OVERVIEW. The general process of approval or acceptance of certain operations, programs, documents, procedures, methods, or systems is an orderly method used by Flight Standards Service (FS) inspectors to ensure that such items meet regulatory standards and provide for safe operating practices. It is a modular, generic process that is ideally suited for the approval of Category (CAT) II programs that are solicited by operators from the Federal Aviation Administration (FAA). The process described in this section is not all-inclusive, but it is rather a tool to be used with good judgment in conducting day-to-day duties and responsibilities.

APPLICABILITY. The purpose of this section is to provide operational system safety oversight, analysis, and guidance to FS inspectors on the authorization of operators of small Category A aircraft (including airplanes and helicopters) to conduct CAT II approach and landing operations and/or Copter instrument landing system (ILS) with a decision height (DH) below 200 feet. Once concurrence from the Flight Technologies and Procedures Division is obtained, the Principal Operations Inspector (POI) authorizes these operations via the issuance of Letter of Authorization (LOA) C060 or H108. The process in this section applies only to U.S. operators of small Category A aircraft under Title 14 of the Code of Federal Regulations (14 CFR) part 91. Specifically, the process described in this section pertains to the authorization of CAT II operations based on authorized deviations to the requirements of part 91, §§ 91.189, 91.191, and 91.205(f), as described in § 91.193.

PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES. POIs will make a PTRS entry to record the actions directed by this section. The PTRS entry will be listed according to the applicable phase, as annotated below. POIs should use the “Comment” section to record comments about interactions with the operators. The applicable PTRS codes for this task are as follows:

- CAT II and/or Copter ILS with DH below 200 feet approval for a small Category A aircraft operator: 1430.
- Copter ILS: 1220. For Copter ILS approach procedures to minima lower than 200 feet DH, the PTRS code is “1220” and the “National Use” field entry should be listed as “HBAT CILS.” The “Comment” section of the PTRS should be used to record the disposition of the applicant’s request.

PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of regulatory requirements of part 91 and FAA policies and qualifications as an Operations aviation safety inspector (ASI).

B. Coordination. This task requires coordination with, at a minimum, avionics and airworthiness units, the Flight Technologies and Procedures Division, and the Aircraft Maintenance Division.
4-271 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

1) Title 14 CFR:
   - Parts 91 and 97.
   - Part 91 Appendix A.

2) FAA Orders:
   - Order 8260.60, Special Instrument Procedures.

3) Advisory Circulars (AC):
   - AC 120-57, Surface Movement Guidance and Control System.

4) Other:
   - Terminal Procedures Publication (TPP).
   - Aeronautical Information Manual (AIM).

B. Forms. None.

C. Job Aid. Part 91 Small Category A Aircraft CAT II and Copter Lower than 200 DH Approval Job Aid.

   NOTE: For the most recent version of the job aid, refer to the Flight Technologies and Procedures Division, Flight Operations Group Policies & Guidance website at https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs400/afs410/policy_guidance/.

4-272 OBJECTIVE. The objective of this task is to determine if an operator of a small Category A civil aircraft (airplane or helicopter) has developed acceptable procedures to conduct safe instrument approaches to CAT II minima and/or Copter minima with a DH below 200 feet.
Successful completion of this task results in acceptance or rejection of the operator’s proposed CAT II procedures manual (if required) and issuance or denial of LOA C060.

4-273 SMALL CATEGORY A AIRCRAFT CAT II AND COPTER ILS OPERATIONS. The DH and Runway Visual Range (RVR) for an aircraft on an ILS approach is specified on the part 97 Standard Instrument Approach Procedure (SIAP) chart. The DA for a CAT I approach is 200 feet or more above the touchdown zone (TDZ) or threshold and the RVR minimum is 1,800 feet or greater. The FAA determined that height above touchdown (HAT) and visibility values could be lowered for some small Category A aircraft operators based upon the demonstrated skill of the flightcrew and the performance of the aircraft and ground-based navigation equipment. The FAA has authorized certain operators to use lower-than-normal CAT I ILS minima at specified airports after demonstrating the ability to conduct these operations safely.

