

Federal Reserve Bank	Rate	Effective
Philadelphia	1.25	October 30, 2008.
Cleveland	1.25	October 29, 2008.
Richmond	1.25	October 30, 2008.
Atlanta	1.25	October 31, 2008.
Chicago	1.25	October 29, 2008.
St. Louis	1.25	October 30, 2008.
Minneapolis	1.25	October 30, 2008.
Kansas City	1.25	October 29, 2008.
Dallas	1.25	October 30, 2008.
San Francisco ..	1.25	October 29, 2008.

(b) *Secondary credit.* The interest rates for secondary credit provided to depository institutions under 201.4(b) are:

Federal Reserve Bank	Rate	Effective
Boston	1.75	October 29, 2008.
New York	1.75	October 29, 2008.
Philadelphia	1.75	October 30, 2008.
Cleveland	1.75	October 29, 2008.
Richmond	1.75	October 30, 2008.
Atlanta	1.75	October 31, 2008.
Chicago	1.75	October 29, 2008.
St. Louis	1.75	October 30, 2008.
Minneapolis	1.75	October 30, 2008.
Kansas City	1.75	October 29, 2008.
Dallas	1.75	October 30, 2008.
San Francisco ..	1.75	October 29, 2008.

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By order of the Board of Governors of the Federal Reserve System, November 3, 2008.
Jennifer J. Johnson,
Secretary of the Board.
 [FR Doc. E8-26483 Filed 11-5-08; 8:45 am]
BILLING CODE 6210-01-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 23, 25, 33, and 35

[Docket No.: FAA-2007-27310; Amendment Nos. 23-59, 25-126, 33-28, and 35-5]

RIN 2120-A195

Airworthiness Standards; Propellers; Correction

AGENCY: Federal Aviation Administration (FAA), DOT.
ACTION: Final rule; corrections.

SUMMARY: This document corrects the amendment number and a typographical error in the final rule published in the **Federal Register** on Friday, October 24, 2008. The final rule amends the airworthiness standards for issuance of original and amended type certificates for airplane propellers.

DATES: This amendment becomes effective December 23, 2008.

FOR FURTHER INFORMATION CONTACT: Jay Turnberg, Engine and Propeller Directorate Standards Staff, ANE-110, Federal Aviation Administration, 12 New England Executive Park, Burlington, Massachusetts 01803-5299; telephone (781) 238-7116; facsimile (781) 238-7199, *e-mail:* jay.turnberg@faa.gov.

Correction

In the final rule, Airworthiness Standards; Propellers, published in the **Federal Register** issue of Friday, October 24, 2008, (73 FR 63339) make the following corrections:

1. On page 63339, in the second column, the fifth line of the heading, "Amendment No. 35-5" is corrected to read, "Amendment No. 35-8."
2. On page 63340, in the third column, revise the heading "Harmonization with S-P Amendment 1" to read "Harmonization with CS-P Amendment 1".

Issued in Washington, DC, on October 31, 2008.

Pamela Hamilton-Powell,
Director, Office of Rulemaking.
 [FR Doc. E8-26392 Filed 11-5-08; 8:45 am]
BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 29

[Docket No. SW022; Special Conditions No. 29-022-SC]

Special Conditions: Eurocopter France (ECF) Model EC225LP Helicopter, Installation of a Search and Rescue (SAR) Automatic Flight Control System (AFCS)

AGENCY: Federal Aviation Administration (FAA), DOT.
ACTION: Final special conditions; request for comments.

SUMMARY: These special conditions are issued for the ECF Model EC225LP helicopter. This helicopter will have novel or unusual design features associated with installing an optional SAR AFCS. The applicable airworthiness standards do not contain adequate or appropriate safety requirements for this design feature. These special conditions contain the additional safety standards the Administrator considers necessary to show a level of safety equivalent to that established by the existing airworthiness standards.

DATES: The effective date of these special conditions is October 30, 2008.

We must receive your comments by December 22, 2008.

