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# **Federal Register**

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## **Part IV**

# **Department of Transportation**

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**Federal Aviation Administration**

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**14 CFR Parts 43 and 91  
Inoperative Instruments or Equipment;  
Final Rule**

## DEPARTMENT OF TRANSPORTATION

## Federal Aviation Administration

## 14 CFR Parts 43 and 91

[Docket No. 22320; Amdt. Nos. 43-30 and 91-206]

RIN 2120-AA19

## Inoperative Instruments or Equipment

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

**SUMMARY:** These amendments revise the Federal Aviation Regulations (FAR) to permit rotorcraft, nonturbine-powered airplanes, gliders, and lighter-than-air aircraft, for which an approved Master Minimum Equipment List has not been developed, to be operated with inoperative instruments and equipment not essential for the safe operation of the aircraft. Furthermore, these amendments permit general aviation operators of small rotorcraft, nonturbine-powered small airplanes, gliders, and lighter-than-air aircraft, for which a Master Minimum Equipment List has been developed, the option of operating under the minimum equipment list concept or in accordance with the provisions of this final rule.

EFFECTIVE DATE: December 13, 1988.

**FOR FURTHER INFORMATION CONTACT:** Edna H. French-Manager, Project Development Branch (AFS-850) or John Lynch; General Aviation and Commercial Division, Office of Flight Standards, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267-8150.

**SUPPLEMENTARY INFORMATION:****Public Participation**

These amendments are based on SNPRM No. 81-14A. All interested persons have been given an opportunity to participate in making these amendments, and due consideration has been given to their comments. Except for the changes discussed below, these amendments and the reasons for their adoption are the same as those stated in Notice 81-14A.

**Background**

Except as provided for in § 91.30, all instruments and equipment installed on an aircraft must be in operative condition for an operator to continue to meet the aircraft's airworthiness requirements. The FAA recognized that flight could be conducted with instruments and equipment inoperative under specified conditions with the

adoption of the minimum equipment list (MEL) concept. Presently, the MEL concept extends to air carrier, commercial, and general aviation operators of multiengine aircraft, but only if the aircraft has a master MEL. Owners or operators of aircraft for which master MEL's have not been developed are required to adhere to § 91.165 which requires that all aircraft discrepancies which occur between required inspections be repaired in accordance with Part 43. This means that all of the aircraft's instruments and equipment must be operative, regardless of whether or not they are essential for the operation being conducted.

The FAA addressed this issue for operators of general aviation multiengine aircraft by issuing Amendment No. 91-157 (44 FR 43714; July 28, 1979). This amendment permitted the operation of multiengine aircraft with inoperative instruments or equipment within the limitations of §§ 91.29 and 91.165. After Amendment No. 91-157 was published, the FAA received strong negative reaction from the public. Generally, the commenters objected, because they believed the rules were confusing, the time allowed for compliance was insufficient, and very few master MEL's had been developed at the time. Many commenters stated that they use the listing in § 91.33 as the sole standard for determining whether or not an instrument or item of equipment is required to be operational. Although the FAA intended to provide relief to the general aviation community by issuing Amendment No. 91-157, it was perceived as restrictive and criticized as excluding single-engine aircraft. Therefore, the FAA issued Amendment No. 91-160 on October 26, 1979 (44 FR 62884; November 1, 1979), suspending § 91.30 so the FAA could study the matter further.

Following the suspension of § 91.30, operators desiring to use MEL's petitioned for exemptions from § 21.181. This allowed operators to obtain individual approvals to operate multiengine aircraft with inoperative instruments and equipment. The FAA was able to gain valuable information on the usefulness and safety aspects of MEL's when used in general aviation operations. Even though this experience was beneficial, processing exemptions was time consuming and costly to both the FAA and the public. Before the FAA reinstated § 91.30 on March 13, 1986, over 350 individual exemptions were processed.

On September 18, 1981, the FAA issued Notice of Proposed Rulemaking (NPRM) No. 81-14 (46 FR 52278; October

28, 1981). This notice proposed permitting the operation of aircraft with inoperative instruments and equipment not essential for the operation being conducted. The proposal included provisions to consolidate all MEL requirements of Parts 121, 125, and 135 into Part 91. It also proposed to broaden the application of these provisions to other aircraft and to allow the operation of aircraft without an MEL with certain instruments or items of equipment inoperative through an approved aircraft flight manual or operating limitations statement. Even though this notice received more favorable response than Amendment No. 91-157, the general aviation community still had concerns and objections, and the FAA decided that the proposal needed further revision.

The FAA reinstated Amendment No. 91-157 (50 FR 51188; December 13, 1985) on December 6, 1985. This permitted operators of multiengine aircraft, under specific conditions, to operate their aircraft with inoperative instruments and equipment. The FAA, in making the decision to reinstate § 91.30, determined the reasons for suspending the rule no longer existed. However, as was the case when Amendment No. 91-157 was first published, aircraft for which master MEL's had not been developed were still excluded. The reinstatement of § 91.30 provided immediate relief to operators of multiengine aircraft, and allowed additional time for the FAA to resolve the problems confronting operators of other aircraft.

