual inspection (FAR 91.169(a)).
    - (c) Routine and detailed inspections (FAR 91.171).
    - (d) Inspections required by the approved aircraft inspection program (FAR 135.60).
    - (e) Inspections required by Airworthiness Directives (FAR 39).
    - (f) VOR equipment check (FAR 91.25).
    - (g) Altimeter system tests and inspections (FAR 91.170).
  - (2) To illustrate how procedures may be developed that would be acceptable means of complying with this provision, the following examples are offered as guidance.

2/17/70

- (a) An operator has two aircraft being operated on the 100-hour/annual inspection system. In this case, entries in the permanent maintenance record required by FAR 43.11 could suffice to allow the pilot-in-command to determine when the last inspection was made and the next inspection is due. In some cases, operators have made the task easier by inserting on each new maintenance record page the date the next annual is due and the time in service when the next 100-hour inspection is due. FAA Form 8320-2, Inspection Reminder (ref. AC 91.11A) is another handy method of keeping the annual due date where the pilot can always see it.

<p style="text-align: center;">DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>INSPECTION REMINDER</b></p> <p style="text-align: center;"></p> <p style="text-align: center;">The next annual inspection of this aircraft required by Federal Aviation Regulations is due:</p> <p style="text-align: center;">DATE</p> <p style="text-align: center;">FAA Form 8320-2 (6-67) Formerly FAA Form 2912</p> <p style="text-align: right;"><small>* GPO: 1967 OF-277-820</small></p>
--

- (b) An operator has many aircraft and conceivably could be operating on either the 100-hour/annual, progressive, or approved aircraft inspection program. Many of these operators have developed and installed large aircraft status boards. This system can display all types of information useful to the operator's personnel, including space enabling the pilot-in-command of a particular aircraft to determine when the next airworthiness inspection is due. It also serves the operator the dual purpose of allowing maintenance personnel to schedule their work so that inspections can be conducted in an efficient manner.
- (c) An operator has aircraft that are being maintained under an approved aircraft inspection program (ref. FAR 135.60). In this instance, he could provide a maintenance record that would show the pilot-in-command that the required airworthiness inspections under his approved program have been conducted. This is often combined into the daily aircraft record (ref. Appendix 7).
- (d) Many airworthiness directives are issued that require either a one-time inspection or repetitive inspections. The operator should devise a procedure that will allow the pilot-in-command to determine that these inspections have been made. This can be done in many ways but should be adaptable to the type of operations involved. In some instances, operators provide a daily aircraft record in which maintenance personnel attest to the conduct of such inspections. In other cases the operators provide a separate section in the back of the permanent maintenance record (ref. FAR 91.173(b)(2)) in which a chronological listing of compliance with airworthiness directives is made including the method of compliance.

- (e) VOR equipment checks and altimeter system tests and inspections can also be included on a daily aircraft record sheet or on a status board such as described in paragraph (b).
- (3) Approved for Return to Service. In addition to the procedures in (1) and (2) above, the operator should develop procedures that will allow the pilot-in-command to determine that the aircraft has been approved for return to service after required airworthiness inspection. One way that this could be done is to include it as an item in the daily aircraft record described in paragraph d below. In order to clear up some misunderstanding in terminology, "approval for return to service" is considered to be a properly executed maintenance record entry in accordance with FAR 43.9. "Return to service" as used in FAR 43.5 is considered to be any action indicating an intent by the owner, or operator, or other person to put the aircraft in an operational status.
- d. Reporting Mechanical Irregularities or Defects. Procedures must be developed by the operator whereby the pilot-in-command can inform the operator of mechanical irregularities or defects that come to his attention. This is an important procedure and should be covered in detail. It is the method whereby the operator is able to inform maintenance personnel of the suspected condition of the aircraft and enables the maintenance personnel to efficiently make determinations of the airworthiness condition of the aircraft. It also is a basis for the operator of multiengine aircraft to report Mechanical Reliability Reports (FAR 135.57) and Mechanical Interruption Summary Reports (FAR 135.59). Some operators have developed daily aircraft record sheets that contain many items of useful information necessary in the day-to-day operations. Among the items that can be entered are the "pilot squawks" or the mechanical irregularities or defects. This system has three advantages.
- (1) It enables the pilot to comply with the reporting of mechanical irregularities or defects.
  - (2) It provides the operator a readily available source for preparing his daily mechanical reliability reports and monthly mechanical interruption summary.
  - (3) It provides a means of communication between flight personnel and maintenance personnel, allowing maintenance personnel to go straight to the suspected areas without having to search around for them.

2/17/70

- e. Correction of Mechanical Irregularities or Defects. Procedures must be established by the operator to allow the pilot to determine that mechanical irregularities or defects previously reported have been corrected or that a determination has been made that the airworthiness has not been affected and flight operations may be continued. These procedures are closely related to those in paragraph d above, and some operators provide a space for this on their daily aircraft record. (Reference sample format, Appendix 7.) Proper use of this type of format allows the pilot to determine quickly what has previously been reported, whether by himself or another pilot, whether or not any action has been taken regarding the item, and the name of the maintenance personnel who approved the aircraft for return to service.
- f. Procedures for Obtaining Maintenance. This section is where the operator instructs those pilots, who are so authorized to act for the operator, in the procedures for obtaining maintenance and servicing at places where previous arrangements have not been made. Again, this can be a relatively simple set of procedures, outlining such items as types of service authorized, restrictions on type of persons who may perform maintenance (i.e., certificated mechanic, repair station, etc.), and possibly dollar limitations.
- g. Refueling Procedures. For this part of the manual the operator is required to develop procedures that will inform his personnel of the manner in which refueling is to be conducted. There are no rigid guidelines that can be established for this section. The extent of control over fueling procedures will vary from complete control (such as when the operator operates the fueling facility), to little control (such as deciding whether to purchase fuel or not to purchase fuel). In the event the operator manages the fueling facilities, there are several publications he will find useful in setting up good practices for fueling. Some of these are: (1) AC 20-43, Aircraft Fuel Contamination; (2) FAR 159, National Capital Airports, Section 159.133, Fueling Operations, which outlines procedures that FAA requires to be followed at Washington National Airport and Dulles International Airport; and (3) National Fire Protection Association, 60 Batterymarch Street, Boston, Massachusetts 02110, publishes NFPA No. 407, Aircraft Fueling, which establishes industry standards for aircraft fueling on the ground. In addition, the various fuel companies have publications outlining recommended practices and procedures.

When fueling is accomplished at facilities other than those operated by himself, the operator should establish procedures that will determine that safe practices are being employed in the storage and dispensing of fuel. In addition, he should provide the flight crew with the procedures to be followed during refueling operations.

- h. Approved Aircraft Inspection Program. After an operator has this program approved by the FAA, he must include it as an element of his manual (see paragraph 21 for details).
9. FLIGHT LOCATING REQUIREMENTS (FAR 135.29). An operator filing FAA flight plans for each flight need not establish other flight locating procedures.
10. AIRCRAFT PROVING TESTS (FAR 135.32).
- a. What? Flights conducted to demonstrate the reliability of an aircraft and the operator's competence to operate it in accordance with the provisions of FAR 135.
- b. When? Required only if an operator intends using a turbojet airplane or an aircraft for which two pilots are required for VFR operations by FAR 135 if he has not previously proved that aircraft or one of the same make and similar design.
- c. Notification. An operator preparing to conduct aircraft proving tests should submit a written plan to its certificate-holding district office at least 15 days before the beginning of the intended tests.
- d. Plan. The plan is not limited to but should include at least the following:
- (1) Pertinent data relative to the aircraft such as make, model, type, and instrumentation, autopilot, navigation, communications equipment installed.
  - (2) Revisions to operators manual and training program.
  - (3) Identification by name, grade of certificate, and company title of personnel who will conduct the proving tests.
  - (4) An hourly breakdown of proving test flight time allotted to training, night, instrument, and airports.
- NOTE: Entry into a representative number of en route airports would be those typical of the intended operation, such as high altitude, sea level, hard surface, controlled, VASI equipped, noncontrolled, short field, and unimproved.
- (5) Deviation requests, if any.

- e. Proving tests must be acceptable to the Administrator; therefore, we suggest coordination with the certificate-holding district office prior to submission of the plan, including arrangements for FAA participation.
11. BUSINESS OFFICE AND OPERATIONS BASE (FAR 135.41). An operations base, as used in FAR 135.41, is considered to exist wherever an operator bases one or more aircraft and a crew. For example: an operator domiciling a pilot and aircraft at a location other than its home base for the purpose of conducting passenger, cargo, or mail flights, is considered to have established an operations base. However, an operator who bases an aircraft, pilot, and mechanic at a location to accommodate a construction or seismic operation on a temporary basis is considered to have established only a temporary operations base.
12. RECORDKEEPING REQUIREMENTS. The letter of competency issued to a pilot in accordance with FAR 135.131 may be used to verify compliance with the initial and recurrent instrument check recordkeeping requirements of FAR 135.43. The letter need not be carried by the pilot.
13. PILOT AND FLIGHT ATTENDANT CREWMEMBERS TRAINING PROGRAMS AND TESTING (FAR 135.55, 135.137, 135.138, 135.139). Each operator, other than one who uses only himself as pilot, is required to establish and maintain a pilot, and if appropriate, a flight attendant crewmember training program appropriate to the assigned operation. Further, he is to ensure that those persons are adequately trained to meet the applicable initial and recurrent knowledge and practical testing requirements of FAR 135. Ground and flight training curriculums for initial, transition, and recurrent phases of training are a required part of these programs. Since completion of the initial and recurrent phases of the training program and passing a written or oral and flight test is required since the beginning of the 12th calendar month before an operator may use or a person may serve as a pilot in that service, the curriculums should contain, but not be limited to, those items necessary to ensure satisfactory completion of the testing requirements of FAR 135.138(a) and (b).
- Although it is not only recommended, but desirable that each operator develop training programs based on his individually authorized operation, ratings, and area of operation as well as aircraft, personnel, and facilities to be used, the curriculum outlines in Appendix 5 may be helpful in developing these required programs.
14. MECHANICAL RELIABILITY REPORTS (MRR). Each operator of multiengine aircraft is required to submit mechanical reliability reports daily. He will submit them on FAA Form 8330-2, Malfunction and Defect Report, (BOB: 04-R0003), which will be supplied by his local district office. The district office will cover over the present address on the forms and in its place affix the address of the local district office so that the completed forms will be returned to that office. A separate space is not provided on the form for all the information required by FAR 135.57, therefore, it will be necessary for the operator to write in, under item 7 of the form, the name of the operator and the date.

The MRRs will be reviewed by the local district office and then forwarded to the FAA Maintenance Analysis Center in Oklahoma City, Oklahoma, where the information will be encoded and put into a data bank of service difficulties. The information in the data bank is continually analyzed and trends or significant conditions are detected. The information is then published in Advisory Circular 20-7 (as amended), General Aviation Inspection Aids, which is available to the public. More serious items are transmitted directly to the local FAA district office who in turn will alert the operators. It can readily be seen that it is to every operator's advantage to participate in this information sharing system.

The operator is responsible for submitting the reports even though he contracts his maintenance to some other person who in turn discovers the reportable condition. In such cases, the operator should make arrangements at the time he contracts the maintenance to have the person furnish him the information necessary to comply with the reporting requirement.

15. MECHANICAL INTERRUPTION SUMMARY. The format for submitting the information required by FAR 135.59 should be agreed upon by the local district office and the operator.
16. APPROVED AIRCRAFT INSPECTION PROGRAM. In the last decade, the air taxi industry has undergone phenomenal changes in numbers, complexity, and types and frequency of operation. As a result, the FAA has taken a close look at the aircraft inspection requirements, which were developed some years ago, to see if they are still adequate to provide the level of safety necessary in the present environment.
  - a. Background. In the past, there have been two separate inspection programs available to air taxi operators. They were the 100-hour/annual inspection or the progressive inspection. The basic difference between the two programs being that the 100-hour/annual inspection program required a complete comprehensive inspection each 100 hours time in service plus an annual inspection (the scope and detail being the same as the 100-hour) at least once each twelve calendar months while the progressive inspection is based on conducting inspection increments in an on-going time-in-service- or calendar-time periods. The progressive inspection required a schedule of inspection that provided for a complete inspection of the aircraft at least once each year that was consistent with the manufacturer's recommendation and insured that the aircraft would be airworthy at all times. These two inspection requirements are adequate for the type of operation conducted by the majority of operators; however, there are air taxi operators conducting or proposing to conduct operations for which these inspection requirements do not provide for the efficient and effective inspection of aircraft used in the particular operation. Accordingly, a new inspection program, called Approved Aircraft Inspection Program, has been provided for under FAR 135.

b. What is it? The Approved Aircraft Inspection Program is developed by an ATCO operator to meet his particular inspection requirements. It is used in lieu of the inspections in FAR 91.169 or 91.171, and allows the operator the flexibility he needs in having his aircraft inspected. While it is in lieu of FAR 91.169 or 91.171, it cannot be contrary to any other regulatory provisions such as FAR 91.34, Category II Manual, 91.170, Altimeter System Tests and Inspections, FAR 39, Airworthiness Directives, FAR 91.25, VOR Equipment Check, etc. It should be made clear at this point that this program only encompasses the function of inspection which includes tests and checks. While "Inspection" is part of maintenance it is limited in scope to just the function of inspection, while "maintenance" includes other functions such as overhaul, repair, preservation, and replacement of parts. Therefore, when an Approved Aircraft Inspection Program is developed, it should only speak to inspection and not the other functions of maintenance. Simply stated, the Approved Aircraft Inspection Program does not encompass overhaul periods and retirement or replacement times. Further, it does not require a complete cycle each year as does the Progressive Inspection.

c. When may an approved aircraft inspection program be required?

To determine whether or not the 100-hour, annual or progressive inspection is adequate for any make and model of aircraft used by an operator, the FAA inspector may consider the manufacturer's maintenance and inspection recommendations, applicable airworthiness directives, malfunction or defect reports, mechanical reliability reports, Mechanical Interruption Summaries, aircraft maintenance records, reports of inspections, the condition of the aircraft, and the complexity of the aircraft. The inspector may consider those operational factors which may cause the 100-hour, annual, or progressive inspection to be inadequate such as high utilization, frequent landings, weather extremes, and reliance on communication and navigation equipment. The 100-hour, annual, or progressive inspection may be considered inadequate if -

- (1) The 100-hour, annual, or progressive inspection interval does not enable the detection of defects in time to prevent operation of the aircraft in an unairworthy condition or to prevent failure of any equipment that is necessary for safe operation of the aircraft;



- (2) The scope and detail of the 100-hour, annual, or progressive inspection is not sufficient to verify condition, accuracy, and tolerance of any aircraft component or equipment.

d. Notification.

- (1) Previously certificated operator. Whenever the Administrator determines that the 100-hour/annual or progressive inspections are not adequate, the local district office will amend the operations specification requiring the operator to develop an Approved Aircraft Inspection Program (see Appendix 8). The amendment will be transmitted by a letter which will explain those areas in which the present inspection system is deficient in order to provide the operator with a basis to begin to develop his inspection program. Close coordination between FAA personnel and the operator's personnel is essential at this time to effect an orderly development phase. The operator will be given 30 days to develop his inspection program unless a different period of time is specified in the operations specifications.
- (2) Newly certificated operator. Whenever an application is made and an ATCO certificate is issued, a determination will be made by the local district office to decide if the inspection system proposed for use by the operator (either the 100-hour/annual or progressive) is adequate. In the event it is not determined adequate, the district office will issue an operations specification requiring the operator to develop and Approved Aircraft Inspection Program. As in (1) above, the letter of transmittal will explain the areas that are deficient and the procedures after the letter of transmittal in (1) above will be followed.

2/17/70

- e. Factors to be considered in development and approval. There are several factors that should be given consideration by the operator when he is developing his inspection program and will be considered by the FAA when approving the program. No one single factor should be used to arrive at a determination. Instead, a careful analysis of all the factors listed below should be made before a conclusion is made.
- (1) Size and stability of the fleet. Suitable controls should be described that will assure that aircraft added to the fleet conform to the approved aircraft inspection program. Such aircraft should be inspected to the extent necessary to determine their condition and what should be done to fit them into the approved aircraft inspection schedule.
  - (2) Operator's maintenance management practices. An operator who has a well established maintenance organization can readily adapt to the disciplines that are necessary in an approved aircraft inspection program. This should not be taken to mean that an operator must have a maintenance organization. It is entirely possible to contract the approved aircraft inspection program to another organization that has the capability to inspect the aircraft in a manner established in the program. In this event, however, the operator is still responsible to see that the inspections are made in accordance with the program.
  - (3) Area of operations. Some operational environs are peculiar to only certain operators. Examples are: operations in extreme cold or hot weather, desert operations that expose aircraft to problems associated with blowing sand, and operations in salt-laden atmosphere. Approved aircraft inspection programs should incorporate procedures that control problems associated with particular areas of operations.
  - (4) Types of operations. Much can be said about how the type of operation being conducted can have an effect on the type of approved aircraft inspection program being developed or considered for approval.
    - (a) For example, a fleet of aircraft are being operated in a high density terminal area of the National Airspace System under IFR conditions would probably require the avionics systems to be inspected with greater frequencies than normally required in order to provide the reliability needed to operate in today's environment. This would be caused by the numerous contacts with traffic control, channel changes, etc. The need to maintain accuracy in these systems as well as in the instrument systems goes without saying.