ADDRESSES: You must mail or deliver two copies of your comments to: Federal Aviation Administration, Rotorcraft Directorate, Attn: Rules Docket (ASW-111), Docket No. SW022, 2601 Meacham Blvd., Fort Worth, Texas 76137. You must mark your comments: Docket No. SW022. You may inspect comments in the Rules Docket weekdays, except Federal holidays, between 8:30 a.m. and 4 p.m.

FOR FURTHER INFORMATION CONTACT: Jeff Trang, FAA, Rotorcraft Directorate, ASW-111, Aircraft Certification Service, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5135; facsimile (817) 222-5961.

SUPPLEMENTARY INFORMATION: The FAA has determined that notice and opportunity for prior public comment hereon are impracticable because these procedures would significantly delay issuance of the design approval and thus delivery of the affected aircraft. The FAA therefore finds that good cause exists for making these special conditions effective on issuance.

Comments Invited

We invite interested people to take part in this rulemaking by sending written comments, data, or views. The most helpful comments reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data. We ask that you send us two copies of written comments.

We will file in the docket all comments we receive, as well as a report summarizing each substantive public contact with FAA personnel about these special conditions. You can inspect the docket before and after the comment closing date. If you wish to review the docket in person, go to the address in the **ADDRESSES** section of this document between 8:30 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

We will consider all comments we receive by the closing date for comments. We will consider comments filed late if it is possible to do so without incurring additional expense or delay. We may change these special conditions based on the comments we receive.

If you want us to let you know we received your comments on these special conditions, send us a preaddressed, stamped postcard on which the docket number appears. We will stamp the date on the postcard and mail it back to you.

Background and Discussion

On March 27, 2006, ECF applied for a change to Type Certificate (TC) No. H4EU to install an optional SAR AFCS in the Model EC225LP helicopter. The Model EC225LP is a transport category helicopter certified to Category A requirements when configured for more than nine passengers and Category A or B requirements when configured for nine or less passengers. This helicopter is also certified for instrument flight under the requirements of Appendix B of 14 CFR part 29, Amendment 29-47.

The use of dedicated AFCS upper modes, in which a fully coupled autopilot provides operational SAR profiles, is needed for SAR operations conducted over water in offshore areas clear of obstructions. The SAR modes enable the helicopter to fly fully coupled maneuvers, to include predefined search patterns during cruise flight, and to transition from cruise flight to a stabilized hover and departure (transition from hover to cruise flight). The SAR AFCS also includes an auxiliary crew control that allows another crewmember (such as a hoist operator) to have limited authority to control the helicopter's longitudinal and lateral position during hover operations.

Flight operations conducted over water at night may have an extremely limited visual horizon with little visual reference to the surface even when conducted under Visual Meteorological Conditions (VMC). Consequently, the certification requirements for SAR modes are considered equivalent to operating under Instrument Meteorological Conditions (IMC). While Appendix B to 14 CFR part 29 prescribes airworthiness criteria for instrument flight, it does not consider operations below instrument flight minimum speed (V_{MINI}), whereas the SAR modes allow for coupled operations at low speed, all-azimuth flight to zero airspeed (hover).

Since SAR operations have traditionally been a public use mission, the use of SAR modes in civil operations requires special airworthiness standards (special conditions) to ensure that a level of safety consistent with Category A and Instrument Flight Rule (IFR) certification is maintained. In this regard, 14 CFR part 29 lacks adequate airworthiness standards for AFCS SAR mode certification to include flight characteristics, performance, and installed equipment and systems.