A. Copter ILS and Helicopter CAT II Approval. Copter ILS and Helicopter CAT II approval will permit operators to fly to minima no lower than 100 feet HAT and to visibilities no lower than RVR 1200 on published part 97 Copter ILS and CAT II procedures. An unpublished DH reduction is not authorized (i.e., the authorized DH must not be lower than the relevant minimum on the SIAP). The visibility minimum may be reduced in accordance with the Copter procedures paragraph in part 97, § 97.3. A marker beacon receiver providing aural and visual indications of the inner marker (IM) or a functioning radio altimeter (RA) is required for these operations.

B. Small Category A Airplane CAT II Approval. Small Category A airplane CAT II approval permits operators to fly to minima no lower than 100 feet HAT and to visibilities no lower than RVR 1200 on published part 97 CAT II ILS procedures. Reductions to CAT I ILS procedures are not authorized (i.e., the authorized DH must not be lower than the relevant minimum on the SIAP). A marker beacon receiver providing aural and visual indications of the IM or a functioning RA is required for these operations.

C. Approaches Authorized. Operators approved for CAT II approaches conducted under part 91 may conduct any part 97 public CAT II approaches (i.e., published approaches). The specific approaches do not have to be listed in the LOA. Small Category A aircraft, CAT II, and Copter ILS operations to a DH below 200 feet that are authorized based on the provisions of this section are not authorized when operating for compensation or hire.

4-274 APPLICATION FOR DEVIATION. Section 91.193 provides for deviations to the requirements of §§ 91.189, 91.191, and 91.205(f). This authority applies to the operation of small Category A aircraft that meet the requirements listed in § 97.3. Initial contact can occur in any of several forms (telephone conversation, in-person visit, letter, submission of an application, etc.). Before approval of a CAT II authorization, an operator must accomplish the following:

A. Letter of Intent (LOI). The applicant should submit an LOI to conduct CAT II and/or Copter ILS operations. The letter should contain specific information about the proposed operation (e.g., the types of aircraft, crew experience, aircraft and avionics configurations, and a description of the maintenance and inspection program). Operators should state the extent of
relief requested from the requirements of §§ 91.189, 91.191, and/or 91.205(f). This LOI must be submitted to the responsible Flight Standards District Office (FSDO).

**B. FSDO Receipt.** Upon receipt of an LOI requesting a small Category A aircraft CAT II and/or Copter ILS deviation, the inspector will inform the applicant of the requirements for approval.

**C. Application Package.** When the applicant submits a complete application package, Operations, Airworthiness, and Avionics inspectors should review the application package for completeness, verify that the aircraft/avionics are equipped as required in paragraph 4-277, complete the small Category A CAT II approval job aid (see subparagraph 4-271C) and forward that data to the Flight Technologies and Procedures Division. Flight Technologies and Procedures Division concurrence is required for all small Category A aircraft, CAT II ILS, and Copter ILS authorizations.

**4-275 REVIEW OF APPLICATION PACKAGE.**

**A. Pilot Certification and Recency.** The applicant must be authorized for CAT II operations and meet all CAT II recency requirements in accordance with 14 CFR part 61, §§ 61.57 and 61.67. LOA C060 cannot be issued to a pilot who does not meet the CAT II certification and recency requirements at the time of issuance. The pilot may elect to concurrently seek CAT II authorization under part 61 and conduct the aircraft evaluation required in this approval process.

**B. Manual Requirements.** Coordinate review of the manual with the airworthiness and avionics units as necessary. The following information and procedures should be included in the CAT II manual (refer to part 91 appendix A, § 1(b)):

1) **Aircraft Identification.** Registration number, serial number, and make and model of the aircraft to which it applies.

2) **Maintenance Program.** A maintenance program, as specified in part 91 appendix A, § 4.

3) **Procedures.** The procedures and instructions related to:
   - DH,
   - Use of RVR information,
   - The decision region (the region between the ILS middle marker (MM)/final approach fix (FAF) and DH),
   - The maximum permissible deviations of the basic ILS indicator within the decision region,
   - A missed approach,
   - Use of equipment minimum altitude for use of autopilot,
   - Instrument and equipment failure warning systems,
   - Instrument failure, and
   - Other procedures, instructions, and limitations that may be found necessary by the Administrator.
4) **Unsatisfactory CAT II Operations Manual.** If the manual is unsatisfactory:

   a) Contact the applicant and explain areas of the CAT II operations manual that need to be corrected.

   b) Prepare a letter of disapproval with a suspense date for submission of the corrected CAT II operations manual.

   c) Retain a copy of the CAT II operations manual for future comparison.

   d) Return the application, the CAT II operations manual, and the letter of disapproval to the applicant.