- (b) Another example would be the case where a fleet of aircraft is being operated on short stage lengths and in and out of rough unimproved runways. This would cause more frequent cycles of landing gear, flap, and brake systems than might have been anticipated in a manufacturer's suggested 100-hour inspection system. The rough terrain operation could also impose stresses on the airframe and systems that would necessitate more frequent inspections in some areas than others.
- (c) High daily utilization should also be considered. Many of today's air taxi aircraft are being flown as much as 12 hours a day. This leaves little time for conducting inspections and performing other routine maintenance. Instead of scheduling a complete, comprehensive inspection at one time, it may be advantageous to break the complete aircraft inspection down into smaller increments and scheduling them on different days.
- (5) Frequency of landings. Approved aircraft inspection programs should emphasize inspection of those parts of aircraft that receive extra wear and tear as a result of exposure to a high frequency of landings.
- (6) Manufacturer's recommendations. Many manufacturers provide comprehensive inspection schedules for their product. These schedules are developed from their extensive knowledge of their product plus the service experience gained from the operators of the aircraft. A careful analysis of the inspection schedule may show that the manufacturer considers that a need exists to have inspections made in certain areas more frequently than the basic 100-hour period to provide the reliability he considers necessary. On the other hand, it may show that there are certain areas of the aircraft where less frequent inspections than the 100-hour period are necessary or desirable.
- (7) Service History. The service history of an aircraft will be a large factor in the development and approval of the approved aircraft inspection program. After an aircraft model has been in service, certain trends will become apparent that will dictate the need for inspection periods other than those provided in the 100-hour. These trends are generally those resulting in unsatisfactory or unreliable conditions either experienced by the operator himself or by other operators of the same basic model. Service history is obtained from information received from the manufacturer, other operators, Airworthiness Directives, General Aviation Inspection Aids, or from information available in the local FAA district office. In any event, service history should be carefully considered when the program is developed or approved.

- f. Development. Whether the approved aircraft inspection program is required to be developed as a result of a finding by the Administrator or it is developed at the option of the operator, the responsibility for the actual development is solely that of the operator. There is no set format that can be prescribed since each operator's inspection requirements may vary from another operator's. Each program must, however, encompass the requirements in FAR 135.60(d)(1), (2), or (3).
- (1) A suggested format for the instructions and procedures for conducting the inspections can be found in Appendix 11; however, it should be pointed out that this is not intended for rigid application but to serve as a guide since it only serves to illustrate a part of the program. Also note that some of the formats can be developed to serve as a maintenance record that the operator can submit for required entries under FAR 91.173(c).
  - (2) A schedule for performance of the inspections should be established. A suggested format is shown in Appendix 12. Again, it is emphasized that this is shown only as a guide in assisting the operator to establish format and is not necessarily all inclusive. In developing the inspection schedules including checks and tests, consider that the desired result is a cycle consisting of the following functions:
    - (a) Inspections--utilizing acceptable methods, techniques, and practices to determine physical condition and detect defects.
    - (b) Tests--operation of aircraft components, appliances, and systems to evaluate functional performance.
    - (c) Checks--examinations in the form of comparisons with stated standards for the purpose of verifying condition, accuracy, and tolerances.
  - (3) Other examples may be found in Advisory Circulars 91-20 and 91-21. However, it should be pointed out that these two advisory circulars were written to conform to the Progressive Inspection requirements which required a complete cycle each year. This requirement is not placed on the approved aircraft inspection program. Inspection periods are usually established initially on the basis of manufacturers' recommendations. This type of information is also usually available from operators with considerable service experience regarding problem areas and service and inspection periods. Since it is improbable that any two operators will have the

2/17/70

same frequency or duration of flight, inspection schedules will vary. Most, however, will be based on the continuous inspection concept. Inspection frequencies may be based on hours flown, calendar time, cycles of operation, or various combinations of these.

- (4) There are several companies that are offering computerized programs to operators of certain aircraft. These programs may be acceptable provided they satisfy the particular operator's requirements and meet all other requirements.
- g. Approval. The approval of the aircraft inspection program will be processed by the local FAA district office. Each page will show the signature of the FAA inspector approving it and the date it was approved.
- h. Where. After the Approved Aircraft Inspection Program is approved, it becomes a part of the operator's manual (ref. FAR 135.60(e)). No aircraft should be inspected in accordance with an Approved Aircraft Inspection Program until its registration number has been listed on the operations specifications by the local FAA district office (see Appendix 9).
1. Who. After the program is approved it is the responsibility of the operator to see that the inspections are accomplished in accordance with the frequency, scope, and detail established in the program. Since the inspections are a part of maintenance, only those persons authorized to perform maintenance may perform the inspections. In the case of this program, this is only an appropriately rated certificated mechanic, or a person working under his supervision, or an appropriately rated repair station. Similarly, only those persons authorized to approve for return to service after maintenance may do so. This would be only an appropriately rated certificated mechanic or appropriately rated repair station. It should be pointed out that since an operator certificated under Part 135 is not a maintenance entity he is not allowed to PERFORM inspections. Also, it is not within the privilege of the inspection authorization or the aircraft manufacturer to perform and approve these inspections.
- (1) A provision of FAR 135 that should be considered in this light is paragraph 135.33. This paragraph prohibits the operator from using anyone in the position of an airman (such as a mechanic) unless that person holds a CURRENT airman's certificate and is QUALIFIED for the work to be performed. This provision applies equally to mechanics employed by the operator or to those with whom the operator may contract maintenance. To determine the currency requirements, refer to FAR 65.83.
- (2) To determine when a mechanic is qualified, FAR 65.81 should be examined. This section provides that a mechanic may not supervise maintenance or approve for return to service unless he has either (1) satisfactorily performed the work before, or (2) has shown his ability to do the work to the satisfaction of the Administrator, or (3) has shown his ability to perform under

the direct supervision of another appropriately rated mechanic or certificated repairman. Many operators take advantage of manufacturers' training schools and clinics to enable their mechanics to comply with the above provisions. In some instances, they send one or two supervisory personnel to the manufacturer and they train or "check out" other personnel on their return. Other operators have chosen to set up their own training systems and are finding this to be very advantageous. In any event, the training of maintenance personnel should be seriously considered as a means for keeping personnel current and qualified which in turn will result in more efficient and effective operations.

- j. Changes. After the program is approved and put into operation, the FAA will maintain close surveillance over it to determine that it is producing the results desired. It is possible that deficiencies may be noted that could not be foreseen when the program was approved, or it is possible that the operating environment can change creating deficiencies in the program. Whenever this occurs, the local FAA office will notify the operator by letter pointing out the areas that are deficient and requesting changes to correct the condition. As in the notification and development stages, close coordination between the district office and the operator is desirable to effect the change as quickly as possible with minimum disruption to the operator's existing program. Each page of the program is dated and signed by the local district office inspector. After this is done, all copies of the program should be changed to conform with the new inspection requirement. When the operator desires to change his inspection program, he will request the change in writing and submit the proposed pages for approval by the local district office. When the changes are approved, the inspector will sign and date each page. Aircraft must not be inspected in accordance with the proposed changes until the operator receives the revised signed and dated pages.
- k. Reconsideration. Whenever an ATCO believes that a notification to develop or change an Approved Aircraft Inspection Program is not justified, he may, within 30 days, petition the Administrator to reconsider the notification. In order to provide a basis for reconsideration, the petition should outline all the reasons why reconsideration is considered necessary by the operator. The petition should be forwarded in writing to the local FAA district office who will forward it to the FAA, Flight Standards Service, Washington, D.C., for final decision.
- l. Listing on Operations Specifications. Aircraft inspected in accordance with the operator's Approved Aircraft Inspection Program are listed on the operations specification. When aircraft are to be removed from the program, the operator should notify his local FAA district office by submitting an original and three copies of

FAA Form 1014. The operator shall complete the upper half of the signature side of the form (see Appendix 9, page 2). When aircraft are to be added to the listing, a similar procedure is involved. In fact, it is possible to add and delete aircraft at the same time as shown in the Appendix 9, page 2. When aircraft are listed on the operations specifications as being inspected under the approved aircraft inspection program, they are not subject to the provisions of the 100-hour/annual or progressive inspection requirements (ref. FAR 91.169 or 91.171). However, when they are removed from the operations specifications and placed back in operations under FAR 91, they again become subject to those provisions. To determine when the next inspection is due, the maintenance records should be examined. The next 100-hour inspection will be due not more than 100 hours time in service from the time the last 100-hour inspection was conducted. If more than 100 hours time in service has elapsed, the inspection is due before for-hire operations are conducted. Similarly, the annual inspection is due 12 calendar months from the time the last annual inspection was conducted. If more than 12 calendar months have elapsed, the next annual inspection is due before further operation of the aircraft.

17. EXCEPTION TO SECOND-IN-COMMAND REQUIREMENTS - LIMITED IFR OPERATIONS.

(FAR 135.75) The following diagrams and accompanying explanations may help in understanding the limited IFR privileges permitted, and the conditions and limitations imposed by FAR 135.75.

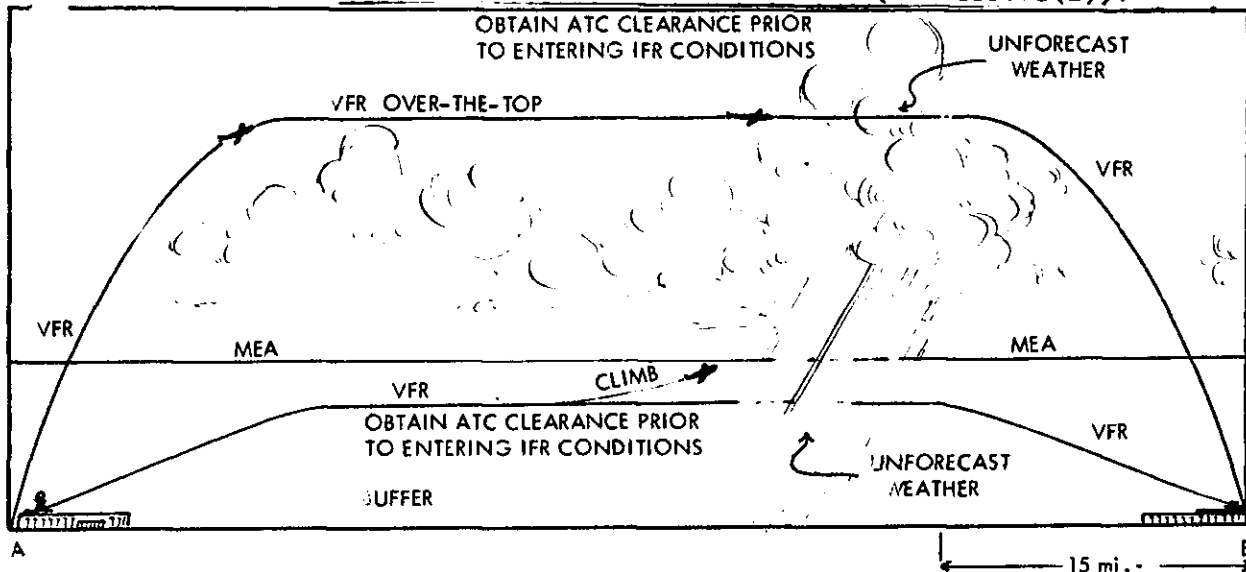
- a. Limited IFR operations of single-engine or multiengine aircraft which do not meet the performance requirements of FAR 135.145(a)(2) are permitted provided a VFR weather buffer is available beneath the ceiling.
- b. If the pilot-in-command is instrument qualified and meets the recency of experience and flight test requirements of this part for flight in instrument conditions and the airplane is properly equipped for IFR flight, and if two pilots are not required for Part 135 operations under VFR, the pilot-in-command of an airplane carrying passengers may, operate it under IFR without a second in command under the following conditions:

(1) En route, if -

- (a) He started and intended the flight to be VFR or VFR over-the-top;
- (b) While en route, unforecast marginal or IFR conditions are encountered;
- (c) The flight can return to VFR or VFR over-the-top operation before reaching a point within a radius of 15 miles from destination airport; and

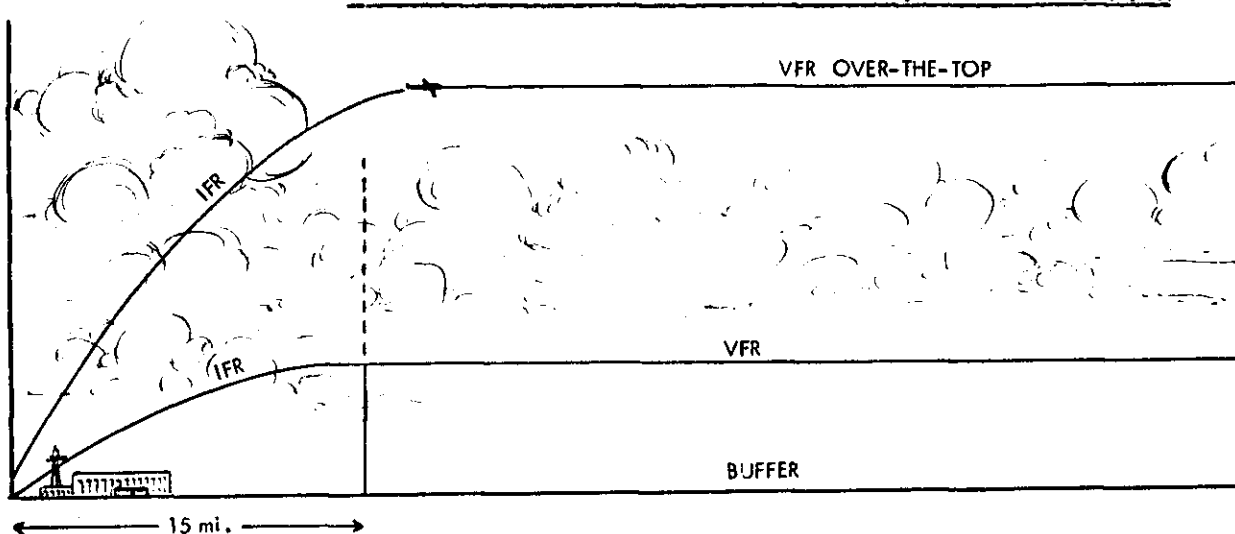
- (d) A "buffer zone" exists for single-engine aircraft and multiengine aircraft which do not meet the performance requirements of FAR 135.145(a)(2).

FIGURE 1. LIMITED IFR EN ROUTE LIMITATIONS (FAR 135.75(a)).



- (2) Take off from departure airport in IFR conditions and fly in IFR conditions to a point no more than 15 miles from the departure airport if weather reports and forecasts indicate that the weather along the planned flight route allows flight under VFR or VFR over-the-top requirements of this Part beginning at a point no more than 15 miles from the departure airport and extending to a point within a 15-mile radius of the destination airport. VFR buffer is required after reaching a point 15 miles from departure if single-engine or multiengine airplane which does not meet performance requirements of FAR 135.145(a)(2) is being utilized.

FIGURE 2. LIMITED IFR DEPARTURE LIMITATIONS (FAR 135.75(b)(1)).