Type Certification Basis

Under 14 CFR 21.101, ECF must show the EC225LP, as changed, continues to meet the applicable provisions of the rules incorporated by reference in TC No. H4EU or the applicable regulations in effect on the date of application for the change. The regulations incorporated by reference in the TC are commonly referred to as the "original type certification basis." The regulations incorporated by reference in H4EU are as follows:

- a. 14 CFR 21.29.
 - b. 14 CFR part 29 Amendments 29-1 to 29-25; plus § 29.785 through Amendment 29-28; plus §§ 29.963, 29.967, 29.973, 29.975 through Amendment 29-34; plus §§ 29.25, 29.865 through Amendment 29-42; plus §§ 29.1, 29.2, 29.49, 29.51, 29.53, 29.55, 29.59, 29.60, 29.61, 29.62, 29.64, 29.65, 29.67, 29.73, 29.75, 29.77, 29.79, 29.81, 29.83, 29.85, 29.87, 29.307, 29.337, 29.351, 29.361, 29.391, 29.395, 29.397, 29.401, 29.403, 29.413, 29.427, 29.501, 29.519, 29.547, 29.549, 29.561(c), 29.561(d), 29.563, 29.602, 29.610, 29.613, 29.621, 29.625, 29.629, 29.631, 29.663, 29.674, 29.727, 29.755, 29.775, 29.783, 29.787, 29.803, 29.805, 29.807, 29.809, 29.811, 29.855, 29.861, 29.901, 29.903, 29.908, 29.917, 29.923, 29.927, 29.954, 29.961, 29.965, 29.969, 29.971, 29.991, 29.997, 29.999, 29.1001, 29.1011, 29.1019, 29.1027, 29.1041, 29.1043, 29.1045, 29.1047, 29.1093, 29.1125, 29.1141, 29.1143, 29.1163, 29.1181, 29.1189, 29.1193, 29.1305, 29.1309, 29.1323, 29.1329, 29.1337, 29.1351, 29.1359, 29.1415, 29.1521, 29.1549, 29.1557, 29.1587, A29, B29, C29, D29 through Amendment 29-47; plus 29.1317 through Amendment 29-49.
 - c. 14 CFR part 36 Amendment 21 (ICAO Annex 16, Volume 1, Chapter 8).
 - d. Equivalent Safety Findings:
 - (1) TC2899RD-R-F-01; § 29.1303(j), V_{ne} aural warning.
 - (2) TC2899RD-R-F-02; § 29.1545(b)(4), Airspeed indicators markings.
 - (3) TC2899RD-R-F-03; § 29.1549(b), Powerplant instruments markings.
 - (4) TC2899RD-R-F-05; § 29.173, 175, Static Longitudinal Stability.
 - (5) TC2899RD-R-F-06; 14 CFR part 29, Appendix B, paragraph IV; IFR Static Longitudinal Stability—Airspeed stability.
 - (6) TC2899RD-R-A-01; § 29.807(d)(2), Ditching emergency exits for passengers.
 - (7) TC2899RD-R-P-01; § 29.923(a)(2), Rotor drive system and control mechanism tests.
- In addition to the applicable airworthiness standards and special

conditions, the ECF Model EC225LP must comply with the fuel vent and exhaust emission requirements of 14 CFR part 34 and the noise certification requirements of 14 CFR part 36.

Regulatory Basis for Special Conditions

If the Administrator finds the applicable airworthiness standards (*i.e.*, 14 CFR part 29) do not contain adequate or appropriate safety requirements for the ECF Model EC225LP helicopter because of a novel or unusual design feature, special conditions are prescribed under 14 CFR 21.16.

The FAA issues special conditions, as defined in § 11.19, under § 11.38, and they become part of the type certification basis under § 21.101.

Special conditions are initially applicable to the model for which they are issued. Should the TC for that model be amended later to include any other model that incorporates the same novel or unusual design feature, or should any other model already included on the same TC be modified to incorporate the same novel or unusual design feature, these special conditions would also apply to the other model.

