MS-158

FEDERAL AVIATION AGENCY
FLIGHT STANDARDS SERVICE
Washington 25, D. C.

July 9, 1962

CIVIL AIR REGULATIONS DRAFT RELEASE NO. 62-33

SUBJECT: Standards and Issuance Requirements for Helicopter and Gyroplane Class Ratings

---

The Flight Standards Service of the Federal Aviation Agency has under consideration amendments to Part 20 of the Civil Air Regulations to establish standards and issuance requirements for helicopter and gyroplane class ratings. The reasons therefor are set forth in the explanatory statement of the attached proposal which is being published in the Federal Register as a notice of proposed rule making.

The Flight Standards Service desires that all persons who will be affected by the requirements of this proposal be fully informed as to its effect upon them and is therefore circulating copies in order to afford interested persons ample opportunity to submit comments as they may desire.

Because of the large number of comments which we anticipate receiving in response to this draft release, we will be unable to acknowledge receipt of each reply. However, you may be assured that all comment will be given careful consideration.

It should be noted that comments should be submitted, preferably in duplicate, to the Docket Section of the Federal Aviation Agency, and in order to insure consideration should be received on or before September 13, 1962.

J. S. Moore

Acting Director,
Flight Standards Service

1146

FEDERAL AVIATION AGENCY

FLIGHT STANDARDS SERVICE

[14 CFR Part 20]

[Regulatory Docket No. 1289; Draft Release No. 62–33]

NOTICE OF PROPOSED RULE MAKING

Standards and Issuance Requirements for Helicopter and Gyroplane Class Ratings

Pursuant to the authority delegated to me by the Administrator (14 CFR 405.27), notice is hereby given that there is under consideration a proposal to amend Part 20 of the Civil Air Regulations and the manual material related thereto as hereinafter set forth.

Interested persons may participate in the making of the proposed rules by submitting such written data, views, or arguments as they may desire. Communications should be submitted, preferably in duplicate, to the Docket Section of the Federal Aviation Agency, Room A–103, 1711 New York Avenue, N.W., Washington 25, D.C. All communications received on or before September 13, 1962, will be considered by the Administrator before taking action on the proposed rules. The proposals contained in this notice may be changed in the light of comments received. All comments submitted will be available in the Docket Section for examination by interested persons at any time.

Until recently, the provisions of Part 20 of the Civil Air Regulations grouped all aircraft using rotating airfoils as a source of lift in the rotor craft category with no further breakdown. Under Civil Air Regulations Amendment 20–16, which becomes effective July 12, 1962, the Agency adopted certain amendments to Part 20 which establish gyroplane and helicoper class ratings in the rotorcraft category rating.

The current aeronautical skill standards for rotor craft category ratings were adopted primarily for the operation of helicopters, because at the time of adoption almost all rotorcraft activity was in helicopters. These standards are satisfactory for helicopters, but because of the unique performance and characteristics of gyroplanes, different aeronautical skill standards which apply specifically to gyroplanes are considered necessary. Therefore, it is proposed to amend Part 20 and the manual material related thereto by revising the current skill standards to make them applicable to helicopters only, and by adding skill standards for gyroplanes. The proposed skill standards for gyroplanes were developed after careful study of the Umbaugh Model 18 gyroplane which has been recently certificated, and which may be typical of other gyroplanes certificated in the future.

In addition to revising the skill standards, it is proposed to amend the aeronautical knowledge requirements for the issuance of a private pilot certificate with a rotorcraft category rating to require knowledge of the use of radio aids to VFR navigation. This is considered desirable in view of the cross-country flying capabilities of helicopters and gyroplanes.

In consideration of the foregoing, it is proposed to amend Part 20 of the Civil Air Regulations (14 CFR Part 20) as follows:

1. By amending § 20.63(b) to read:

20.63 Aeronautical knowledge.

* * * * *

(b) The practical aspects of cross-country flying, including flight planning, map reading, pilotage, the use of radio aids to VFR navigation, and radio communication procedures;

2. By amending § 20.65 by changing the word "type" to "class".

3. By amending § 20.65–1 by changing the word "rotorcraft" appearing in the title to "helicopter" and by deleting the last sentence in paragraph (a)(3).

4. By adding a new § 20.65–2 to read:

20.65–2 Private pilot flight test—gyroplane (FAA policies which apply to § 20.65).

(a) *Flight test items.*

(1) The flight test is given in three phases, and must be conducted in compliance with the Gyroplane Flight Manual. The failure of any required item in any phase constitutes the failure of that phase and of the whole flight test. The whole phase failed must be successfully completed at the time of reapplication.

(2) The flight test may be discontinued at any time by the examiner or the applicant when the failure of a required item makes the successful completion of the whole test impossible. In such cases, credit is allowed for only a whole phase successfully completed.

(3) The applicant is required to demonstrate the competent performance of the following procedures and maneuvers:

Phase I—Oral Operational Examination.

(i) Gyroplane registration, airworthiness, and equipment documents.

(ii) Gyroplane logbooks and airworthiness inspection records.

(iii) Gyroplane performance, range, and operation (from Gyroplane Flight Manual).

(iv) Gyroplane loading, including fuel, oil, and baggage capacities.

(v) Gyroplane line check.

(vi) Use of radio for voice communication (may be simulated when necessary).

Phase II—Basic Pilot Technique.

(i) Preflight operations.

(ii) Taxiing, or sailing and docking.

(iii) Normal and crosswind takeoffs and landings.

(iv) Climbs, level flight, and descents at normal speeds and at minimum level flight speeds.

(v) Entry and recovery from high rates of descent with and without power (recovery to be completed not lower than 300 feet above surface).