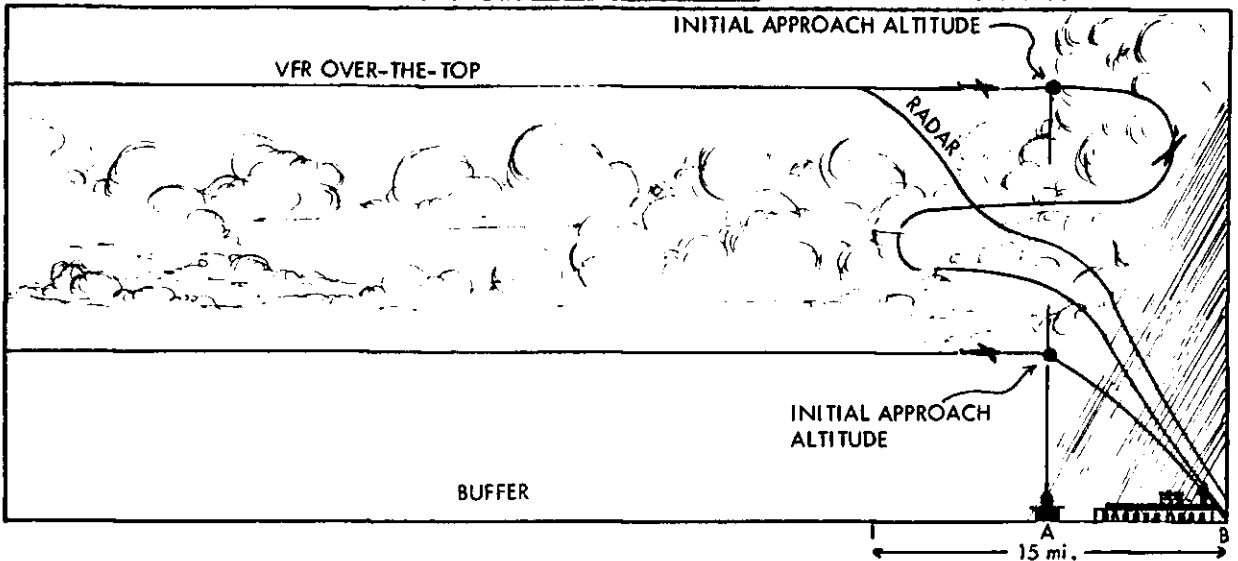


NOTE: The complete VFR weather buffer as mentioned in 21a is not required as illustrated in Figures 2, 3, and 4.



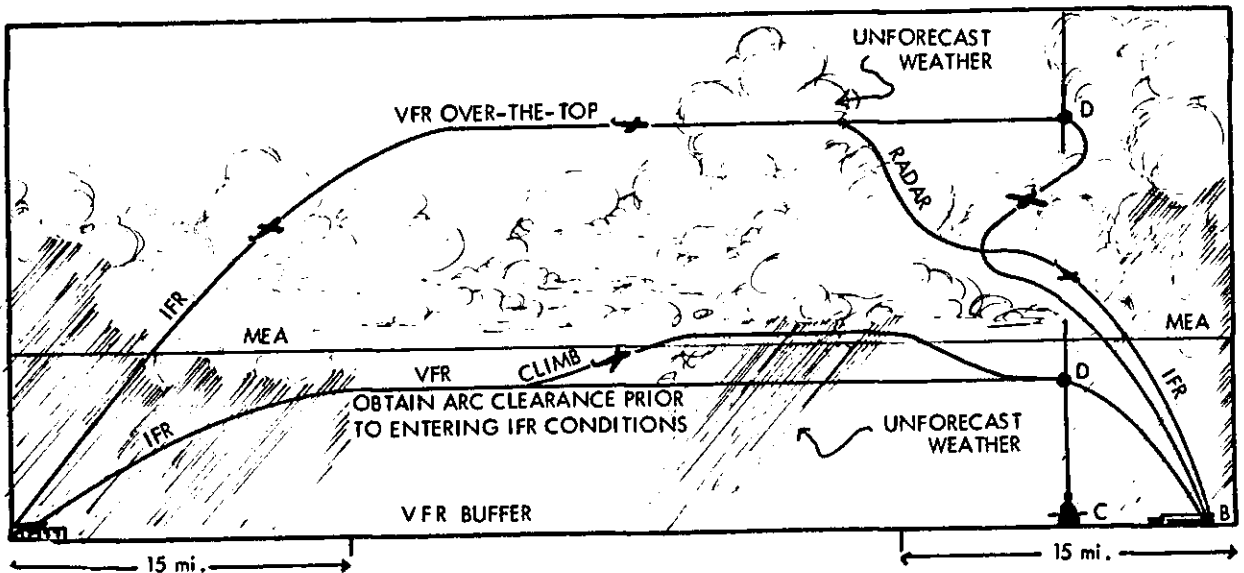
- (3) Making an IFR approach and landing at the destination airport in IFR conditions if -
  - (a) IFR approach minimums exist, and the aircraft is clear of the clouds until reaching the prescribed initial approach altitude over the final approach facility, or
  - (b) The approach is made with the use of radar as provided in FAR 91.116(f).

FIGURE 3. LIMITED IFR APPROACH LIMITATIONS (FAR 135.75(b)(2))



c. A graphic display of the most adverse conditions permitted under limited IFR without a second-in-command pilot is shown in Figure 4.

FIGURE 4. TOTAL PROFILE OF LIMITED IFR (FAR 135.75(a) and (b))



18. APPROVAL FOR USE OF AN AUTOPILOT SYSTEM (FAR 135.77). When an operator applies for operations specifications authorizing the use of an autopilot system in place of a second-in-command, he is required by FAR 135.77 to show that operations using the autopilot system can be conducted safely. The showing is considered satisfactory when the requirements of FAR 135.131(c) and (g) are met during the showing, including each type of instrument approach to be authorized.
19. ICING CONDITIONS (FAR 135.85).
- a. Icing conditions are defined in the U.S. Weather Bureau Manual, Chapter D-20, Aviation Area Forecasts, as follows:
- (1) Trace. Ice becomes perceptible. Rate of accumulation slightly greater than rate of sublimation. It is not hazardous even though deicing/anti-icing equipment is not utilized, unless encountered for an extended period of time - over one hour.
  - (2) Light. The rate of accumulation may create a problem if flight is prolonged in this environment (over one hour). Occasional use of deicing/anti-icing equipment removes/prevents accumulation. It does not present a problem if the deicing/anti-icing equipment is used.
  - (3) Moderate. The rate of accumulation is such that even short encounters become potentially hazardous and use of deicing/anti-icing equipment or diversion is necessary.
  - (4) Severe. The rate of accumulation is such that deicing/anti-icing equipment fails to reduce or control the hazard. Immediate diversion is necessary.
- b. FAR 135.85(e) does not allow the pilot in command to ignore or dispute a forecast of icing conditions for the route of intended flight. If later weather reports available to the pilot contain evidence which indicates that the forecast is obsolete, he may conduct the flight. However, this provision does not relieve the pilot of his responsibility to comply with the known icing conditions limitations of FAR 135(b) and (c).
20. VFR MINIMUM ALTITUDE.(FAR 135.91). VFR minimum altitude and visibility requirements of FARs 135.91 and 135.93 are in addition to the general requirements of FAR 91.105. These minimums also provide the minimums for the VFR buffer zone when operating single-engine aircraft or multiengine aircraft which do not meet the performance requirements of FAR 135.145(a)(2).

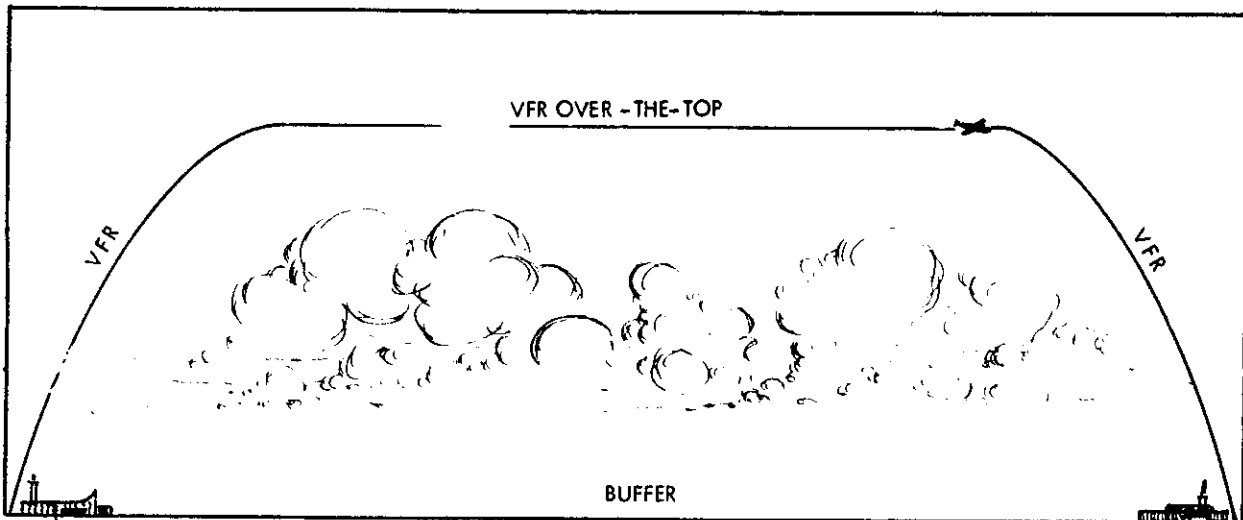
FIGURE 5. MINIMUM WEATHER CONDITIONS - VFR BUFFER

	CEILING	VISIBILITY
Day	1000 Feet 500 feet	1 Mile 2 Miles <u>1/</u>
Night	1000 Feet	2 Miles
Mountainous Area <u>3/</u>	2000 Feet <u>2/</u>	2 Miles

- 1/ Two mile visibility required when ceilings are below 1000 feet.  
2/ Above highest obstacle within a horizontal distance of five miles from intended course.  
3/ Mountainous areas are designated by the Administrator in Part 95 of the Federal Aviation Regulations.

21. VISUAL REFERENCE REQUIRED - HELICOPTER (FAR 135.95). For night operation adequate visual ground light reference requirements will be met if the meteorological conditions are such as to provide a distinct horizon or ample ground reference lights are available for control of the helicopter.
22. VFR OVER-THE-TOP CARRYING PASSENGERS - OPERATING LIMITATIONS (FAR 135.99). An aircraft may be operated VFR over-the-top carrying passengers, if:
- a. Weather reports and forecasts indicate that the weather at the intended point of termination of over-the-top flight allows a descent to beneath the ceiling under VFR and is forecast to remain so for at least one hour after estimated time of arrival at that point, and
    - (1) A multiengine airplane is used which meets the requirements of FAR 135.145(a)(2), or
    - (2) The pilot is the holder of an instrument rating (FAR 135.123) and
    - (3) A VFR buffer zone exists for single-engine aircraft and for multiengine airplanes which do not meet the requirements of FAR 135.145(a)(2).

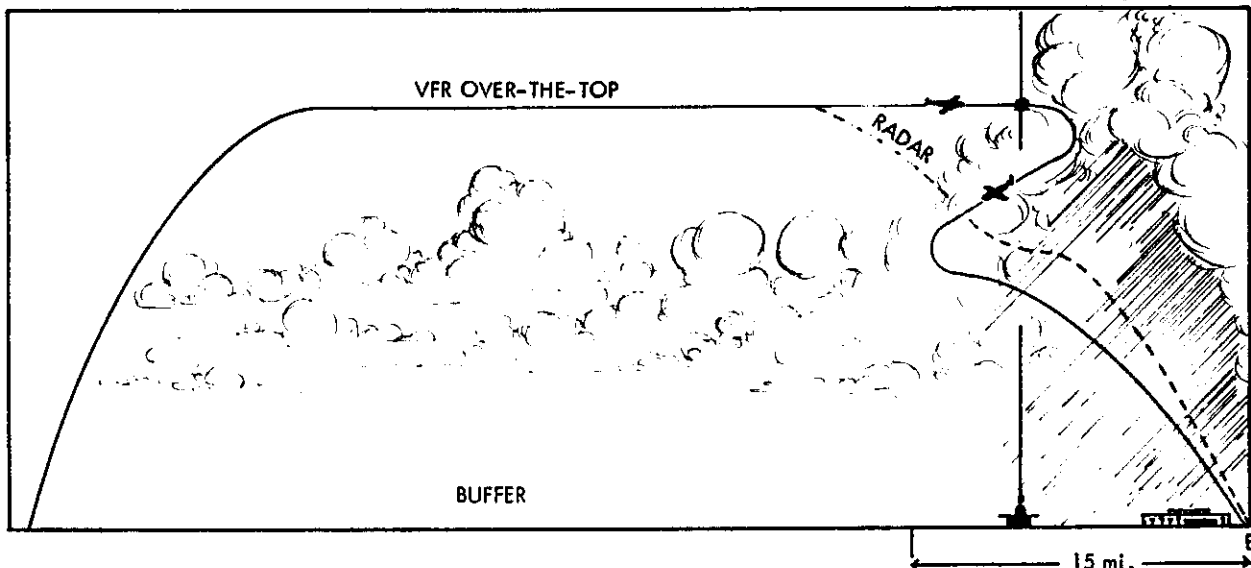
FIGURE 6. VFR OVER-THE-TOP - EN ROUTE (FAR 135.99(a)(1)).



b. Weather reports and forecasts indicate that the weather at the intended point of termination of over-the-top flight allows an IFR approach and landing with flight clear of the clouds until reaching the prescribed initial approach altitude over the final approach facility unless the approach is made with the use of radar as provided in FAR 91.116(f), and

- (1) The pilot is the holder of an instrument rating and meets the requirements of FAR 135.125 and 135.131, and
- (2) A multiengine airplane is used which meets the requirements of FAR 135.145(a)(2), or
- (3) An en route VFR buffer zone exists for single-engine aircraft and for multiengine airplanes which do not meet the requirements of FAR 135.145(a)(2).

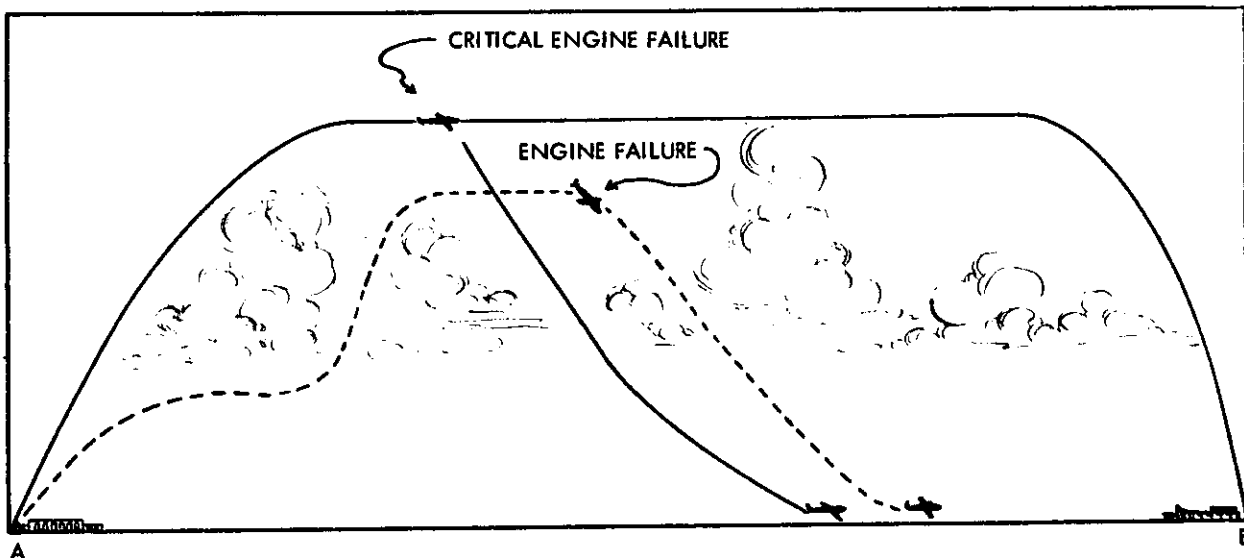
FIGURE 7. VFR OVER-THE-TOP - EN ROUTE AND APPROACH (FAR 135.99(a)(2)).



c. It is operated under conditions allowing:

- (1) In the case of multiengine aircraft, descent or continuation of the flight under VFR if its critical engine fails, or
- (2) In the case of single-engine aircraft, descent under VFR if its engine fails.

FIGURE 8. VFR OVER-THE-TOP - NONINSTRUMENT EQUIPPED (FAR 135.99(b)(1) and (2)).



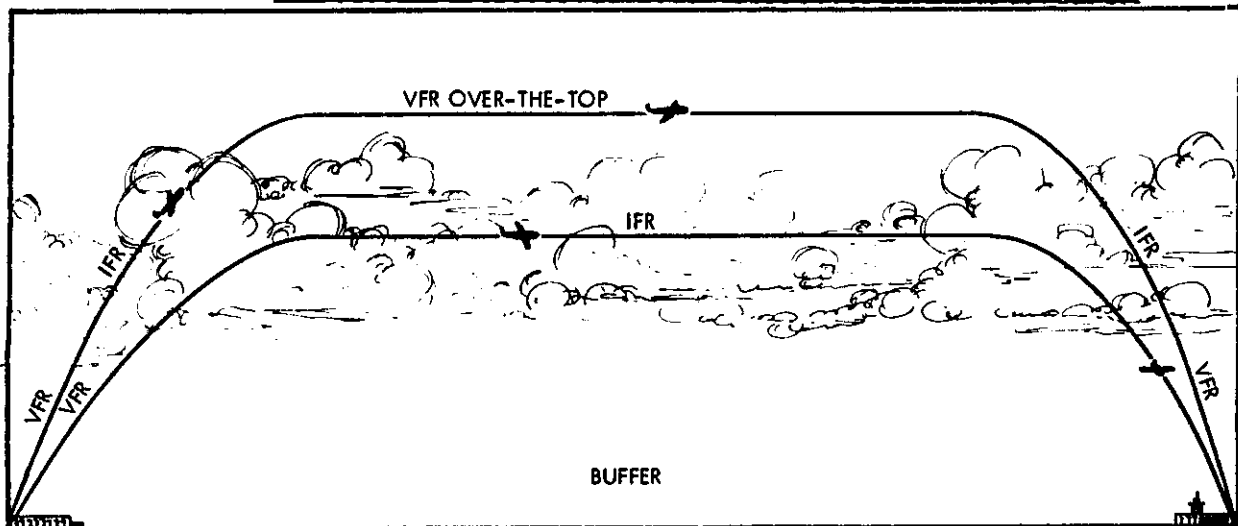
23. PILOT IN COMMAND - ROUTE AND AIRPORT QUALIFICATIONS, INSTRUMENT, INITIAL, AND RECURRENT CHECKS (FAR 135.122, 135.131, 135.138).