Novel or Unusual Design Features

The ECF Model EC225LP helicopter will incorporate the following novel or unusual design features:

The SAR system is composed of a navigation computer with SAR modes, an AFCS that provides coupled SAR functions, hoist operator control, a hover speed reference system, and two radio altimeters. The AFCS coupled SAR functions include:

- a. Hover hold at selected height above the surface.
- b. Ground speed hold.
- c. Transition down and hover to a waypoint under guidance from the navigation computer.
- d. SAR pattern, transition down, and hover near a target over which the helicopter has flown.
- e. Transition up, climb, and capture a cruise height.
- f. Capture and track SAR search patterns generated by the navigation computer.
- g. Monitor the preselected hover height with automatic increase in collective if the aircraft height drops below the safety height.

These SAR modes are intended to be used over large bodies of water in areas clear of obstructions. Further, use of the modes that transition down from cruise to hover will include operation at airspeeds below V_{MINI} .

The SAR system only entails navigation, flight control, and coupled AFCS operation of the helicopter. The

system does not include the additional equipment that may be required for over water flight or external loads to meet other operational requirements.

Applicability

These special conditions apply to the ECF Model EC225LP helicopters. Should ECF apply at a later date for a change to the TC to include another model incorporating the same novel or unusual design feature, these special conditions would apply to that model as well under the provisions of § 21.101(d).

Conclusion

This action affects only certain novel or unusual design features on one model of helicopter. It is not a rule of general applicability.

Normally, in adopting special conditions, we provide notice and an opportunity for comment before issuing the final special conditions. However, because the delivery date of the ECF Model EC225LP helicopter is imminent, we find that it is impracticable to provide prior notice because a delay would be contrary to the public interest. Therefore, good cause exists to make these special conditions effective upon issuance.

List of Subjects in 14 CFR Part 29

Aircraft, Aviation safety.

■ The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701–44702, 44704.

The Special Conditions

■ Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for Eurocopter France EC225LP model helicopters when the optional Search and Rescue (SAR) Automatic Flight Control System (AFCS) is installed:

In addition to the part 29 certification requirements for Category A and helicopter instrument flight (Appendix B), the following additional requirements must be met for certification of the SAR AFCS:

(a) *SAR Flight Modes*. The coupled SAR flight modes must provide:

(1) Safe and controlled flight in three axes (lateral and longitudinal position/speed and height/vertical speed) at all airspeeds from instrument flight minimum speed (V_{MINI}) to a hover.

(2) Automatic transition to the helicopter instrument flight (Appendix B) envelope.

(3) A Go-Around mode that safely disengages any other coupled mode in

case of an aborted approach to a hover or SAR system failure.

(4) A means to prevent unintended flight below a safe minimum height.

(b) *SAR Mode System Architecture*. To support the integrity of the SAR modes, the following system architecture is required:

(1) A system for limiting the engine power demanded by the AFCS when any of the automatic piloting modes are engaged, so FADEC power limitations, such as torque and temperature, are not exceeded.

(2) A system providing the aircraft height above the surface and final pilot-selected height at a location on the instrument panel in a position acceptable to the FAA that will make it plainly visible to and usable by any pilot at his station.

(3) A system providing the pilot-selected heading at a location on the instrument panel in a position acceptable to the FAA that will make it plainly visible to and usable by any pilot at his station.

(4) A system providing to any pilot the pilot-selected longitudinal and lateral ground speeds used by the AFCS in the flight envelope where airspeed indications become unreliable.

(5) A system providing wind speed and wind direction when automatic piloting modes are engaged or transitioning from one mode to another.

(6) A system that monitors for flight guidance deviations and failures, coupled with an appropriate and unmistakable alerting function for the flight crew, unless it is shown that a deviation or failure does not create a hazard.

(7) An alerting system that provides unmistakable visual or aural alerts, or both, to the flight crew under any of the following conditions:

(i) When the stored or pilot-selected minimum safety height is reached.

(ii) When a SAR mode system malfunction occurs.

For normal transitions from one SAR mode to another, a single visual or aural alert may suffice. For a SAR mode malfunction or a mode having a time-critical component, the crew alerting system must activate early enough to allow the crew to take timely and appropriate action. The alerting means must be designed to alert the crew in order to minimize crew errors that could create an additional hazard.