5) **Satisfactory CAT II Operations Manual.** If the manual is satisfactory, approve the manual in accordance with the criteria in § 91.191 and part 91 appendix A.

C. **Maintenance Program Requirements.** Each maintenance program must contain the following:

   1) A list of each instrument and item of equipment specified in part 91 appendix A, § 2 that is installed in the aircraft and approved for CAT II operations, including the make and model of those specified in part 91 appendix A, § 2(a).

   2) A schedule that provides for the performance of the procedures under subparagraph 4-275C5) within 3 calendar-months after the date of the previous inspection. The inspection must be performed by a person authorized by 14 CFR part 43, except that each alternate inspection may be replaced by a functional flight check. This functional flight check must be performed by a pilot holding a CAT II pilot authorization for the type of aircraft checked.

   3) A schedule that provides for the performance of bench checks for each listed instrument and item of equipment that is specified in part 91 appendix A, § 2(a) within 12 calendar-months after the date of the previous bench check.

   4) A schedule that provides for the performance of a test and inspection of each static pressure system in accordance with part 43 appendix E within 12 calendar-months after the date of the previous test and inspection.

   5) The procedures for the performance of the periodic inspections and functional flight checks to determine the ability of each listed instrument and item of equipment specified in part 91 appendix A, § 2(a) to perform as approved for CAT II operations, including a procedure for recording functional flight checks.

   6) A procedure for ensuring that the pilot is informed of all defects in listed instruments and items of equipment.
7) A procedure for ensuring that the condition of each listed instrument and item of equipment upon which maintenance is performed is at least equal to its CAT II approval condition before it is returned to service for CAT II operations.

8) A procedure for an entry in the maintenance records required by part 43, § 43.9 that shows the date, airport, and reasons for each discontinued CAT II operation due to a malfunction of a listed instrument or item of equipment.

D. **Bench Check Requirements.** Any required bench check must:

1) Be performed by a certificated repair station (CRS) holding one of the following ratings, as appropriate, to the equipment checked:
   - An instrument rating, or
   - A radio rating.

2) Consist of removal of an instrument or item of equipment, and performance of the following:
   - A visual inspection for cleanliness, impending failure, and the need for lubrication, repair, or replacement of parts;
   - Correction of items found by that visual inspection; and
   - Calibration to at least the manufacturer’s specifications, unless otherwise specified in the approved CAT II manual for the aircraft in which the instrument or item of equipment is installed.

3) After the completion of one maintenance cycle of 12 calendar-months, a request to extend the period for checks, tests, and inspections is approved if it is shown that the performance of particular equipment justifies the requested extension.

4) The airborne ILS avionics must be operationally checked within the preceding 15 flight-hours and 15 calendar-days before conducting a Copter ILS or CAT II ILS and found to perform satisfactorily. The check may be performed using ramp or bench test equipment, by a functional flight check conducted by a pilot holding a Copter ILS authorization while flying an unrestricted ILS approach (an ILS approach with a DH no higher than 200 feet HAT and no autocoupler limitations), or by an actual Copter ILS or CAT II ILS approach. Such checks should be recorded in the aircraft logbook or aircraft maintenance records by the person performing the check as, provided in § 91.407(b).

4-276 **EVALUATION PROGRAM.** An evaluation program will be conducted by the operator when the aircraft flight control guidance system (FCGS) required for CAT II operations is not approved under an appropriate type certificate (TC) or Supplemental Type Certificate (STC) (part 91 appendix A). Information derived from the evaluation program should be used to update appropriate operational procedures and techniques in the operator’s CAT II manual. Request for deviation of the evaluation program must be coordinated with the Flight Technologies and Procedures Division.
A. Evaluation Program Requirements. An evaluation program is not required if an applicant has an aircraft in which the instruments and equipment have been TC’d or STC’d for CAT II operations. The applicant must present the rest of the application package for approval. This manual may have been developed by a manufacturer and adapted for a specific operator’s use.