- a. The type of instrument approach procedures to be demonstrated before use, and certified to in a letter of competency, are defined in Part 97 of the Federal Aviation Regulations and relate to the type of navigation facility upon which the procedure is established. For example: L/MF, VOR/DME, LOC, LOC(BC), LDA, NDB(ADF) and ILS.
- b. The six months instrument check required by FAR 135.131 may be substituted for:
  - (1) The route and airport qualification flight check requirements of FAR 135.122 if the flight is conducted:
    - (a) in one of the types of airplanes that the pilot is assigned to fly; and
    - (b) over a portion of a representative airway or approved off-airway route to which the pilot may be assigned to fly.

- (2) One of the class or type of aircraft flight checks required by FAR 135.138(b) if takeoffs, landings, and ground handling maneuvers are included on the check.

24. EQUIPMENT - GENERAL REQUIREMENTS (FAR 135.143(b)). Approved instruments and equipment are those which:
- a. Conform to a type certificate, supplemental type certificate, or technical standard order.
  - b. Are approved by the aircraft manufacturer under delegated authority.
  - c. Are accepted as part of the aircraft on original certification.
  - d. If not covered by the procedures specified in subparagraphs a, b, or c, are specifically approved by an authorized representative of the Administrator.
25. PERFORMANCE REQUIREMENTS - AIRCRAFT OPERATED OVER-THE-TOP OR IN IFR OPERATIONS (FAR 135.145).
- a. Multiengine airplanes which meet the single-engine performance of FAR 135.145(a)(2) may be used for IFR or over-the-top operations without regard to buffer zone. However, for other than limited IFR operation, a second-in-command pilot is required to be used unless authorization has been granted for use of an autopilot in lieu of a second pilot.
  - b. A single-engine airplane or multiengine airplane which does not meet the climb requirements of FAR 135.145(a)(2) may be operated in IFR conditions or over-the-top if:
    - (1) Weather reports and forecasts indicate the weather along the planned route (including takeoff and landing) allows VFR flight under the ceiling (VFR weather "buffer") and is forecast to remain so at every point on the route at least one hour after estimated time of arrival at the point (FAR 135.145(b)(1)).
    - (2) VFR buffer includes both departure and destination airports.

FIGURE 9. IFR OR VFR OVER-THE-TOP - EN ROUTE (FAR 135.145(b)(1)).



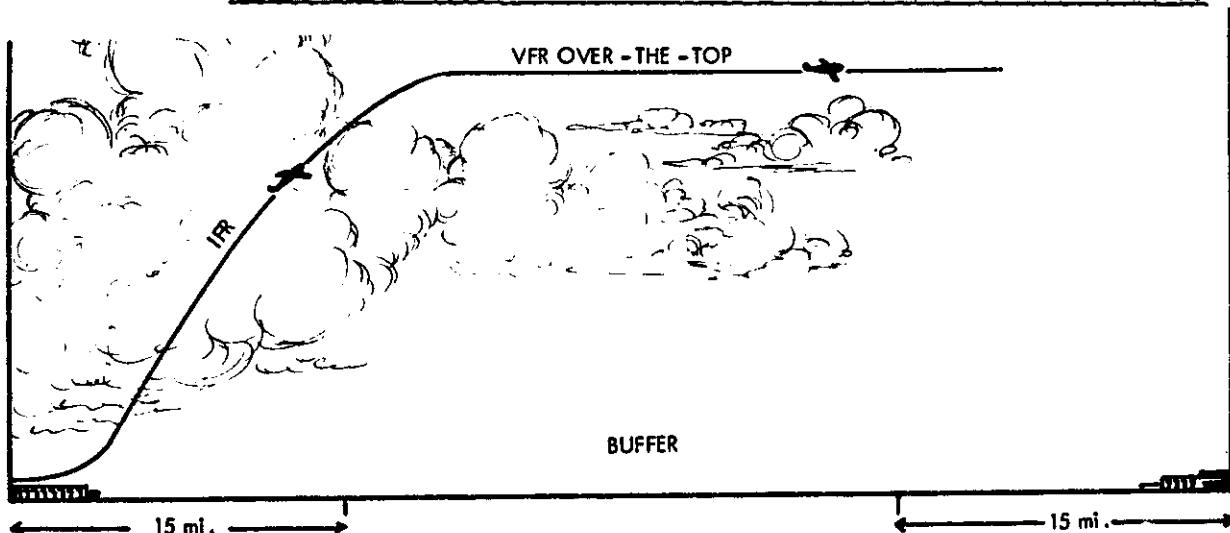
c. The pilot-in-command of a single-engine airplane or multiengine airplane which does not meet the performance requirements of FAR 135.145(a)(2) may:

- (1) Take off from the departure airport in IFR conditions and fly in IFR conditions to a point no more than 15 miles from departure airport.
- (2) Operate the airplane en route over-the-top if buffer zone extends from a point no more than 15 miles from departure airport to a point within 15 miles from destination airport.

NOTE: Second-in-command pilot not required for limited IFR. (FAR 135.75)

This flight cannot go all the way in IFR conditions as departure is in IFR conditions.

FIGURE 10. IFR DEPARTURE AND OVER-THE-TOP - EN ROUTE (FAR 135.145(b)(2)).



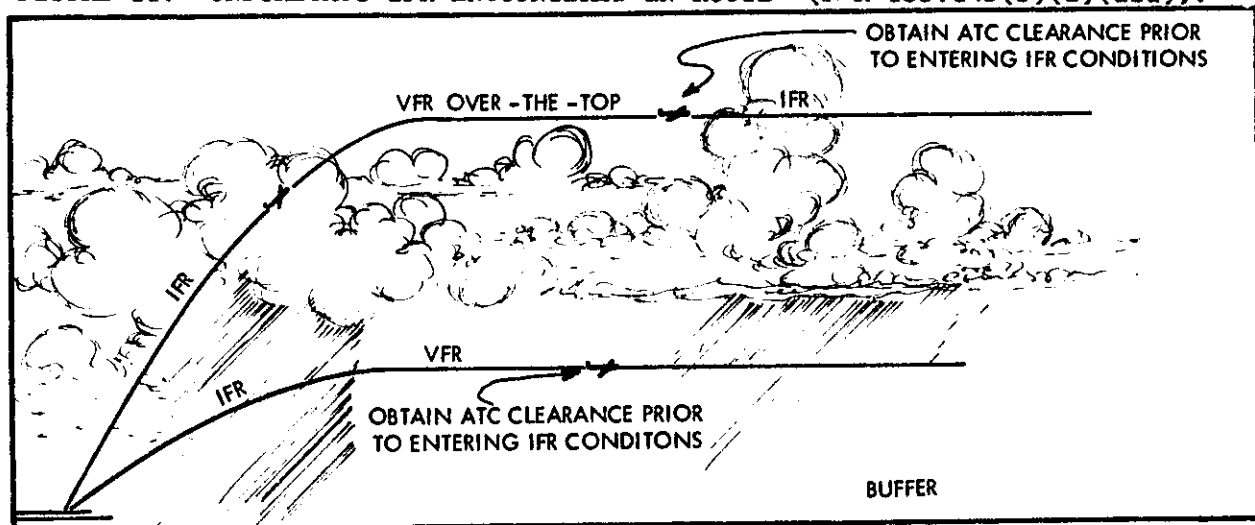
## (3) Operate in IFR conditions en route if:

- (a) Unforecast marginal VFR weather conditions are encountered while en route on a flight which was started and intended to be conducted under VFR or VFR over-the-top requirements of the part (except for limited IFR operations permitted by FAR 135.75(b)(1) and (2)).
- (b) Whether reports and forecasts indicate that the flight can return to VFR or VFR over-the-top conditions before reaching a point 15 miles from destination.

NOTE: Second-in-command pilot is not required (FAR 135.75).

IFR all the way cannot be conducted as buffer zone does not include both departure and destination airport.

FIGURE 11. UNFORECAST IFR ENCOUNTERED EN ROUTE (FAR 135.145(b)(2)(iii)).



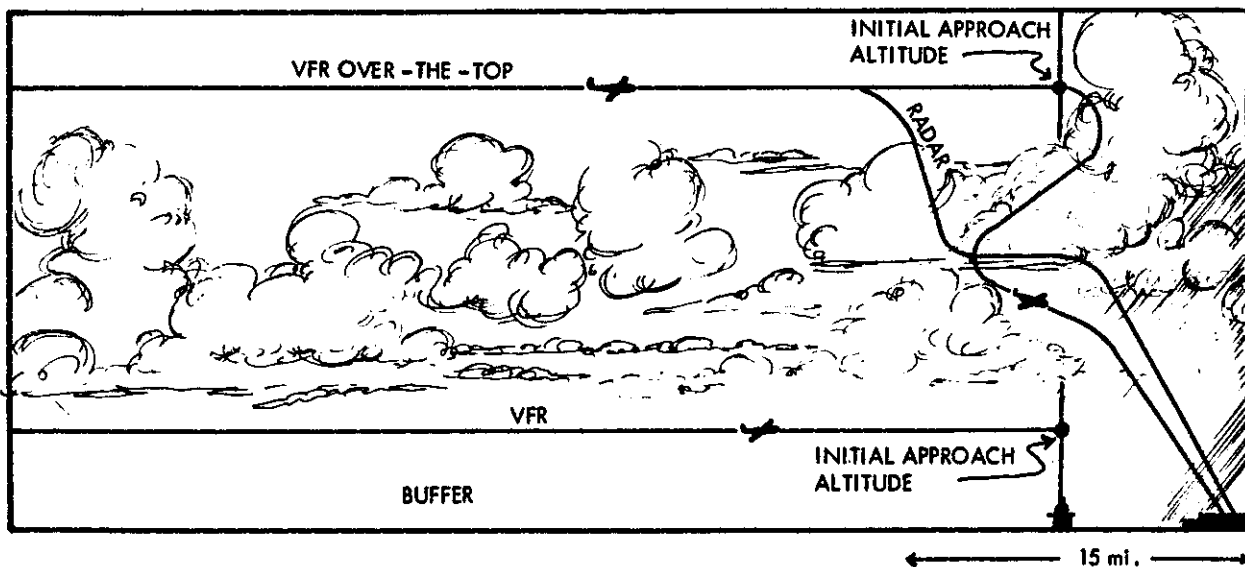
(4) Make an IFR approach and land at the destination airport in IFR conditions if:

- (a) The flight is conducted clear of clouds from a point en route at least 15 miles from destination airport until reaching the prescribed initial approach altitude over the final facility, or
- (b) Approach is made with use of radar (entering IFR conditions no more than 15 miles from destination airport). (FAR 135.75(b))

NOTE: Second-in-command is not required (FAR 135.75).  
Flight in IFR conditions all the way cannot be conducted as buffer zone does not extend over both departure and destination airports.



FIGURE 12. VFR OVER-THE-TOP EN ROUTE WITH IFR APPROACH (FAR 135.145(b)(2)(iv)).

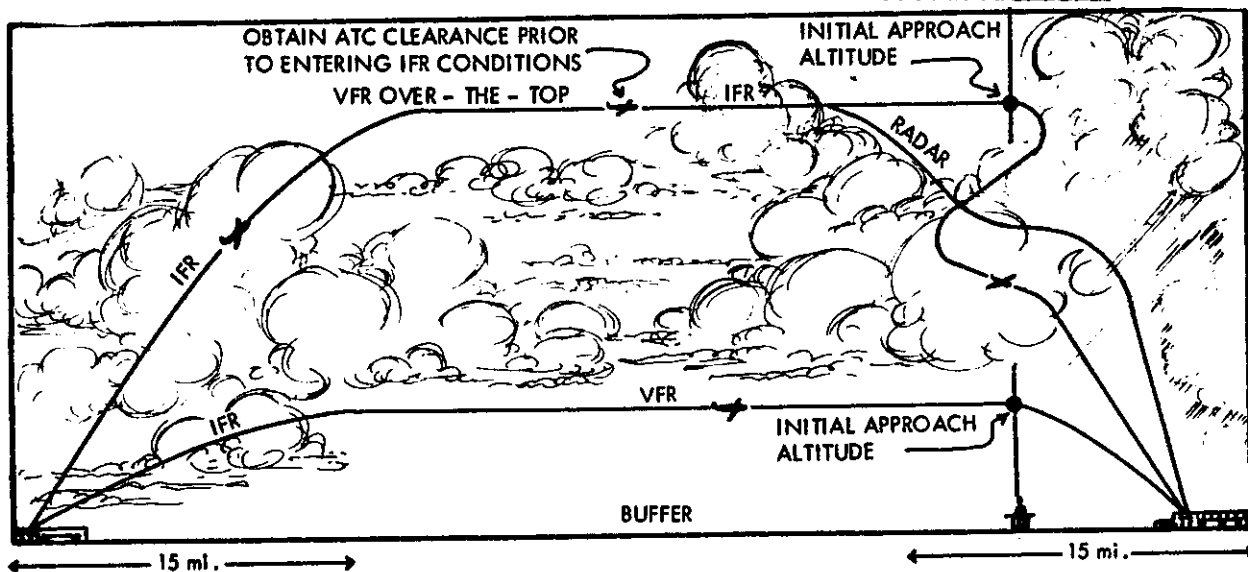


- d. The pilot-in-command of a single-engine airplane or a multiengine airplane which does not meet the performance requirements of FAR 135.145(a)(2) may depart IFR, operate in limited unforecast IFR conditions en route, and make an IFR approach on the same flight, provided he adheres to conditions and limitations of FAR 135.

NOTE: Second-in-command pilot not required per FAR 135.75.

Flight in IFR conditions over entire enroute portion not permitted as buffer zone does not extend over both takeoff and destination airports.

FIGURE 13. IFR DEPARTURE - UNFORECAST IFR EN ROUTE - IFR APPROACH.



26. FIRE EXTINGUISHERS - PASSENGER CARRYING AIRCRAFT (FAR 135.161).

- a. FAR 135.161 does not specify a minimum capacity nor require that the fire extinguisher used in aircraft during air-taxi operation be approved by the fire Underwriters' Laboratories. However, the operator may desire to equip his air-taxi aircraft with fire extinguishers which meet the standards required for such approval. The toxicity rating of the chemical contained in the fire extinguisher is an important consideration when selecting an extinguisher for use in confined space such as an airplane cockpit.
- b. The toxicity ratings listed by the Underwriters' Laboratories for some of the commonly known fire extinguisher chemicals are as follows:

- (1) Bromochloromethane - Group 3
- (2) Bromotrifluoromethane - Group 6
- (3) Carbon Dioxide - Group 5
- (4) Carbon Tetrachloride - Group 3
- (5) Dibromodifluoromethane - Group 4
- (6) Methyl Bromide - Group 2

NOTE: The higher group numbers denote lower toxicity.

- c. Care should be taken to provide adequate ventilation when fire extinguishers are discharged within the crew or passenger compartments. Dry chemical extinguishers should not be used in crew compartments because of the possibility of interference with visibility during discharge.
27. EMERGENCY EQUIPMENT. For international flights, the International Flight Information Manual lists emergency equipment required by foreign governments for flight in certain areas.
28. WEATHER REPORTS AND FORECASTS. An accredited observer, referred to in FAR 135.65, means the holder of a Weather Bureau Certificate of Authority to Take Weather Observations (Appendix 3, Page 2). An operator who desires to obtain such authority should submit a request for a Supplemental Aviation Weather Reporting Station to the U. S. Weather Bureau Regional Office nearest his operation. The addresses of all U.S. Weather Bureau Regional Offices may be found in Appendix 3, Page 1.

29. EMPTY WEIGHT AND CENTER OF GRAVITY. A recent study made as a result of concern over accidents involving multiengine aircraft in which weight and balance were considered to be contributing factors has shown a need for more accurate control over weight and balance procedures. All multiengine aircraft in air taxi operations after 1 April 1971, which have not had the empty weight and center of gravity established by actual weighing in the preceding three years will have to be reweighed and the empty weight and empty center of gravity recalculated. For new multiengine aircraft produced under a manufacturer's average weight system, the first weighing under this provision will be three years after the date the aircraft was originally certificated for airworthiness. Those operators having a fleet weight and balance system approved under their operations specification will be exempt from the requirements of FAR 135.167 but will comply with their fleet system reweighing provisions.