(vi) 720° steep turns about a point (45° bank at steepest point).

(vii) Roll-on landing and full flare landing.

(viii) Short field takeoff and power approach and landing.

(ix) Soft field takeoff and landing (jump takeoff, provided the gyroplane has this capability).

(x) Emergency operation of gyroplane equipment.

Phase III—Cross-country.

(i) Cross-country flight planning.

(ii) Cross-country flying.

(iii) Use of radio aids to VFR navigation.

(iv) Cross-country flying emergencies (lost, weather, overheating engine, power failure, etc.).

(b) *Evaluation of performance.* The applicant's performance is evaluated by the examiner on the basis of the judgment, knowledge, smoothness, and accuracy displayed. A competent performance of any flight maneuver is one during which the pilot is obviously the master of the aircraft, and the successful outcome of the maneuver is never in doubt.

5. By amending § 20.75 by changing the word "type" to "class".

6. By amending § 20.75–1 by changing the word "rotorcraft" appearing in the title to "helicopter" and by deleting the last sentence in paragraph (a)(3).

7. By adding a new § 20.75–2 to read:

20.75–2 Commercial pilot flight test—gyroplane (FAA policies which apply to § 20.75).

(a) *Flight test items.*

(1) The flight test is given in four phases, and must be conducted in compliance with the Gyroplane Flight Manual. The failure of any required item in any phase constitutes the failure of that phase and of the whole flight test. The whole phase failed must be succesfully completed at the time of reapplication.

(2) The flight test may be discontinued at any time by the examiner or the applicant when the failure of a required item makes the successful completion of the whole test impossible. In such cases, credit is allowed for only a whole phase successfully completed.

(3) The applicant is required to demonstrate the competent performance of the following procedures and maneuvers:

Phase I—Oral Operational Examination.

(i) Gyroplane registration, airworthiness, and equipment documents.

(ii) Gyroplane logbooks and airworthiness inspection records.

(iii) Gyroplane performance, range, and operation (from Gyroplane Flight Manual).

(iv) Gyroplane loading, including fuel, oil, and baggage capacities.

(v) Gyroplane line check.

(vi) Use of radio for voice communication (may be simulated when necessary).

Phase II—Basic Piloting Technique.

(i) Preflight operations.

(ii) Taxiing, or sailing and docking.

(iii) At least 3 takeoffs with 3 accuracy landings beyond and within 100 feet of a mark, including:

(*a*) Crosswind takeoff and landing.

(*b*) Short field takeoff and power approach and landing.

(*c*) Soft field takeoff and landing (jump takeoff, provided the gyroplane has this capability).

(iv) Roll-on landings and full flare landing.

(v) Airport traffic pattern.

(vi) Forced landings (single-engine only) and simulated emergencies.

(vii) Emergency operation of gyroplane equipment.

Phase III—Precision Maneuvers.

(i) Gliding spirals about a point on the ground.

(ii) One right and one left 720° steep power turn (45° bank at steepest point).

(iii) Entry and recovery from high rates of descent with and without power (recovery to be completed not lower than 300 feet above surface).

(iv) Maneuvering at minimum level flight airspeed.

Phase IV—Cross-Country Flight.

(i) Cross-country flight planning.

(ii) Cross-country flying.

(iii) Cross-country flying emergencies (lost, weather, overheating engine, power failure, etc.).

(iv) Use of radio aids to VFR navigation.

(v) Two-way radio communications.

(b) *Evaluation of performance.* The applicant's performance is evaluated by the examiner on the basis of the judgment, coordination, accuracy, and smoothness displayed. A competent performance of any flight maneuver is one during which the pilot is obvi-

ously the master of the aircraft, and the successful outcome of the maneuver is never in doubt.

8. By amending the title of § 20.130–1(d)(3) by changing the word "rotorcraft" to "helicopter" and by deleting the related footnote.

9. By amending § 20.130–1(d) by redesignating present subparagraphs (4) and (5) as subparagraphs (5) and (6), respectively, and by adding a new subparagraph (4) to read as follows:

20.130–1 Flight instructor certificates (FAA policies which apply to § 20.130).

* * * * *

(d) *Instructor practical test items.*

* * * * *

(4) *Flight test—gyroplane.* The complete flight test is conducted in compliance with the Gyroplane Flight Manual.

(i) Preflight check and oral equipment examination.

(ii) Preflight operations.

(iii) Taxiing, or sailing and docking.

(iv) Normal takeoff and landing.

(v) Crosswind takeoff and landing.

(vi) High altitude takeoff, roll-on landing, and full flare landing.

(vii) Short field takeoff and power approach and landing.

(viii) Soft field takeoff and landing (jump takeoff, provided the gyroplane has this capability).

(ix) Forced landings (single-engine only) and simulated emergencies.

(x) 720° power turns (45° bank).

(xi) Turns about a point (45° bank at steepest point).

(xii) Entry and recovery from high rates of descent with and without power (recovery to be completed not lower than 300 feet above surface).

(xiii) Maneuvering at minimum level flight airspeed.

(xiv) Airport traffic pattern.

(xv) Use of radio for voice communication-traffic control procedures.

(xvi) Emergency operation of gyroplane equipment.

The format of any final rules adopted pursuant to this proposal will be subject to such changes as may be necessary for recodification under the Agency's recodification program recently announced in Draft Release No. 61–25 (26 F.R. 10698).

These amendments are proposed under authority of sections 313(a), 601, 602 of the Federal Aviation Act of 1958 (72 Stat. 752, 775, 776; 49 U.S.C. 1354, 1421, 1422).

Acting Director,
Flight Standards Service.

Issued in Washington, D.C., on July 9, 1962.