B. Demonstration of FCGS. The equipment to be evaluated for approval will be the FCGS. This program provides a method of approval for those airplane owners or operators having airplanes equipped with an FCGS that is not approved for CAT II operations under an appropriate TC or STC. Satisfactory demonstration will show that the equipment performs to the standards with the reliability necessary for CAT II operations.

C. Requirements for Conducting the Evaluation Program. The procedures and requirements for conducting an evaluation program are prescribed in part 91 appendix A, § 3(e). The following should be considered:

1) When IM-receiving equipment is to be used as the primary means of identifying the 100-foot DH, its use will be permitted when the ground equipment is operable. However, in the absence of operable IM ground equipment, the lowest authorized DH is 150 feet using only a barometric altimeter. It will be necessary to rely on barometric altimeters required by part 91 appendix A, § 2(a)(7). These altimeters will be acceptable under that section if:

   a) The altimeters and their static systems met the requirements of § 91.411 within the past 12 months; and

   b) Altimeter correction data, which considers both scale error and main landing gear wheel height of the airplane, is available to the pilot in command (PIC). Scale error is determined by an altimeter test and inspection under part 43 appendix E.

2) If the first five approaches are successful, the demonstration is complete. Otherwise, a success rate of 90 percent must be achieved for 10 approaches. If this cannot be demonstrated, the application is disapproved. All demonstration approaches must be observed by an FAA Operations inspector qualified in the applicable category and class, and recorded on a suitable form developed by the operator in order to facilitate evaluation. See Figure 4-9, Sample Category II Approach Evaluation, for an example. A successful approach includes all of the following:

   a) At the 100-foot DH, the indicated airspeed and heading are satisfactory for a normal flare and landing (speed must be plus or minus 5 knots of programmed airspeed, but may not be less than the computed threshold speed if autothrottles are used);

   b) The aircraft at the 100-foot DH is positioned so that the cockpit is within, and tracking so as to remain within, the lateral confines of the runway extended;

   c) Deviation from glideslope after leaving the Outer Marker (OM) does not exceed 50 percent of full-scale deflection as displayed on the ILS indicator;
d) No unusual roughness or excessive attitude changes occur after leaving the MM; and

e) In the case of an aircraft equipped with an approach coupler, the aircraft is sufficiently in trim when the approach coupler is disconnected at the DH to allow for the continuation of a normal approach and landing.

3) All evaluation approaches must be conducted under simulated instrument conditions after prior arrangement with the controlling air traffic control (ATC) facility. When conducting approaches, the operator should ask ATC to ensure that vehicles or other aircraft on the surface will not move into the ILS critical area. An aircraft or vehicle in the ILS critical area could cause momentary deviations to ILS course or glideslope signals, which may result in an unsatisfactory approach. If the FAA inspector identifies an external condition, and is reasonably sure this external condition caused an unsatisfactory approach, that approach may be disregarded at the inspector’s discretion.

4) Although the evaluation approaches are not required to be performed on a CAT II ILS, it is important to note that an unsatisfactory evaluation approach is extremely difficult to attribute to small errors in ILS ground equipment. Many CAT I ILS facilities are capable of meeting CAT II signal standards, but are not monitored to the same tolerances as CAT II/III facilities. An unsatisfactory approach due to a critical error incursion is something that may be identified, but an unsatisfactory approach due to a signal or monitor error outside CAT II limits but within CAT I limits cannot be detected by the PIC or FAA inspector.

5) Flags, lights, aural warnings, and other displays associated with normal and abnormal functioning of the FCGS should be evaluated to determine if they provide the crew with information suitable for a CAT II operation.

6) The PIC conducting an evaluation program is not required to meet the CAT II pilot requirements of § 61.67.

D. Current FAA Form 7711, Application for Certificate of Waiver or Authorization, Authorizations. LOA C060 is the only acceptable vehicle for CAT II operational authorization. Operators previously approved using FAA Form 7711 may continue to conduct CAT II operations under the terms of those approvals, but must be issued LOA C060 in accordance with this section as soon as practicable.
**Figure 4-9. Sample Category II Approach Evaluation**

<table>
<thead>
<tr>
<th>CATEGORY II APPROACH EVALUATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot in Command (PIC) ___________ Second in Command (SIC) ___________</td>
</tr>
<tr>
<td>Date ______ Registration No. ____________ Airport ____________</td>
</tr>
<tr>
<td>Runway ______ Weather _______ Wind _______ FAA Inspector ___________</td>
</tr>
</tbody>
</table>

This form will be completed whenever an approach is attempted using the airborne low approach system, regardless of whether the approach is abandoned or concluded successfully.