APPENDIX 1. AIR TAXI CERTIFICATION

The following are examples as they should appear on FAA Form 8000-6, Items 2 and 2a, (Figure 1) and FAA Form 8430-2 (Figure 2) of this Appendix. When a business or trade name is used by an individual or a partnership, the individual or all partners shall be identified by name followed by d/b/a (the abbreviation for doing business as) and the business or trade name used. For example:

<u>NAME AND ADDRESS OF APPLICANT</u>	<u>OPERATING AS</u>
John J. Doe d/b/a Doro Aviation Service Municipal Airport Bayside, Virginia	Individual
John J. Doe, Allen B. Smith, and Richard R. Roe d/b/a Doro Aviation Service Municipal Airport Bayside, Virginia	Partnership
Twin Pines Aviation Company, Inc. Adams Field Little Rock, Arkansas	Corporation
Flying, Inc., d/b/a Amos Flying Service Municipal Airport Waterville, Kentucky	Corporation

For all others, the type of organization shall be specified i.e., company, club, association, etc. The name shall consist of a listing of the officers or directors; i.e., the name of the president and secretary-treasurer, followed by d/b/a and the organization name used. For example:

<u>NAME AND ADDRESS OF APPLICANT</u>	<u>OPERATING AS</u>
John J. Doe, President Richard R. Roe, Secretary- Treasurer d/b/a Inlet Airways Company Municipal Airport Bayside, Virginia	Other - (Specify) "Company"
John J. Doe, President Richard R. Roe, Secretary-Treasurer Cantwell Company d/b/a Greater Aviation Municipal Airport Bayside, Virginia	Other - (Specify) "Company"

2/17/70

Only one certificate will be issued to any person; however, an organization may operate under more than one business name (on a single certificate) provided the certificate, FAA Form 8430-2, states the name and address of the principal business office and the name and address of other business offices that are to be used. Further, to assure that members of the public may adequately identify either organization with which it deals, the single certificate, FAA Form 8430-2, should clearly indicate that both names will be used. For example:

PRINCIPAL NAME AND BUSINESS OFFICE

OTHER NAME AND BUSINESS OFFICE

Individual

John R. Doe d/b/a  
Bear Lake Lodge  
P.O. Box 342  
West, Wisconsin

and

John R. Doe d/b/a  
Miami Airlines  
Miami Airport  
Miami, Florida

Partnership

John R. Doe and  
Virgil L. Smith d/b/a  
Bear Lake Lodge  
P.O. Box 342  
West, Wisconsin

and

John R. Doe and  
Virgil L. Smith d/b/a  
Miami Airlines  
Miami Airport  
Miami, Florida

Corporation

Skyway Aero Service, Inc., d/b/a  
Skyway Aero Service, Inc.  
Select Field  
Hartshorn, Louisiana

and

Strongarm Airlines  
Ucome Field  
West, Wisconsin

The application shall be signed by an authorized officer of the "parent" organization listed in Item 2 of FAA Form 8000-6.

If the mailing address differs from the exact location of the principal business office, Item 2 of FAA Form 8000-6 should be completed as follows:

NAME AND BUSINESS OFFICE

MAILING ADDRESS

John R. Doe d/b/a  
Bear Lake Lodge  
Bear Lake Airport  
West, Wisconsin

John R. Doe d/b/a  
Bear Lake Lodge  
P.O. Box 342  
West, Wisconsin

The following is used, when applicable, to identify the individual signing the application, FAA Form 8000-6; when signing for receipt of FAA Form 1014, Operations Specifications; and when signing the application portion of FAA Form 1014, in application for an amendment to existing operations specifications. The information shall be typed on the title line under the signature as follows:

Individual	Owner, Doro Aviation Service
Partnership	Partner, Doro Aviation Service
Corporation	President, Vice President, or Secretary-Treasurer, Twin Pines Aviation Company, Inc.
Other	President or Secretary-Treasurer, Inlet Airways Company

By reason of the geographical separation of the 48 contiguous states from the States of Alaska and Hawaii, the following are examples pertaining to Item 8, AREA OF OPERATION, on FAA Form 8000-6, and the corresponding FAA authorized AREA OF OPERATION to be shown on the Operations Specifications, FAA Form 1014:

FOR OPERATIONS IN A SPECIFIC AREA OR STATE

1. An operator applying to operate within the State of Alaska.

a. Application - FAA Form 8000-6, Item 8 AREA OF OPERATION

Specific Areas  
ALASKA

b. Operations Specifications - FAA Form 1014

AREA OF OPERATION  
ALASKA

2. An operator applying to operate within the State of Hawaii.

a. Application - FAA Form 8000-6, Item 8 AREA OF OPERATION

Specific Areas  
HAWAII

b. Operations Specifications - FAA Form 1014

AREA OF OPERATION  
HAWAII

3. An operator applying to operate within the State of Arizona.

a. Application - FAA Form 8000-6, Item 8 AREA OF OPERATION

Specific Areas  
ARIZONA

b. Operations Specifications - FAA Form 1014

AREA OF OPERATION  
ARIZONA

FOR OPERATIONS WITHIN THE STATE OF ALASKA AND TO AND FROM CANADA

1. An operator based in the 48 contiguous states or the State of Alaska applying to operate within or between the 48 contiguous states and Alaska.

a. Application - FAA Form 8000-6, Item 8 AREA OF OPERATION

Continental  
United States

International  
Canada

b. Operations Specifications - FAA Form 1014

AREA OF OPERATION  
Continental United States and Canada

NOTE: This would require Canadian authorization in order to overfly or land in Canada en route.

FOR OPERATIONS WITHIN THE 48 CONTIGUOUS STATES

1. An operator applying to operate solely within the 48 contiguous states.

a. Application - FAA Form 8000-6, Item 8 AREA OF OPERATION

Continental United  
States excluding Alaska

b. Operations Specifications - FAA Form 1014

AREA OF OPERATION  
Continental United States excluding Alaska

FOR OPERATIONS WITHIN THE 48 CONTIGUOUS STATES  
AND TO AND FROM CANADA OR MEXICO

1. An operator applying to operate within the 48 contiguous states and to and from Canada or Mexico.

a. Application - FAA Form 8000-6, Item 8 AREA OF OPERATION

Continental United States excluding Alaska

International  
Canada  
Mexico

b. Operations Specifications FAA Form 1014

AREA OF OPERATION

Continental United States excluding Alaska,  
Countries of Canada and Mexico

FOR OPERATIONS WITHIN OR BETWEEN THE 48 CONTIGUOUS STATES  
AND THE STATE OF ALASKA, AND TO AND FROM CANADA, MEXICO, PUERTO RICO,  
NICARAGUA, AND GUATEMALA

1. An operator based in either the 48 contiguous states or the State of Alaska applying to operate within and between the 48 contiguous states and the State of Alaska, and to and from Canada, Mexico, Puerto Rico, Nicaragua, and Guatemala.

a. Application - FAA Form 8000-6, Item 8 AREA OF OPERATION

Continental United States

International  
Canada  
Mexico  
Puerto Rico  
Nicaragua  
Guatemala

b. Operations Specifications - FAA Form 1014

AREA OF OPERATION

Continental United States and the countries of Canada,  
Mexico, Puerto Rico, Nicaragua, and Guatemala



TERRITORIES AND POSSESSIONS OF THE UNITED STATES

1. American Samoa
2. Bonin - Volcano Islands - Marcus (Navy)
3. Guam
4. Marshall, Caroline, and Mariana Islands
5. Canal Zone and Panama Canal
6. Puerto Rico
7. Ryukyu Islands
8. Virgin Islands (St. Thomas, St. John, St. Croix)
9. Baker, Howland, Jarvis, Johnston, Sand Kingman Reef, Midway, Palmyra, and Wake Islands

CATEGORIES AND CLASSES OF AIRCRAFT AND OPERATING CONDITIONS

Listed below are examples of categories and classes of aircraft and operating conditions that may be shown as operations specifications. (Other combinations of individual listings of categories and classes of aircraft and operating conditions that are authorized by Federal Aviation Regulations Part 135 may be arranged in a similar manner).

- Airplane Single-Engine Land: VFR Day and Night, Passengers and Cargo  
Airplane Single-Engine Land: VFR and IFR Day and Night, Passengers and Cargo  
Airplane Single-Engine Land: VFR Day and Night, Cargo Only  
Airplane Single-Engine Land: IFR Day and Night, Cargo Only
- Airplane Single-Engine Land and Sea: VFR Day, Passengers and Cargo
- Airplane Multiengine Land: VFR and IFR Day and Night, Passengers and Cargo  
Airplane Multiengine Land: VFR Day and Night, Cargo Only
- Airplane Multiengine Land and Sea: VFR Day, Passengers and Cargo
- Helicopter Single-Engine Land: VFR Day and Night, Passengers and Cargo
- Helicopter Single-Engine Sea: VFR Day and Night, Passengers and Cargo

FIGURE 1. APPLICATION FOR AIR TAXI COMMERCIAL OPERATOR  
(ATCO) CERTIFICATE UNDER FAR 135

DEPARTMENT OF TRANSPORTATION—FEDERAL AVIATION ADMINISTRATION <b>APPLICATION FOR AIR TAXI COMMERCIAL OPERATOR</b> (ATCO) CERTIFICATE UNDER FAR 135						Form Approved: Budget Bureau No. 04-R0171					
Submit in triplicate (3) to appropriate FAA District Office.						2a. OPERATING AS (See pages 2 & 3 of the Appendix)					
1. APPLICATION IS HEREBY MADE FOR ("X" applicable box) <input checked="" type="checkbox"/> ISSUANCE <input type="checkbox"/> AMENDMENT OF ATCO CERTIFICATE						<input type="checkbox"/> INDIVIDUAL <input type="checkbox"/> PARTNERSHIP <input type="checkbox"/> CORPORATION <input type="checkbox"/> OTHER (Specify):					
2. NAME AND ADDRESS OF APPLICANT (See pages 1 & 2 of this Appendix)  (If additional space is necessary, attach separate sheet.)  ZIP CODE:						2b. U.S. CITIZENSHIP AS DEFINED IN FAR 135					
						2c. HOLD CAB ECONOMIC/EXEMPTION AUTHORITY					
						2d. HOLD A COMMERCIAL OPERATING CERTIFICATE (If "Yes," state Regulation(s) under which issued):					
3. PRINCIPAL OPERATIONS BASE (Airport, City, State) Municipal Airport, Bayside, Virginia						4. PRINCIPAL MAINTENANCE BASE (Airport, City, State) Municipal Airport, Bayside, Virginia					
5. NAME OF <input type="checkbox"/> OPERATIONS MANAGER OR <input checked="" type="checkbox"/> CHIEF PILOT John R. Ike                      703-999-1672						6. NAME OF <input type="checkbox"/> MAINTENANCE SUPERVISOR OR <input checked="" type="checkbox"/> CHIEF MECHANIC A. B. Brown                      703-999-1674					
7. OPERATION AUTHORIZATIONS REQUESTED ("X" applicable items)						8. AREA OF OPERATION requested.					
AIRCRAFT CATEGORY AND CLASS			CARRYING		VFR		IFR		<input type="checkbox"/> UNITED STATES <input type="checkbox"/> SPECIFIC AREAS <input checked="" type="checkbox"/> INTERNATIONAL (List Countries)  "Canada"		
			PASS.	CARGO	DAY	NIGHT	DAY	NIGHT			OFF AIRWAYS
AIRPLANE—SINGLE ENGINE LAND			X	X	X	X	X	X			
AIRPLANE—MULTI ENGINE LAND			X	X	X	X	X	X			X
AIRPLANE—SINGLE ENGINE SEA											
AIRPLANE—MULTI ENGINE SEA											
HELICOPTER			X	X	X	X					
OTHER (Specify) IFR Route outside controlled airspace between Emporia and Richmond, Va. is requested.											
9. AIRCRAFT TO BE USED (List one aircraft only in each category and class)											
REGISTRATION NUMBER	MAKE	MODEL	CATEGORY AND CLASS	OWNERSHIP ("X" one)		EQUIPPED FOR ("X" applicable items)					
				OWNED	AGREEMENT OR LEASE (Attach copy)	VFR		IFR			
N567A	Piper	PA-28	ASEL	X		X	X	X	X		
N765P	Beechcraft	BE-99	AMEL	X		X	X	X	X		
N675C	Bell	206	Helicopter, SEL		X	X	X				
10. CERTIFICATION											
I certify these statements and the attachments hereto are true and correct.											
SIGNATURE OF APPLICANT			TITLE		DATE						
/s/ Allen B. Smith			(See page 3 of this Appendix)		September 1, 1969						
RECORD OF ACTION—FOR FAA USE ONLY											
11. INSPECTOR'S RECOMMENDATIONS											
12. INSPECTORS' SIGNATURES		OPERATIONS		MAINTENANCE		AVIONICS					
13. APPROVAL ACTION		COMMENTS									
APPROVED. CERTIFICATE NO. ISSUED.											
DISAPPROVED		SIGNATURE		TITLE		DATE					

THE UNITED STATES OF AMERICA  
DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

FEDERAL AVIATION  
OPERATING CERTIFICATE

No. EA-2

*This certifies that*

John J. Dowd/b/a  
Dorb Aviation Service  
Municipal Airport  
Bayside, Virginia

*has met the requirements of the Federal Aviation Act of 1958, as amended, and the rules, regulations, and standards prescribed thereunder for the issuance of this certificate, and is hereby authorized to operate as*

AIR TAXI/COMMERCIAL OPERATOR

*in accordance with said Act and the rules, regulations, and standards prescribed hereunder, and the terms, conditions, and limitations contained in the operations specifications.*

*This certificate is not transferable and, unless sooner surrendered, suspended or revoked, shall continue in effect until otherwise terminated by order of the Administrator.*

*Effective date:* April 1, 1970

*Issued at:* EA-GADO-16

*By Direction of the Administrator*

\_\_\_\_\_  
(To be signed by supervising inspector)

(Signature)

\_\_\_\_\_  
(Supervising Inspector, EA-GADO-16)

(Title)

UNITED STATES OF AMERICA  
FEDERAL AVIATION AGENCY  
WASHINGTON

Form Approved  
Budget Bureau No. 04-R075.

**OPERATIONS SPECIFICATIONS**

John J. Doe d/b/a Doro Aviation Service is authorized to conduct air taxi operations as an air carrier engaged in air transportation or commercial operation as a commercial operator utilizing aircraft of 12,500 pounds or less maximum certificated takeoff weight in accordance with the applicable provisions of Federal Aviation Regulations Part 135, other FARs, and the terms, conditions and limitations contained herein.

Operations are authorized in the following categories and classes of aircraft under the conditions and within the area of operations authorized.

Airplane Single-Engine Land, VFR Day and Night, Passengers and Cargo

Airplane Multiengine Land, VFR and IFR Day and Night, Passengers and Cargo

Helicopter Single-Engine Land, VFR Day and Night, Passengers and Cargo

AREA OF OPERATION

Continental United States and countries of Canada and Mexico

OTHER AUTHORIZATIONS

IFR operations over routes outside controlled airspace are authorized as follows:

Richmond VOR Direct Emporia NDB (and reverse course)

Record Keeping Requirements

The operator is authorized to keep the completed load manifest, required by section 135.43(d) of the FAR's, at its Boeing Field, Seattle Washington office for those flights conducted by Seattle assigned crews and aircraft.

Autopilot Authorization

Use of an autopilot ("ABC" Model 123) installed in Beechcraft BE-99 N765P is authorized in lieu of second pilot when passengers are carried under IFR or in actual IFR weather conditions, and the pilot holds a current Statement of Competency Letter for instrument flight using autopilot.

Effective date See reverse side



UNITED STATES OF AMERICA  
FEDERAL AVIATION AGENCY  
WASHINGTON

Form Approved  
Budget Bureau No. 04-R075.

**OPERATIONS SPECIFICATIONS**

John J. Doe d/b/a Doro Aviation Service is authorized to conduct air-taxi operations as an air carrier engaged in air transportation or commercial operation as a commercial operator, utilizing aircraft of 12,500 pounds or less maximum certificated takeoff weight, in accordance with the applicable provisions of Federal Aviation Regulations Part 135, other FARs, and the terms, conditions, and limitations contained therein.

Operations are authorized in the following categories and classes of aircraft under the conditions and within the area of operations authorized.

Airplane Single-Engine Land, VFR Day and Night, Passengers and Cargo

Airplane Multiengine Land, VFR and IFR Day and Night, Passengers and Cargo

Helicopter Single-Engine Land, VFR Day and Night, Passengers and Cargo

AREA OF OPERATION

Continental United States and Canada.