(8) The SAR system hoist operator control is considered a flight control and must comply with the following:

(i) The hoist operator control must be designed and located to provide for convenient operation and to prevent confusion and inadvertent operation.

(ii) The helicopter must be safely controllable by the hoist operator control throughout the range of that control.

(iii) The hoist operator control may not interfere with the safe operation of the helicopter. Pilot and copilot flight controls must be able to smoothly override the control authority of the hoist operator control, without exceptional piloting skill, alertness, or strength, and without the danger of exceeding any other limitation because of the override.

(9) The reliability of the AFCS must be related to the effects of its failure. The occurrence of any failure condition that would prevent continued safe flight and landing must be extremely improbable. For any failure condition of the AFCS which is not shown to be extremely improbable:

(i) The helicopter must be safely controllable and capable of continued safe flight without exceptional piloting skill, alertness, or strength. Additional unrelated probable failures affecting the control system must be evaluated.

(ii) The AFCS must be designed so that it cannot create a hazardous deviation in the flight path or produce hazardous loads on the helicopter during normal operation or in the event of a malfunction or failure, assuming corrective action begins within an appropriate period of time. Where multiple systems are installed, subsequent malfunction conditions must be evaluated in sequence unless their occurrence is shown to be improbable.

(10) A functional hazard assessment (FHA) and a system safety assessment must be prepared and consider the catastrophic failure conditions associated with SAR operations. For SAR catastrophic failure conditions, changes may be required to the following:

(i) System architecture.

(ii) Software and complex electronic hardware design assurance levels.

(iii) HIRF test levels.

(iv) Instructions for continued airworthiness.

The assessments must consider all the systems required for SAR operations to include the AFCS, all associated AFCS sensors (e.g., radio altimeter), and primary flight displays. Electrical and electronic systems with SAR catastrophic failure conditions (e.g., AFCS) must comply with the § 29.1317(a)(4) High Intensity Radiated Field (HIRF) requirements.

(c) *SAR Mode Performance Requirements*. (1) The SAR modes must be demonstrated in the requested flight

envelope for the following minimum sea-state and wind conditions:

(i) Sea State: Wave height of 2.5 meters (8.2 feet), considering both short and long swells.

(ii) Wind: 25 knots headwind; 17 knots for all other azimuths.

(2) The selected hover height and hover velocity must be captured (to include the transition from one captured mode to another captured mode) accurately and smoothly and not exhibit any significant overshoot or oscillation.

(3) For any single failure or any combination of failures of the AFCS that is not shown to be extremely improbable, the Minimum Use Height (MUH) must result in a loss of height that is no greater than half of the MUH with a minimum margin of 15 feet above the surface.

(4) The SAR mode system must be usable up to the maximum certified gross weight of the aircraft or to the lower of the following weights:

(i) Maximum emergency flotation weight.

(ii) Maximum hover Out-of-Ground Effect (OGE) weight.

(iii) Maximum demonstrated weight.

(d) *Flight Characteristics.* (1) The basic aircraft must meet all the part 29 airworthiness criteria for helicopter instrument flight (Appendix B).

(2) For SAR mode coupled flight below V_{MINI} , at the maximum demonstrated winds, the helicopter must be able to maintain any required flight condition and make a smooth transition from any flight condition to any other flight condition without requiring exceptional piloting skill, alertness, or strength, and without danger of exceeding the limit load factor. This requirement also includes aircraft control through the hoist operator's control.

(3) For SAR modes at airspeeds below V_{MINI} , the following requirements of Appendix B to part 29 must be met and will be used as an extension to the IFR certification envelope of the basic aircraft:

(i) Static Longitudinal Stability: The requirements of paragraph IV of Appendix B are not applicable.

(ii) Static Lateral-Directional Stability: The requirements of paragraph V of Appendix B are not applicable.