The FAA issued a Notice of Meeting announcement (51 FR 18800; May 22, 1986) to solicit public participation for this ongoing rulemaking project. The FAA determined that prior to initiating any further rulemaking projects involving this subject, it would request assistance from the public. On June 17, 1986, a public meeting was held at the FAA Headquarters in Washington, DC. The meeting was attended by thirty-nine FAA and industry personnel. One of the principal industry comments was that requiring all instruments and equipment to be operative at all times was totally unacceptable. Furthermore, the attendees disagreed that § 91.165 requires all instruments and equipment to be operative at all times. Also, industry expressed a concern that the MEL approval process is unnecessarily burdensome for both Part 91 operators and the FAA. The attendees stated that the Flight Standards District Offices (FSDO) are already backlogged with priority work, and past experience has shown the minimum time to complete the MEL approval process is six months.

The commenters stated that general aviation operators have operated safely for years, using the instrument and equipment listings in § 91.33 as their sole reference for determining whether an instrument or item of equipment was required for the operation being conducted. The attendees requested that the FAA develop rules to permit the operation of aircraft with inoperative instruments and equipment, and suggested they follow the procedures that operators have used successfully for years. On December 15, 1987, the FAA issued Supplemental Notice of Proposed Rulemaking (SNPRM) No. 81-14A (52 FR 47680), in which it proposed the rules that are contained in this final rule document. The FAA's intent in proposing the rules contained in Notice No. 81-14A was to provide a realistic approach to the inoperative instruments and equipment issue in response to the concerns of the general aviation community. The FAA determined that general aviation operators of small aircraft were in need of relief from § 91.165. In developing these amendments, specifically § 91.30(d), the FAA utilized a philosophy and rationale similar to that used in the development of the MEL concept.

In the past, many aircraft operators have incorrectly used the listing in § 91.33 as the sole standard for determining whether or not their aircraft met the requirements for the operation being conducted. With these new rules, the FAA provides a regulatory basis for the operation of these aircraft with inoperative instruments and equipment, when those instruments and equipment are not essential for the safe operation of the flight. These rules permit operation of aircraft with inoperative instruments and equipment within the framework of a controlled program of maintenance inspections, repairs, and parts replacements. It is imperative that the owner/operator exercise prudent judgment and at each required inspection, have any inoperative instrument or item of equipment inspected or repaired, as appropriate. In this good faith effort, the FAA has decided to conform §§ 43.11, 91.30, and 91.165 to the operational practices and procedures that the aviation public has requested.

**Sections Affected**

As a result of comments from the public and additional FAA review of Notice No. 81-14A, the FAA rearranged and renumbered some of the rules in this Final Rule document as compared to the proposed rules contained in Notice No. 14A (52 FR 47680; December 15, 1987).

The following comparison table shows these differences:

**COMPARISON BETWEEN THE PROPOSED RULES AND THE FINAL RULES**

Notice No. 81-14A	Final rule
§ 43.11(b) .....	§ 43.11(b)
§ 91.30(a) .....	§ 91.30(a)
§ 91.30(c) .....	§ 91.30(c)
§ 91.30(d) .....	§ 91.30(d)
§ 91.30(d)(1) .....	§ 91.30(d)(1) (i) and (ii)
§ 91.30(d)(2) .....	§ 91.30(d)(2)
§ 91.30(d)(3) .....	§ 91.30(d)(3)
§ 91.30(d)(4) .....	§ 91.30(d)(4)
§ 91.165(a) .....	§ 91.165(a)
§ 91.165(b) .....	§ 91.165(c)
§ 91.165(c) .....	§ 91.165(b)
§ 91.165(d) .....	§ 91.165(d)

Section 91.30(d) permits rotorcraft, nonturbine-powered airplanes, gliders, and lighter-than-air aircraft, for which master MEL's and approved MEL's have not been developed, to be operated with inoperative instruments and equipment. Additionally, operators of small rotorcraft, nonturbine-powered small airplanes, gliders, and lighter-than-air aircraft, for which master MEL's and approved MEL's have been developed, may elect to operate in accordance with an approved MEL or in accordance with the provisions of § 91.30(d).

The pilot-in-command, owner, or operator will be required to identify the inoperative instruments or equipment, consult the aircraft's approved flight manual or owner's handbook, and review § 91.30(d)(2). After the pilot-in-command ensures that an inoperative instrument or equipment is not required, the aircraft may depart, provided—

(1) The inoperative instrument or item of equipment is deactivated or removed, the cockpit control of the affected instrument or item of equipment is placarded with the word "Inoperative," and the discrepancy is recorded in the aircraft's maintenance records in accordance with § 43.9 of this chapter. If the inoperative instrument or item of equipment is being removed from the aircraft or if deactivation requires maintenance, a certificated and appropriately rated maintenance person will be required to accomplish the removal and maintenance task; and

(2) At the next required inspection, the inoperative instrument or item of equipment is repaired, replaced, removed, or inspected, as appropriate.