OTHER AUTHORIZATIONS

IFR operations over routes outside controlled airspace are authorized as follows:

Richmond VOR Direct Emporia NDB (and reverse course)

Effective date See reverse side

FEDERAL AVIATION AGENCY  
Washington, D. C.

Operating Certificate No. 16 EA-2

John J. Doe d/b/a  
Dora Aviation Service hereby makes application for amendment  
of the Operations Specifications appearing on the reverse side hereof, as follows:  
Request authorization to conduct international operations into Mexico. Request  
authorization to use an autopilot in lieu of second pilot when carrying passengers  
in IFR operations.  
Request authorization to keep copies of completed load manifests at our Boeing  
Field Seattle, Washington base.

Reasons and supporting data (if insufficient space attach additional page):  
Desire to expand existing operations for reason of several recent requests for air  
taxi service into Mexico.

The airplane, Beechcraft BE-99, N765P, is equipped for IFR operations, including an  
autopilot, in accordance with Federal Aviation Regulations Part 135. The autopilot,  
an "ABC" Model 123, was installed and approved by the Beechcraft factory. Pilots  
John R. Ike and Richard R. Roe will be used in this operation.

Management control requires the completed load manifests be retained and available  
in our Seattle office files on flights conducted by the three flight crews on the  
two aircraft assigned to that location.

I CERTIFY that the statements submitted in connection herewith are true and that I am duly authorized  
to make this application on behalf of the applicant.

(to be signed by applicant)  
.....  
(Signature)

Date September 9, 1970

(See Appendix 1, page 3)  
.....  
(Title)

INSPECTOR'S RECOMMENDATIONS:  
Recommend approval of international operations into Mexico. Pilots John R. Ike  
and Richard R. Roe were each issued a statement of Competency Letter for instrument  
flight using an autopilot.

Recommend retention of completed load manifests at Seattle base on flights by Seattle assigned  
crews and aircraft  
..... /s/ Henry J. Jones  
(Signature)  
General Aviation Operations Inspector  
(Title) EA-GADQ-16

The Operations Specifications set forth on the reverse side hereof are .....

Amendment No. One

By direction of the Administrator:

Effective date September 24, 1970

(to be signed by supervising inspector)  
.....  
(Signature)

Supersedes specifications dated April 1, 1970

Supervising Inspector, EA-GADQ-16  
.....  
(Title)

Received for the applicant by:

..... /s/ .....  
(Signature)

Date September 20, 1970

Appendix 1, page 3  
.....  
(Title)

PILOT PROFICIENCY

<b>AIRMAN PROFICIENCY/QUALIFICATION CHECK</b>				DATE OF CHECK <b>10 January 1970</b>	
				LOCATION <b>Richmond, Virginia</b>	
NAME OF AIRMAN (Last, first, middle initial) <b>Ike, John R.</b>				TYPE OF CHECK <b>FAR 135 6 month instrument</b>	
EMPLOYED BY <b>Doro Aviation Service</b>		BASED AT (City and State) <b>Bayside, Virginia</b>		TYPE AIRCRAFT/SIMULATOR USED <b>Beechcraft BE-99</b>	
NAME OF CHECK AIRMAN				BLOCK TIME <b>1:20</b>	
<b>FLIGHT MANEUVERS GRADE (S-Satisfactory U-Unsatisfactory)</b>					
<b>PILOT</b>			<b>FLIGHT ENGINEER</b>		
S - SATISFACTORY U - UNSATISFACTORY W - WAIVER (See Appendix F to 121)		AIR-CRAFT	SIMU-LATOR	ITEM	
				S	U
<b>PREFLIGHT</b>					
1. EQUIPMENT EXAMINATION (Oral or written)		S		1. EQUIPMENT EXAM (Oral) (Written)	
2. * PREFLIGHT INSPECTION		S		2. PREFLIGHT CHECK OF AIRCRAFT	
3. TAXING		S		3. COMPUTATION OF FUEL LOAD & FUEL LOADING PROCEDURE	
4. POWERPLANT CHECKS		S		4. COMPLETION OF COMPANY APPROVED FORMS	
<b>TAKEOFFS</b>					
5. NORMAL		S		5. STARTING, TAXI, AND RUNUP	
6. INSTRUMENT		N/A		6. POWERPLANT AND PROPELLER CONTROL	
7. CROSSWIND		S		7. CRUISE CONTROL AND COMPUTATIONS	
8. WITH SIMULATED POWERPLANT FAILURE		S		8. AIRCRAFT/POWERPLANT OPERATION ANALYSIS	
9. * REJECTED TAKEOFF		S		9. FUEL SYSTEM MANAGEMENT	
<b>INSTRUMENT PROCEDURES</b>					
10. * AREA DEPARTURE		S		10. AIR CONDITION & PRESSURIZATION CONTROL	
11. * HOLDING		S		11. ELECTRICAL SYSTEM OPERATION	
12. * AREA ARRIVAL		S		12. POWERPLANT FIRE CONTROL	
13. ILS APPROACHES		S		13. EMERGENCY GEAR AND FLAP EXTENSION	
14. OTHER INSTRUMENT APPROACHES		S		14. HEATER FIRE AND CARGO COMPARTMENT FIRE	
15. CIRCLING APPROACHES		S		15. SMOKE EVACUATION	
16. MISSED APPROACHES		S		16. EMERGENCY DEPRESSURIZATION	
<b>INFLIGHT MANEUVERS</b>					
17. * STEEP TURNS		S		17. FUEL DUMPING PROCEDURE	
18. * APPROACHES TO STALLS		S		18. POWERPLANT SHUTDOWN AND RESTART	
19. * SPECIFIC FLIGHT CHARACTERISTICS		S		19. DEICING AND ANTI-ICING	
20. POWERPLANT FAILURE		S		20. LOCATION AND USE OF EMERGENCY EQUIPMENT	
<b>LANDINGS</b>					
21. NORMAL		S		REMARKS <b>Satisfactorily Demonstrated ILS, LOC(BC) VOR, NDB(ADF) approaches using an autopilot</b>  <b>Flight conducted over a portion of authorized off-airway route Richmond to Emporia</b>	
22. FROM AN ILS		S			
23. CROSSWIND		S			
24. WITH SIMULATED POWERPLANT(S) FAILURE		S			
25. REJECTED LANDING		S			
26. FROM CIRCLING APPROACH		S			
27. NORMAL AND ABNORMAL PROCEDURES		S			
28. EMERGENCY PROCEDURES		S			
29. JUDGEMENT		S			
30. HOVERING MANEUVERS		N/A			
31. RAPID DECELERATIONS (Quick stops)		N/A			
32. AUTOROTATIONS (Single engine helo. only)		N/A			
Items that may be waived are indicated by an asterisk (*) See Appendix F to FAR 121. All applicable items must be graded S, U or W. N/A for FAA FAR 135 Operation					
RESULT OF CHECK		X APPROVED DISAPPROVED		CHECK AIRMAN'S PERFORMANCE	
				SATISFACTORY UNSATISFACTORY	
REGION <b>Eastern</b>		DISTRICT OFFICE <b>EA-GADO-16</b>		INSPECTOR'S SIGNATURE <b>/s/ Henry J. Jones</b>	



STATEMENT OF COMPETENCY LETTER

General Aviation District Office  
456 Parkwater Road  
Bayside, Virginia 20030

10 January 1970

Mr. John R. Ike  
123 Fulton Street  
Bayside, Virginia 20030

STATEMENT OF COMPETENCY

This is to certify that John R. Ike 123 Fulton Street, Bayside, Virginia, 20030, holder of Commercial Pilot Certificate No. 356829 has on this date satisfactorily demonstrated his ability to pilot Beechcraft BE-99 aircraft in instrument flight using an autopilot in lieu of a second pilot in accordance with Federal Aviation Regulations 135.77 and 135.131(g).

The following instrument approach procedures were satisfactorily demonstrated and are authorized for use: ILS, LOC(BC), VOR, NDB(ADF).

/s/ Henry J. Jones  
General Aviation Operations Inspector  
EA-GADO-16

This authorization expires 31 July 1970  
6 calendar months

APPENDIX 3. Weather Information

ADDRESS LIST OF U.S. WEATHER BUREAU REGIONAL OFFICES

Director, Weather Bureau Eastern Region  
585 Stewart Avenue  
Garden City, New York 11530

Director, Weather Bureau Southern Region  
Room 10E09  
819 Taylor Street  
Ft. Worth, Texas 76102

Director, Weather Bureau Central Region  
Room 1836  
601 East 12th Street  
Kansas City, Missouri 64106

Director, Weather Bureau Western Region  
Box 11188  
Federal Building  
125 South State Street  
Salt Lake City, Utah 84111

Director, Weather Bureau Alaskan Region  
632 6th Avenue  
Anchorage, Alaska 99501

Director, Weather Bureau Pacific Region  
Room 516  
Bethel-Pauahi Building  
1149 Bethel Street  
Honolulu, Hawaii 96813



## OPERATOR'S MANUAL OUTLINE

### PREFACE

Does this section inform the reader that the Manual is a necessary management tool for the use and guidance of all company flight and ground operations and maintenance personnel in conducting an orderly and safe operation?

### REVISION

Are the procedures adequate to assure compliance with the operator's responsibility to keep the Manual current and the holders responsibility to keep it up-to-date with the changes and additions furnished? Is a means provided to readily identify revisions, i.e., date of last revision on each page?

### INDEX

Is it a complete, concise, easy to use reference to the contents of the Manual?

#### I. Company Organization.

Is each individual in a management capacity identified with respect to his authorization to act, for the certificate holder, in his assigned areas of responsibility?

#### II. Company Procedures and Policy.

Does this section contain sufficient detail to provide the necessary guidance to enable each employee to carry out his assigned duties and responsibilities and conduct himself in accordance with the desired company policy? Does it assure the operator that his responsibility for compliance with the regulations will be fulfilled?

#### III. Operations Specifications.

If copies of the operations specifications are not used, does the extracted information meet the regulatory requirement? If deviations, exemptions or petitions for reconsideration have been authorized are they included?

#### IV. Accident Notification Procedures.

Does the procedure ensure the operator that he will be immediately notified and furnished information in sufficient detail to comply with the accident, incident and overdue aircraft notification requirements of the National Transportation Safety Board Investigation Regulation Part 430?

V. Flight Locating Procedures.

Are the established procedures adequate to ensure compliance with the flight locating requirements of FAR 135.29 for each flight for which an FAA flight plan is not filed?

VI. Enroute Qualification.

Does this section provide a method of scheduling to ensure compliance with the initial and recurrent testing? Are the approved check pilots, if appropriate, identified? Is a recording procedure provided?

VII. Emergency Procedures.

Is information provided to define the duties and responsibilities of the operator, flight and ground crews during emergencies? Does it ensure compliance with the operator and pilot in command emergency operations and reporting requirements of FAR 135.7?

VIII. Weight and Balance Procedures.

Are the procedures adequate to ensure compliance with the aircraft weight and balance limitations of each individual make, model and type aircraft operated? Do they provide for calculated values established by actual weighing of multiengine aircraft within the preceding three years? (Refer to paragraph 8a of this AC)

IX. Airworthiness Inspections.

Do the procedures ensure that the pilot in command can determine:

1. That the required airworthiness inspections have been made? (Ref. 8c(1)) and;
2. That the aircraft has been approved for return to service? (Ref. 8c(3)).

X. Mechanical Irregularities.

1. Reporting:

Is the pilot in command provided with a reporting system to inform the operator of aircraft mechanical irregularities or defects that come to his attention? (Ref. 8d) and

2. Correction.

Can the pilot in command easily determine the current aircraft airworthiness status resulting from corrective action taken on previously reported mechanical irregularities or defects?  
(Ref. 8e)

XI. Procedures for Obtaining Service and Maintenance.

Does this section clearly define who is authorized to obtain maintenance, preventative maintenance and servicing, where it may be obtained, and to what extent? (Ref. 8f)

XII. Refueling Procedures.

Are ground and flight personnel provided with adequate information, pertinent to the specific operation, for the elimination of fuel contamination, protection from fire, and passenger protection and supervision during refueling? (Ref. 8f)

XIII. Approved Aircraft Inspection Program.

When applicable, refer to paragraph 16 of this Advisory Circular.

XIV. Distribution.

Does the method of distribution ensure that the manual or appropriate portions (and amendments) will be received by the operators ground operations personnel, crewmembers, representatives of the Administrator and made available to maintenance personnel? Does it ensure that the manual or appropriate parts will be available for use of ground and flight personnel on each aircraft when away from the principal base?

PILOT TRAINING CURRICULUM OUTLINE

Operator  
Date

Course Title: Pilot Training Program

PURPOSE: Does this paragraph establish the purpose as that of providing a standardized program to train each pilot, initially and on a recurrent frequency, for proficiency in procedures, techniques and information essential to the satisfactory performance in the operations to which he is assigned. To enable each pilot to pass the knowledge and practical tests required by Part 135 of the Federal Aviation Regulations.

PHASE: Initial and Recurrent Ground Training

I. REFERENCE AND STUDY MATERIAL (Furnished by the operator)

- (a) Operator's Manual
- (b) Company operations specifications
- (c) Parts 61, 91 and 135 of the Federal Aviation Regulations
- (d) Aircraft equipment manuals, approved aircraft flight manual or owner's handbook.
- (e) Airmen's Information Manual and if foreign operations authorized, the International Flight Information Manual
- (f) Adequate charts and approach plates pertinent to the assigned VFR and IFR operations.

II. SUBJECTS

Is the training adequate, commensurate with the pilots qualification and experience, to ensure his passing the required written or oral test of knowledge in the following:

- (a) Federal Aviation Regulations
- (b) For each type aircraft to be flown:
  - (1) Powerplant
  - (2) Major components, systems and appliances
  - (3) Performance and limitations

- (4) Operation procedures - standard and emergency
- (5) Flight manual or owner's handbook
- (6) Weight and balance computation, compliance and limitations for takeoff, landing and en route operation.
- (c) Navigation - use of air navigation aids, instrument approach facilities and procedures.
- (d) Air traffic control procedures, VFR - IFR, as appropriate.
- (e) Meteorology - general and area of operation
- (f) Severe weather avoidance; thunderstorm, icing conditions and turbulent air penetration.
- (g) Cockpit vigilance, altitude awareness and crew coordination.

PHASE: Initial and Recurrent Flight Training

I. Does the training include at least the following:

- (a) Those original pilot certification flight maneuvers, pertinent to the class and type aircraft, as contained in FAR 61 and related Advisory Circulars.
- (b) Navigation by pilotage (when appropriate)
- (c) The six-month instrument check equipment and flight test requirements:

Equipment

- (1) Emergency procedures
- (2) Engine operation
- (3) Fuel and lubrication systems
- (4) Power settings
- (5) Stall Speeds
- (6) Best Engine-out speed
- (7) Propeller and supercharger operations
- (8) Hydraulic, mechanical and electrical systems



Flight

- (1) Navigation by instruments
- (2) Recovery from simulated emergencies
- (3) Standard instrument approaches pertinent to the type authorized to be used
- (4) Use of autopilot when authorized
- (5) Takeoffs, landings and ground handling maneuvers

PHASE: Transitional Ground Training

I. Reference and Study Material

Is an appropriate listing provided?

II. Subjects

Does the curriculum provide for adequate training to enable the pilot to pass the knowledge test relative to the new equipment, procedures and techniques?

PHASE: Transitional Flight Training

- I. Is the training provided by this section of the curriculum adequate to integrate the new equipment, procedures and techniques smoothly into the operation? Does it enable each assigned pilot to pass the required practical skill test?

EXAMINATION: Do the company testing procedures, for each phase, ensure the operator that pilots are receiving adequate training commensurate with their experience, qualifications and assigned duties?

GENERAL: Do the ground and flight training curriculums contain adequate information to ensure the operator that his crewmembers are knowledgeable in the area of:

- (1) Wake turbulence avoidance (Airman Information Manual and Advisory Circular AC-90-23A)
- (2) Altitude awareness and cockpit vigilance
- (3) Hydroplaning
- (4) Use of airborne weather radar and its interpretation (if appropriate)

- (5) Severe weather flying and turbulence penetration relative to:
  - a. Proper use of stabilizer trim and autopilot;
  - b. Proper airspeed, aircraft configuration, trim and power settings; and
  - c. Flying qualities of each type aircraft used such as stick forces which can be induced through misuse of stabilizer trim.
- (6) Cold weather operation
- (7) Visual Approach Slope Indicator (VASI) (FAR 91.87(d)(3)).