(iii) Dynamic Stability: The requirements of paragraph VI of Appendix B are replaced with the following two paragraphs:

(A) Any oscillation must be damped, and any aperiodic response must not double in amplitude in less than 10 seconds. This requirement must also be

met with degraded upper mode(s) of the AFCS. An "upper mode" is a mode that utilizes a fully coupled autopilot to provide an operational SAR profile.

(B) After any speed deviation of 5 knots, the return to the initial automatic hold condition must occur without oscillation within 10 seconds or less.

(4) With any of the upper mode(s) of the AFCS engaged, the pilot must be able to manually recover the aircraft and transition to the normal (Appendix B) IFR flight profile envelope without exceptional skill, alertness, or strength.

(e) *One-Engine Inoperative (OEI) Performance Information.* (1) The following performance information must be provided in the Rotorcraft Flight Manual Supplement (RFMS):

(i) OEI performance information and emergency procedures, providing the maximum weight that will provide a minimum clearance of 15 feet above the surface, following failure of the critical engine in a hover. The maximum weight must be presented as a function of the hover height for the temperature and pressure altitude range requested for certification. The effects of wind must be reflected in the hover performance information.

(ii) Hover OGE performance with the critical engine inoperative for OEI continuous and time-limited power ratings for those weights, altitudes, and temperatures for which certification is requested.

These OEI performance requirements do not replace performance requirements that may be needed to comply with the airworthiness or operational standards (§ 29.865 or 14 CFR part 133) for external loads or human external cargo.

(f) *RFMS.* (1) The RFMS must contain, at a minimum:

(i) Limitations necessary for safe operation of the SAR system to include:

(A) Minimum crew requirements.

(B) Maximum SAR weight.

(C) Engagement criteria for each of the SAR modes to include MUH.

(ii) Normal and emergency procedures for operation of the SAR system (to include operation of the hoist operator control), with AFCS failure modes, AFCS degraded modes, and engine failures.

(iii) Performance information:

(A) OEI performance and height-loss.

(B) Hover OGE performance information, utilizing OEI continuous and time-limited power ratings.

(C) The maximum wind envelope demonstrated in flight test.

(g) *Flight Demonstration.* (1) Before approval of the SAR system, an

acceptable flight demonstration of all the coupled SAR modes is required.

(2) The AFCS must provide fail-safe operations during coupled maneuvers. The demonstration of fail-safe operations must include a pilot workload assessment associated with manually flying the aircraft to an altitude greater than 200 feet above the surface and an airspeed of at least the best rate of climb airspeed (V_y).

(3) For any failure condition of the SAR system not shown to be extremely improbable, the pilot must be able to make a smooth transition from one flight mode to another without exceptional piloting skill, alertness, or strength.

(4) A failure condition that is not shown to be extremely improbable must be demonstrated by analysis, ground testing, or flight testing. For failures demonstrated in flight, the following normal pilot recognition and recovery times are acceptable (normal pilot recognition time is the time that it takes an average pilot to recognize that a failure has occurred):

(i) Transition (Cruise-to-Hover/Hover-to-Cruise) and Hover: Normal pilot recognition plus 1 second.

(ii) Cruise: Normal pilot recognition plus 3 seconds.

(5) All AFCS malfunctions must include evaluation at the low-speed and high-power flight conditions typical of SAR operations. Additionally, AFCS hard-over, slow-over, and oscillatory malfunctions, particularly in yaw, require evaluation. AFCS malfunction testing must include a single or a combination of failures (e.g., erroneous data from and loss of the radio altimeter, attitude, heading, and altitude sensors) which are not shown to be extremely improbable.

(6) The flight demonstration must include the following environmental conditions:

(i) Swell into wind.

(ii) Swell and wind from different directions.

(iii) Cross swell.

(iv) Swell of different lengths (short and long swell).

Issued in Fort Worth, Texas, on October 30, 2008.

Mark R. Schilling,

Acting Manager, Rotorcraft Directorate, Aircraft Certification Service.

[FR Doc. E8-26462 Filed 11-5-08; 8:45 am]

BILLING CODE 4910-13-P