**APPROACH EVALUATION:**

Was the approach successful? Yes ____ No ____

Flight control guidance system (FCGS) used:

- Autocoupler ____________
- Flight Director ____________

If equipped and used, did autocoupler and flight director agree? Yes ____ No ____

SIC? Yes ____ No ____

FAA Inspector? Yes ____ No ____

Airspeed at 200’ ± _______ at 100’ ± _______ from programmed speed?

If unable to initiate _____ or complete _____ approach (indicate which), indicate the cause:

Airborne equipment _______ Identify and describe nature of deficiency:

Ground equipment _______ Identify and describe nature of deficiency:

Approach control or tower request ______.

Other _______ State reason: _______________________________________________________

Was airplane in trim at 100’ for continuation of flare and landings? Yes ____ No ____

If approach and landing abandoned, state altitude above runway: ____ feet; state reasons:

Quality of overall performance: Acceptable _____ Unacceptable _____

PIC Signature ___________________________________________________________________
SMALL CATEGORY A AIRCRAFT SPECIAL PROVISIONS. The following text must be entered into LOA C060, Table 1, CAT II Airplane Systems and Landing Minimums, when authorizing any operator of small Category A aircraft.

A. Exceptions to § 91.189. The provisions of § 91.189 apply to all operations conducted in accordance with this authorization. However, when a second in command (SIC) is not required by the aircraft type design, the SIC requirements of § 91.189(a)(1) are not applicable.

B. Exceptions to § 91.205(f). The provisions of § 91.205(f) do not apply, with the following exceptions:

1) For operations under the terms of this authorization, the instruments and equipment specified in § 91.205(d) are required together with the following instruments and equipment:

   - A communication system that does not affect the operation of the ILS systems;
   - A marker beacon receiver that provides distinctive aural and visual indications of the OM and MM;
   - One sensitive altimeter adjustable for barometric pressure having a placarded correction for altimeter scale error, in the absence of an RA;
   - One vertical speed indicator;
   - For operations with DH below 150 feet, either a marker beacon receiver providing aural and visual indications of the IM or a functioning RA;
   - Warning systems for immediate detection by the pilot of system faults in the ILS and the RA (if installed);
   - An externally vented static pressure system with an alternate static pressure source; and
   - A heat source for the installed airspeed system pitot tube or an equivalent means of preventing malfunctioning because of icing of the pitot system.

2) No passengers or property may be carried for compensation or hire.

3) The minimum for ILS approaches to CAT II runways is 100 feet DH/RVR 1200.

4) Operations under the terms of this authorization will not be conducted unless the required ILS equipment has been operationally checked within the preceding 15 flight-hours and within 15 calendar-days before flight, and has been found to perform satisfactorily for the type of operation authorized. The check may be performed using ramp test equipment, a functional flight check conducted by a pilot holding a CAT II authorization, or by an actual approach. Such checks should be recorded in the aircraft logbook or aircraft maintenance records by the person performing the check, as provided in § 91.407(b).
4-278 OTHER PROCEDURES.

A. Office Files. Establish a responsible Flight Standards office file on the operator that includes, but is not limited to, a copy of the following, as applicable:

- LOI.
- The approved CAT II operations manual.
- The evaluation program information, if required.
- LOA C060, if authorized.
- Letter of disapproval, if not authorized.
- Other documents of correspondence.

B. Distribution. Send the originals of the following documents to the applicant:

- The approved CAT II operations manual.
- LOA C060.
- The evaluation program.
- Letter of approval of a CAT II operations manual.

C. Complete the PTRS. Make appropriate PTRS entries.

4-279 TASK OUTCOMES. Completion of this task results in one or more of the following:

- An approved CAT II operations manual.
- Issuance of LOA C060.
- An approved evaluation program.
- A disapproved application.
- A letter indicating disapproval of a CAT II operations manual.
- A letter indicating approval of a CAT II operations manual.

4-280 FUTURE ACTIVITIES.

- Renewal of aircraft authorization.
- Review revisions to the operator’s CAT II operations manual.

RESERVED. Paragraphs 4-281 through 4-299.