**AIRCRAFT DAILY RECORD**

XYZ AIRLINES  
ANYTOWN, ANYSTATE USA

AC 135-3  
2/17/70

Registration No :			Date:		Empty Weight:			Empty CG:		
Flight No.	From	To	Pilot	Copilot	AIRCRAFT TIME			Engines : No. 1	No. 2	
					To date	This trip	Total			
								Bal brt.		
								Forward :		
								These		
								Flights :		
								Total		
								To Date :		
VOR Receiver Checks:			<p align="center"><b>MAINTENANCE RELEASE:</b></p> <p>I certify that the corrective actions listed below have been made in accordance with Federal Aviation Regulations Part 43 and the aircraft is approved for return to service. Also that the required airworthiness inspections in accordance with the approved aircraft inspection program of XYZ Airlines have been made and the aircraft is approved for return to service.</p> <p align="right">Signature: _____</p> <p align="right">Cert. No. &amp; Ratings: _____</p>							
No. 1:										
No. 2:										
By:										
Item No.	Discrepancies			Item No.	Corrective Action			By:		

FIGURE 1. OPERATIONS SPECIFICATIONS

UNITED STATES OF AMERICA FEDERAL AVIATION AGENCY WASHINGTON		Form Approved Budget Bureau No. 04-R075.
<b>OPERATIONS SPECIFICATIONS</b>		<b>PART D</b>
<b>AIRCRAFT MAINTENANCE</b>		
<p>ISSUED TO: XYZ Air Taxi</p> <p>Pursuant to Section 135.60(a) of the Federal Aviation Regulations, you are hereby notified that the aircraft inspections specified in FAR 91.169 or FAR 91.171 are not adequate for the <u>(specify make and model)</u> aircraft that you operate under FAR 135. You are therefore required to develop and submit an aircraft inspection program for approval (ref. FAR 135.60) by <u>(specify date)</u>.</p>		
<p>Effective date <u>See reverse side</u></p>		

FIGURE 2. OPERATING CERTIFICATE

FEDERAL AVIATION AGENCY  
Washington, D. C.

Operating Certificate No. ....

..... hereby makes application for amendment  
of the Operations Specifications appearing on the reverse side hereof, as follows:

Reasons and supporting data (if insufficient space attach additional page):

I CERTIFY that the statements submitted in connection herewith are true and that I am duly authorized  
to make this application on behalf of the applicant.

.....  
(Signature)  
Date .....  
.....  
(Title)

INSPECTOR'S RECOMMENDATIONS:

.....  
(Signature)  
.....  
(Title)

The Operations Specifications set forth on the reverse side hereof are .....

Amendment No. Original .....

By direction of the Administrator:

Effective date April 15, 1970 .....

(to be signed by Supervising Inspector)  
.....  
(Signature)

Supersedes specifications dated .....

Supervising Inspector, EA-GADQ-16 .....

(Title)

Received for the applicant by:

.....  
(Signature)  
Date .....  
.....  
(Title)

FIGURE 1. OPERATIONS SPECIFICATIONS

UNITED STATES OF AMERICA FEDERAL AVIATION AGENCY WASHINGTON	Form Approved Budget Bureau No. 04-R075.
<b>OPERATIONS SPECIFICATIONS PART D AIRCRAFT MAINTENANCE</b>	
ISSUED TO: XYZ Air Taxi	
APPROVED AIRCRAFT INSPECTION PROGRAM	
The aircraft listed below by registration number shall not be used in air taxi operations by <u>(identify the specific ATCO by name)</u> unless:	
a. The aircraft has been inspected in accordance with the Approved Aircraft Inspection Program for XYZ Air Taxi.	
Registration No.	
1.	
2.	
3.	
4.	
5.	
Effective date. <u>See reverse side</u>	

FIGURE 2. OPERATING CERTIFICATE

FEDERAL AVIATION AGENCY  
Washington, D. C.

Operating Certificate No. 16-EA-2.....

John R. Doe d/b/a Doro Aviation Service hereby makes application for amondment of the Operations Specifications appearing on the reverse side hereof, as follows:

Request that N1234 and N1235 be removed from listing of aircraft to be inspected in accordance with the Approved Aircraft Inspection Program of Doro Aviation Service. Also request that N1236 be added to the list.

Reasons and supporting data (if insufficient space attach additional page):

I CERTIFY that the statements submitted in connection herewith are true and that I am duly authorized to make this application on behalf of the applicant.

(to be signed by the applicant)

Date March 31, 1971

(Signature)  
(See Appendix 1, Page 3)  
(Title)

INSPECTOR'S RECOMMENDATIONS:

Recommend Approval

/s/ Bill J. Smith  
(Signature)  
General Aviation Maintenance Inspector  
(Title) EA-GADO-16

The Operations Specifications set forth on the reverse side hereof are Approved

Amendment No. One

By direction of the Administrator:

Effective date April 15, 1971

(to be signed by Supervising Inspector)  
(Signature)

Supersedes specifications dated July 8, 1970

Supervising Inspector, EA-GADO-16  
(Title)

(One copy to be signed by the applicant when he receives the original of FAA Form 1014.) Received for the applicant by:

Date April 10, 1971

/s/  
(Signature)  
(See Appendix 1, Page 3)  
(Title)



FIGURE 1. OPERATIONS SPECIFICATIONS

UNITED STATES OF AMERICA FEDERAL AVIATION AGENCY WASHINGTON	Form Approved Budget Bureau No. 04-R078.
<b>OPERATIONS SPECIFICATIONS - PART E AIRCRAFT MAINTENANCE</b>	
ISSUED TO: XYZ Air Taxi	
In accordance with FAR 135.167(b)(2) you are authorized to operate <u>(specify make &amp; model of aircraft)</u> under the following approved weight and balance system. (The weight and balance system should then be described.)	
Effective date <u>See reverse side</u>	

FIGURE 2. OPERATING CERTIFICATE

FEDERAL AVIATION AGENCY  
Washington, D. C.

Operating Certificate No. ....

..... hereby makes application for amendment  
of the Operations Specifications appearing on the reverse side hereof, as follows:

Reasons and supporting data (if insufficient space attach additional page):

I CERTIFY that the statements submitted in connection herewith are true and that I am duly authorized  
to make this application on behalf of the applicant.

.....  
(Signature)  
Date .....  
.....  
(Title)

INSPECTOR'S RECOMMENDATIONS:

.....  
(Signature)  
.....  
(Title)

The Operations Specifications set forth on the reverse side hereof are .....

Amendment No. .... By direction of the Administrator:  
Effective date .....  
.....  
(Signature)  
Supersedes specifications dated .....  
.....  
(Title)

Received for the applicant by:

.....  
(Signature)  
Date .....  
.....  
(Title)

APPENDIX 11. Sample Instructions and Procedures for Conducting the Approved Aircraft-Inspection Program.

FIGURE 1. PATTERN A -- AIRFRAME

N-	STATION
Aircraft Total Time	Date
Inspection Item	Mechanic
CABIN SEATS & SAFETY BELTS Row 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - Lounge	
MAIN CABIN - LOUNGES - LAVATORIES 1. Buffets	
2. Buffets Electrical	
3. Entrance Door	
4. Windows	
5. Emergency Equipment	
6. Lighting	
7. Hat Rack	
8. Walls and Ceiling	
9. Water Tank (Supply & Storage)	
10. Lounge to Cockpit Door	
11. Forward Lounge Tables	
12. Lavatory Doors and Locks	
13. Emergency Windows	

PATTERN A

AIRFRAME

N-		STATION
Aircraft Total Time		Date
Inspection Item	Mechanic	
CABLES		
1. Raise Rugs and Floor Boards for Cable Inspection		
2. Inspect all Cables Under Floor		
3. Install Rugs and Floor Boards After Cable Inspection		
4. Inspect Floor Boards and Rugs for Security		
5. Inspect Under All Floor Boards for General Condition of Structures, Pulleys, Pulley Brackets, Bell Cranks, etc. prior to re-installing floorboards.		

PATTERN A.

AIRFRAME

N-	STATION
Aircraft Total Time	
INSPECTION ITEM	MECHANIC
<b>FLIGHT COMPARTMENT</b>	
1. Windshield and Windows	
2. Cockpit Area	
3. Additional Crewmember's Seat	
4. Crew Seats	
5. Radio Controls and Panels	
6. Headphones, Microphones, and Speakers	
7. Fuselage Door	
8. Radio Rack Shelves	
9. Radio Rack Cables	
10. Cargo Area	
11. Emergency Equipment	
12. Foreign Material	
<b>SERVICE ITEMS</b>	
1. Check Applicable A.D. Notes	
2. Check Applicable Newsletters	
3. Lavatories and Cans (also drains)	
4. Turbines	
5. Hydraulic & Anti-icing Fluids	
6. Accumulator Pressure Systems	
7. Air Brake Cylinder	
8. Cabin Seats, Rugs, Buffet (cleanliness)	
9. Oxygen & Fire Bottles	
10. Visual Inspection	

PATTERN A

AIRFRAME

RADIO CHECK

Inspection Item	Capt.	F/O	F/E
<b>FUNCTIONALLY CHECK:</b>			
1. VHF Transmitter			
2. VHF Receiver			
3. H F Transceiver			
4. #1 ADF (Audio and Homing)			
5. #2 ADF (Audio and Homing)			
6. #1 VOR/LOC			
7. #2 VOR/LOC			
8. #1 Glideslope Rec.			
9. #2 Glideslope Rec.			
10. VOR Accessory/Instrumentation Unit			
11. Marker Rec. (Aural and Lights)			
12. Loran			
13. P. A. Amplifier			
14. Interphone Amplifier			
15. DME			
16. Radar			
17. Transponder			
18. Auto Pilot			
19. Service Interphone			
@ Pilot's Headset & Microphone			
21. F/O Headset & Microphone			
22. Engineer's Headset & Microphone			

NOTE: Enter discrepancies in Aircraft Log Book

PATTERN A  
ENGINE NO. 1

N-	STATION
Engine T.S.O.	DATE
Inspection Item	Mechanic
1. Uncowl Engine	
2. Drain Oil Tank and Refill with New Oil	
3. Check Main Oil Screen	
4. Reinstall Main Oil Screen	
5. Remove Spark Plugs	
6. Compression Check Cyls.	
7. Injection Check Engine	
8. Install Spark Plugs (New or Reconditioned)	
<u>ACCESSORY SECTION</u>	
1. Pres. Check Engine Fuel System	
2. Rear Section and Accessories	
3. Accessory Section and Components	
4. Engine Mount and Components	
<u>COWLING AND CARBURETOR AIRSCOOP</u>	
1. Assembly and Attachments	
2. Airscoop	
<u>EXHAUST SYSTEM</u>	
1. P. R. T. 's	
2. Ex. Stacks and Attachments	
3. Ex. Clamps and Bolts	
<u>POWER SECTION</u>	
1. Cylinders and Attaching Units	
2. Cases and Engine Sumps	
3. Cowl Flaps and Units	
4. Intake Pipes	
5. Ignition System Complete	
<u>NOSE SECTION</u>	
1. Front Case and Units	
2. Propeller Assembly	
<u>ELECTRICAL</u>	
1. Fire Wall Terminals	
2. Fire Warning Units	

PATTERN A

AIRFRAME

CABIN SEATS AND SAFETY BELTS

1. Check seats for security to floor.
2. Seat operation.
  - a. Slipping back rests.
  - b. Slipping brake.
  - c. Broken brake cable.
3. Cleanliness of seat cushion and back cover.
4. Broken or loose, missing seat pocket bungee.
5. Seat cushion snaps secured to seat frame.
6. Arm rests for condition and security.
  - a. Torn leather.
  - b. Cleanliness.
  - c. Ash trays for operation and condition.
7. Pockets for life vest for condition and security.
8. Life vests for condition and check CO<sup>2</sup> in pockets, handles, safety cocked for operation, check dates for leakage tests.
9. Check seat cushion bottoms, bungee missing and broken.
10. Check seat belts for operation security.
11. Check female end for spring tension.
12. Check male and female end for frayed metal tips or plastic ends in good condition.
13. Check metal tag date for load test.
14. Check and install sickness cups or bags.



PATTERN A  
AIRFRAME  
MAIN CABIN LOUNGES AND LAVATORIES

1. BUFFETS

- a. For cleanness.
- b. Operation of doors.
- c. Check for sharp edges, cracks and security.
- d. Drains to be opened.

2. BUFFETS ELECTRICAL

- a. Check operation of ovens, coffee containers, hot cups.
- b. Check plugs wiring circuit breakers.
- c. Check lighting.

3. ENTRANCE DOOR

- a. Check operation.
- b. Check seal for condition and security
- c. Check for leakage around seal, (staining of seal and adjacent areas indication of leak).
- d. Check condition of door itself, such as: trim windows locking fingers to be in positive position when door is locked; check through windows marks line up when locked.
- e. Check door warning light for operation.

4. WINDOWS

- a. Check for cracks around outer edge at thru bolts.
- b. Check crazing-small dots like stars anywhere on window.
- c. Scratches - write up only scratches that can be felt by finger nail.
- d. Check trim, seal and cleanness.

5. EMERGENCY EQUIPMENT

- a. Life rafts and containers condition and security.
- b. Life vests and containers.
- c. Proper amount of different size life vests (infant).
- d. Destruction knife.
- e. Oxygen bottles full to 1100 p.s.i.; dust covers over heads operation and security; proper number of oxygen masks.
- f. Escape chute-- condition and security, color code markings.
- g. Escape rope--condition and security.
- h. Axe--condition and security.
- i. Fire bottles--weight, condition and security and seal.
- j. Emergency cabin light operation and condition, proper location and security.
- k. Hostess P.A. system--to pilot, to passenger.
- l. Emergency procedure cards behind each seat pocket.
- m. First-aid kit, condition - proper quantities of materials.

6. LIGHTING

- a. Check ceiling lights - bright and night.
- b. Check reading lights.
- c. Check hostess call light.
- d. Lavatory lights and hostess call light in lavatories.

7. HAT RACK

- a. Condition security, check for pillows, blankets and cleanness.

8. WALLS AND CEILING

- a. Condition and security and cleanness.

9. WATER TANK

- a. Condition and security (supply and storage, leakage operation and drainage).

10. LOUNGE TO COCKPIT DOOR

- a. Condition and security.
- b. Door locking mechanism.

11. FORWARD LOUNGE - TABLES

- a. Check for integrity of mounting, table structure, etc.

12. LAVATORY DOORS AND LOCKS

- a. Check for proper lubrication and operation.

13. EMERGENCY WINDOWS

- a. Same as windows.
- b. Operation.
- c. Clearly marked.
- d. Check fingers for locking through locking windows marks lineup.
- e. Check handle for safety .032 wire brass.

CABLES

1. Raise rugs and floor boards for cable inspection.

2. Inspect all cables under floor.

- a. Check cables for rust, bird caging, fraying, pay attention around pulleys, loose and missing grommets and fair leads.
- b. Cables for being crossed.
- c. Cable tension.
- d. Check turnbuckles for safety (proper safety, proper wire, etc.).

3. Inspect under all floor boards for general condition of structures, pulleys, pulley brackets, bell cranks, etc. and corrosion.
4. Check floor boards for cracks corrosion for missing anchor nuts or any other locking device.
5. Install rugs and floor boards after inspection.
  - a. Check for condition and security.

#### FLIGHT COMPARTMENT

1. WINDSHIELD AND WINDOWS
  - a. Check delamination.
  - b. Check cracks.
  - c. Check fogging.
  - d. Check condition and security, wrench in place.
  - e. Operation of sliding windows - pilot and copilots.
  - f. Check condition and security of wiper blades and arms, proper blade tension and operation.
  - g. Check w/s defroster, de-icer, anti-icer, fluid outlets.
2. COCKPIT AREA
  - a. Cleanness.
  - b. Check condition and security of trim, panels, markings, placards, checklist (pilots).
  - c. Check operation of flight controls, trim controls, engine controls, fuel tanks selector, X-feed, fuel dump controls, fuel shut-off, CO<sup>2</sup> selector.
3. ADDITIONAL CREWMEMBER SEAT
  - a. Check for condition and security and operation.
4. CREW SEATS
  - a. Check for condition and security and operation.
  - b. Check seat track for wear, check seat track stops.
  - c. Check seat cushions for condition, also arm rests and ash trays.
  - d. Check seat belts--condition and security.
5. RADIO CONTROLS AND PANELS
  - a. Check condition and security and operation.
6. HEADPHONES, MICROPHONES AND SPEAKERS
  - a. Check condition and security and operation.

7. FUSELAGE DOOR

- a. Check for condition and security and operation.
- b. Check door seal for tears, leaks and correct positioning.
- c. Check locking finger -- for going home check warning door light for correct position and operation.
- d. Check trim-locking windows and scanning window for cracks, crazing, etc.; lining up of door fingers.

8. RADIO RACK SHELVES

- a. Check for condition and security (cracks, looseness, etc.).

9. RADIO RACK CABLES

- a. Check condition, security, freedom of movement, and absence of chafing.

10. CARGO AREA

- a. Check condition and security.
- b. Cargo post, webbing and locking of post, flooring for cracks, corrosion, loose screws, and maximum load factor.
- c. Cleanness of area.

11. EMERGENCY EQUIPMENT

- a. Condition and security of life rafts and vests.
- b. Correct amount of vests and rafts.
- c. Destruction knife.
- d. Crew Oxygen and smoke mask (for condition, security and supply).
- e. Fire bottle (weight, date and seal).
- f. Crash axe.
- g. Signal lamp.
- h. Very pistol (flares).
- i. Emergency locator transmitter/receiver.

12. FOREIGN MATERIAL

- a. Remove and clean area of foreign material.

SERVICE ITEMS

1. Comply with any A. D. notes (When applicable).
2. Comply with newsletters (when applicable).
3. Lavatories and cans (also drains).
4. Turbine both - check and fill.

5. Hyd. fluid, anti-icing fluid - check and fill.
6. Accumulator pressure system and nose - check and fill.  
Air-brake cylinder - check and fill.  
Cabin seats, rugs, buffets - cleanliness.  
Oxygen, fire bottles. Check and fill (NOTE: Date of last hydro. check and when appropriate have rechecked).
10. Visually inspect fuselage, tail surface, controls, wings, flaps main and nose gear tires for cuts, wear, proper pressure, lights landing and running, rotating beacon, wing icing, taxiing lights, antennas, etc.

PATTERN A. NO. 1 ENGINE

1. UNCOWL ENGINE
  - a. Mark cowling for easy installation.
  - b. Check for cracks, loose rivets or broken locking fingers.
  - c. Check for missing or broken cam locks.
2. DRAIN OIL TANK AND REFILL WITH NEW OIL
  - a. Drain oil at bottom at hopper at Y drain and close. (make sure you feel a positive snap).
3. CHECK MAIN OIL SCREEN
  - a. For foreign material, use magnet, small particles of bronze are permissible.
4. REINSTALL MAIN OIL SCREEN
  - a. Replace O-ring gasket.
  - b. Double safety clamp.
  - c. Check for leaks.
5. REMOVE SPARK PLUGS
  - a. Check condition of plug. This can tell you if plugs were firing, condition of cyl. mixture of cyl. etc.
  - b. Peening of plug.
6. COMPRESSION CHECK CYLINDER
  - a. Check for very low compression or no compression at all.
  - b. Borescope cyl. to check for cracks, ring gland failure, etc., if compression is found in this condition, to be low or not at all.

7. INJECTION CHECK ENGINE

- a. Install power unit.
- b. Fuel aux. pumps on.
- c. Mixture control full rich.
- d. Spin prop.
- e. Check for leaks at all injection nozzles, at cyl. lines, and pu

8. INSTALL SPARK PLUGS (New or Reconditioned)

- a. Check condition of plugs; if plugs were dropped, replace, new gas and torque to pressurized valve.

ACCESSORY SECTION

1. PRESSURE CHECK ENGINE FUEL SYSTEM

- a. Check for leaks at all lines, pumps, fuel transmitter and carb. operate primer.
- b. Check for leaks at induction case.
- c. Check nozzles and lines.

2. REAR SECTION AND ACCESSORIES

- a. Rear section of engine for cracks, leaks both oil and fuel.
- b. Condition and secure.
- c. Check operation throttle mixture, carb. scoop, fire wall shutoff, check cables.

3. ACCESSORY SECTION AND COMPONENTS

- a. Check condition and security of components.

4. ENGINE MOUNT AND COMPONENTS

- a. Mount - cracks, oil leakage.
- b. Check engine bolts and trunnion.

COWLING AND CARBURETOR AIRSCOOP

1. ASSEMBLY AND ATTACHMENTS

- a. Condition and secure.

2. AIRSCOOP

- a. Condition and security, operation from cockpit.
- b. Check push rods, cables pulleys, etc.

### EXHAUST SYSTEM

1. P.R.T.'s
  - a. Check for cracks on head, turbine blades, spin turbine check for freeness, check hold down bolts for hood.
2. EX. STACKS AND ATTACHMENTS.
  - a. Cracks, worn spots, blow by, hot spots, clamp and bolts worn, broken, missing exhaust stacks.
3. EX. CLAMPS AND BOLTS
  - a. Condition and secure, worn or broken, loose check for secure at cyl. end.

### POWER SECTION

1. CYLINDERS AND ATTACHING UNITS
  - a. Cracks around spark plugs, boss, heads, baffles for secured cracks, etc.
  - b. Check cyl. hold down bolts for tightness and sheared.
  - c. Rocker covers for leaks, push rods for leak, cyl. drain lines.
2. CASES AND ENGINE SUMPS
  - a. Check case for condition and secure, cracks leaks at parting surface, sumps for cracks leaks and safety.
3. COWL FLAPS AND UNITS
  - a. Check cowl flap shingles for condition and security, cracks, mounts and drive units and motors.
4. INTAKE PIPES
  - a. Check condition and security at attach points at case end and at cyl. packing nut tight and safety, cracks hold in pipe, etc.
  - b. Check for distortion of pipe.
5. IGNITION SYSTEM COMPLETE
  - a. Check plugs for tightness.
  - b. Check H. T. coil and leads.
  - c. Check lead cigarettes.
  - d. Check P leads.
  - e. Check mag. and dist.
  - f. Harness for cracks and condition and security.
  - g. Check spark advance.

NOSE SECTION

1. FRONT CASE AND UNITS

- a. Case for cracks and oil leak.
- b. Check prop gov. and step relay for condition and security.
- c. Check conduits.

2. PROP. ASSEMBLY

- a. Prop blades for cracks, nicks, condition and security of chaffing strip at leading edge. De-icer boot for cuts tear and operation. Leaks at hub and at shank of blades.

ELECTRICAL

1. FIRE WALL TERMINALS

- a. Check for condition and security, dirty, worn, corrosion, and water.

2. FIRE WARNING UNITS

- a. Same as above plus---check operation by shorting each unit.

2-3-4-ENGINES

Remove cowl and visual inspect.



FIGURE 2

Aircraft: N-

Date:

TURN AROUND INSPECTION

	<u>MECHANIC</u>
1. Left Wing: Flap, Fluid Leaks, Landing and Navigation Lights, Aileron & Tab, Wing Surfaces.	
2. Cabin Heater: CO <sup>2</sup> Discharge Discs.	
3. Nos. 1 & 2 Engines: Nacelle Exterior, Oil Cooler, Cowl Flaps, visible portion of engine thru Cowl Flaps Gap and Front Cowl.	
4. Nos. 1 & 2 Propellers: DeIcer Boots, Blades, Blade Angle, Wiring, Blade Switches, Brush Block Oil Leaks.	
5. Cabin Supercharger/Air Tail Heater Scoops, Static Ports Pitot Heads.	
6. Left Main Gear and Well: Tires, Brakes, Strut Extension, Wheel Well Doors, General Inspection of Well Interior.	
7. Cabin Heater Combustion Air Inlet.	
8. Radio Antennas and Radome.	
9. Nose Gear/Well: Tire, Strut Extension, Wheel Well Doors, CO <sup>2</sup> Discharge Discs, General Inspection of Well Area.	
10. Right Main Gear Well, #3 & #4 Engines & Propellers: Right Wing, etc., Inspect in same manner as left side of aircraft.	
11. Tail Area: Stabilizer Surfaces, Flight Controls and Tabs, Navigation Lights.	
12. Main Cabin Door: Bayonets, etc.	
13. Fluid Service Covers.	
14. Cockpit External Door Bayonets, etc.	
15. Rear Emergency Exit Door, Right side of aircraft.	
16. Emergency Exit Windows.	
17. Review and Correct Discrepancies Recorded in Aircraft Log.	

FIGURE 3

Aircraft: N-

Date:

SERVICE CHECK

<u>ITEM</u>	<u>MECHANIC</u>
1. Left Gear: Tires, Brakes, Wheels, Strut Extension, Lockouts, Hydraulic and Air Lines Shuttle Valves.	
2. Right Gear: Repeat Left Gear Check and Check Air/Ground Transfer Micro Switch Assembly.	
3. Nose Gear: Static Ground Wire, Tire, Wheel Strut Extension, Steering Systems Components.	
4. Recirculating Blower Intake.	
5. Cabin Heater CO <sup>2</sup> Discharge Discs.	
6. Cabin Heater Blower Intake.	
7. After Cooler Flap Door.	
8. Left Wing Lower Surface: Flaps, Inspection and Access Doors (NOTE: Tank Drain/Shutoff Valve door fit flush <u>only</u> when valve is correctly positioned) Dump chutes, Landing Lights, Aileron and tab (alignment), Fuel Vent Drain Post, Fuel Leakage Stains, Integrity of Skin and rivets.	
9. Left Navigation Light and Wing Tip.	
10. Wing Leading Edge.	
11. Airfoil Heater Exhaust.	
12. No. 1 Engine: Nacelle exterior, oil cooler scoop and door, cowl flaps, visible portions of engine through cowl flap gap and front cowl inlet.	
13. No. 1 Propeller: Deicer Boots, Blades, Blade Angle (forward pitch) wiring, Blade Switches, Brush Block, Oil Leaks.	
14. Cabin Supercharger/Airfoil Heater Airscoop.	
15. Left Main Gear Well: Doors, wiring plumbing cables, Junction Box Covers, Firewall Shutoff Valves, Wheel well light gear lip latch, Fuel Strainers, Tank Selector, Boost Pumps, Gear Attach Fittings, Gear-up Micro Switch, Bungees, Gear Down Micro Switch.	
16. No. 2 Engine and Propeller: Inspect in same manner as No. 1.	
17. Cabin Heater Combustion Air Inlet.	
18. Lavatory Drain and fill access door.	



Fig. 3

SERVICE CHECK  
(cont'd)

<u>ITEM</u>	<u>MECHANIC</u>
19. All Antennas and Radomes.	
20. Static Pressure Ports.	
21. Pitot Heads.	
22. Nose Gear Well: Doors CO <sup>2</sup> Discharge Discs, Bottles, and Plumbing, Gear Down Micro Switch, Gear Attach Fittings, Gear Up Micro Switch, Gear Brake Snubber, Shear Bolt Air/Ground Micro Switch Torque Link and Connector Pins, Hydraulic Lines Steering Components.	
23. Forward Belly Compartment: Clean - Lights, CO <sup>2</sup> Detectors, CO <sup>2</sup> Outlets.	
24. Hydraulic Compartment: Accumulator Pres. Gages, Hydraulic Fluid Quantity, General Inspection for Leaks, Cables, Pullies, Wiring, Wing Flap Selector Valve.	
25. Right Main Gear Well - No. 3 and No. 4 Engines and Propellers, Right Wing, etc. Inspect in same manner as left side of airplane.	
26. Cabin Pressure Control Valve Outlet.	
27. Alchohol Tank, Quantity.	
28. Freon Condenser: Air Intake and Exhaust Flap.	
29. After Cooler/Supercharger Oil Cooler Scoop.	
30. Heater Compartment: Fire Detector Ducting, Back Fire warning Switch, Lines, Spark Plug Leaks.	
31. Rear Belly Compartment: Inspect same as Front Belly.	
32. Ground Air Condition Intake.	
33. All Windows and Emergency Exits.	
34. Tail Heater Compartment Access Door.	
35. Dorsal Fin Light.	
36. Horizontal and Vertical Stabilizers.	
37. Static Dischargers.	
38. Elevator (Check Tab Alignment).	
39. Navigation Lights.	
40. Rudder (Trim Tab Alignment).	
41. Tail Heater Ground Blower Intake and Exhaust.	
42. Cabin Pressure Relief Valves and Valve Atmospheric Pressure Vent.	
43. Left Side of Fuselage: Inspect same as right side.	
44. Upper Wing Surfaces, Note Security of Fuel and Oil Covers.	
45. Review Aircraft Log Items and Correct Discrepancies Recorded Therein.	
46. Log Book Signed Releasing Aircraft For Flight.	

APPENDIX 12. Sample Format for Performance of  
the Approved Aircraft Inspection Program.

APPROVED AIRCRAFT INSPECTION PROGRAM  
XYZ AIRLINES  
FLY-RIGHT AIRCRAFT MODEL 1

	<u>Inspection</u>	<u>Tests</u>	<u>Checks</u>
<u>Air-Conditioning, Chapter 21</u> Heater			
<u>Auto-Pilot, Chapter 22</u> Amplifiers/Computers Control, Altitude Servos Control Panel, Trim Indicators			
<u>Electrical, Chapter 24</u> Ammeter & Voltmeter Generator/Alternator Inverter, Emergency Inverter, Main Regulator, Voltage Relay, Reverse Current			
<u>Equipment &amp; Furnishings, Chapter 25</u> Chute, Evacuation First-Aid Kit Transmitter, Emergency			
<u>Fire Protection, Chapter 26</u> Cylinders, CO <sup>2</sup> Panel, Fire Detector *Hydrostatic Test every 5 years			
<u>Flight Controls, Chapter 27</u> Cylinder, Flap Actuating Indicator, Wing Flap Position Transmitter, Wing Flap Position			
<u>Fuel, Chapter 28</u> Indicator, Fuel Quantity Pump, Fuel Boost Transmitter, Fuel Quantity			
<u>Hydraulic, Chapter 29</u> Accumulator Indicator, Hydraulic Quantity Pump, Auxiliary Hydraulic Transmitter, Hydraulic Quantity			

Approved \_\_\_\_\_  
FAA Inspector

Effective Date \_\_\_\_\_

APPROVED AIRCRAFT INSPECTION PROGRAM  
XYZ AIRLINES  
FLY-RIGHT AIRCRAFT MODEL 1

	<u>Inspection</u>	<u>Tests</u>	<u>Checks</u>
<u>Ice &amp; Rain, Chapter 30</u>			
Indicator, Deice Pressure			
Motor, Wing Deice			
Pump, Alchohol Anti-ice			
<u>Instruments, Chapter 31</u>			
Clock			
<u>Landing Gear, Chapter 32</u>			
Bottle, Emergency Air			
Indicator, Landing Gear Pressure			
Wheels, Tires & Brakes			
*Hydrostatic Test every 5 years.			
<u>Lights, Chapter 33</u>			
Flasher			
Rotating Beacon			
<u>Navigation, Chapter 34</u>			
Altimeter			
Indicator, Air Speed			
Compass, Magnetic			
Indicator, Gyro Horizon			
Indicator, Outside Air Temperature			
Indicator, Rate of Climb			
Indicator, Turn & Bank			
Indicator, Directional Gyro			
Flight Director System			
Computer/Amplifier			
Indicators			
Control Panel			
Bench Check every 12 months			
<u>Oxygen, Chapter 35</u>			
Bottle, Oxygen			
Indicator, Oxygen Pressure			
Hydrostatic Test every 5 years.			
<u>Vacuum, Chapter 36</u>			
Indicator, Vacuum			
Valve, Relief			
Filter, Air			
<u>Fuselage, Chapter 53</u>			
<u>Nacelles, Chapter 54</u>			

Approved \_\_\_\_\_  
                    FAA Inspector

Effective Date \_\_\_\_\_

AC 135-3  
2/17/70

Appendix 12  
Page 3

APPROVED AIRCRAFT INSPECTION PROGRAM  
XYZ AIRLINES  
FLY-RIGHT AIRCRAFT MODEL 1

Inspection      Tests      Checks

Wings, Chapter 57

Approved \_\_\_\_\_  
                    FAA Inspector

Effective Date \_\_\_\_\_

APPROVED AIRCRAFT INSPECTION PROGRAM  
XYZ AIRLINES  
FLY-RIGHT AIRCRAFT MODEL 1

	<u>Inspection</u>	<u>Tests</u>	<u>Checks</u>
<u>Propellers, Chapter 61</u>			
Motor, Propeller Feathering			
Propeller Assembly			
Propeller Governors			
Pump, Propeller Feathering			
<u>Power Plant - General, Chapter 71</u>			
Actuator, Cowl Flap			
Cowling			
Mount, Engine			
Engine, Chapter			
<u>Engine, Chapter 72</u>			
Engine, Basic			
<u>Engine Fuel &amp; Control,,Chapter 73</u>			
Carburetor Assembly			
Indicators, Fuel Pressure			
Pump, Engine Driven			
Transmitter, Fuel Pressure			
Warning Unit, Fuel Pressure			
<u>Ignition, Chapter 74</u>			
Ignition Harness			
Spark Plugs			
<u>Engine Indicating, Chapter 77</u>			
Indicator, Carburetor Air Temperature			
Indicators, Cylinder Head Temperature			
Indicators, Manifold Pressure			
Tachometer, Generator			
<u>Exhaust, Chapter 78</u>			
Exhaust Manifold Assembly			
<u>Oil, Chapter 79</u>			
Indicator, Oil Pressure			
Indicator, Oil Quantity			
Indicator, Oil Temperature			
Regulator, Oil Cooler			
Valve, Emergency Shutoff			

Approved \_\_\_\_\_  
FAA Inspector

Effective date \_\_\_\_\_