Section 91.165 has been revised by rewording and rearranging the current text into separate paragraphs and by adding procedures for returning an aircraft to service with inoperative instruments and equipment. The revision establishes a requirement for

owners and operators to have any inoperative instrument or item of equipment repaired, replaced, removed, or inspected, as appropriate. Also, this revision will ensure that after the aircraft has been inspected, and if maintenance is being deferred, the owner/operator of that aircraft is aware and responsible for ensuring that maintenance persons have made the appropriate entries in the aircraft's maintenance records and properly placarded the inoperative instruments or equipment "Inoperative."

When repair of inoperative instruments and equipment is deferred after an inspection, a maintenance person will make a determination that the inoperative instruments and equipment will not affect the intended function of any other operable instruments and equipment. An entry will then be made in the aircraft maintenance records in accordance with § 43.11. A maintenance person will place a placard that meets the aircraft's airworthiness certification regulation (e.g., §§ 23.1541, 27.1541, etc.) on the inoperative instrument or cockpit control of the inoperative item of equipment.

A new sentence has been added to § 43.11(b) to provide for an aircraft to be returned to service with inoperative instruments and items of equipment. The person approving the aircraft for return to service after any annual, 100-hour, progressive, or unscheduled inspection will be required to placard any inoperative instruments and equipment, and shall make an entry in the aircraft's maintenance records describing the deficiencies. Subsequent inspections will require reevaluating the instrument/equipment and updating the entry in the aircraft records.

**Discussion of Comments to Notice No. 81-14**

Sixty-five comments were received in response to Notice No. 81-14 (46 FR 52278; October 26, 1981), representing the views of manufacturers, associations, and individual operators. Generally, the comments favored rulemaking to provide relief for Part 91 operators to permit, under appropriate circumstances, operations with inoperative instruments and equipment. However, many commenters who favored rulemaking, strongly disagreed with the proposals contained in Notice No. 81-14. Therefore, the FAA withdrew the proposals.

The commenters were concerned with the operating limitations statements that were perceived as unnecessarily burdensome and time-consuming for

both industry and the FAA, without commensurate improvement in safety. The FAA agreed and the proposal has been withdrawn.

Concerning the proposal to develop an MEL in the FAA Approved Airplane or Rotorcraft Flight Manual, the FAA agreed with the comments that further evaluation of the means required to implement the procedure is necessary before this proposal can be adopted. Accordingly, the FAA has withdrawn the proposal to include MEL's in FAA Approved Airplane or Rotorcraft Flight Manuals.

Notice No. 81-14 proposed adding a new paragraph (g) to § 91.33 to permit operators of general aviation aircraft (for which a master MEL has not been developed) to be operated with inoperative instruments and equipment. After further consideration on how best to approach this matter, it was decided that proposed paragraph (g) should not be in § 91.33. Therefore, the FAA has withdrawn the proposal to add a new paragraph (g) to § 91.33.

In an effort to standardize and simplify the regulatory procedures applicable to operations with inoperative instruments or equipment, the FAA proposed to consolidate the MEL requirements contained in Parts 121, 125, and 135 into a single regulation under Part 91. The FAA has determined that this proposal should be addressed through separate rulemaking, and therefore, the proposal has been withdrawn.

The National Business Aircraft Association (NBAA) and 19 other commenters supported the proposal to allow Part 91 operators to use an approved MEL. However, the commenters suggested the master MEL's were developed for air carriers and include references to equipment (such as flight data and voice recorders) that may not be applicable to private operators. Commenters suggested these references should be eliminated from the master MEL. A master MEL originates when an aircraft is type certificated, and the master MEL is developed for the aircraft type, regardless of the aircraft's intended use. Any operator (air carrier or private) may use the master MEL as a guide to develop an MEL for a specific aircraft with specified operational requirements. Although private operators may not have the same instrument or equipment requirements as air carriers, the FAA does not agree that instruments and equipment should be eliminated from the master MEL.

#### Discussion of Comments to SNPRM No. 81-14A

One hundred seventy-four comments were received in response to Notice No. 81-14A (52 FR 47680), representing the views of manufacturers, associations, and individuals. One hundred and two commenters favored the proposals contained in Notice No. 81-14A, six were against, and sixty-six appeared to not understand that the proposals provided relief from the current rules.

The six commenters opposed to the proposals of Notice No. 81-14A, objected to the proposal on the grounds that they believe the current rule (i.e., § 91.33) is inadequate in ensuring that an aircraft is operated with the proper instruments and equipment. Although many pilots believe the provisions of § 91.33 are the only requirements for determining whether or not an instrument or an item of equipment is needed for an aircraft to be considered airworthy for flight, they are not correct. Though many of the required instruments and equipment are covered by § 91.33, there are additional requirements. Some of these requirements are covered in an aircraft's applicable airworthiness certification regulations. Also, there are added requirements contained in an aircraft equipment list, kinds of operations equipment list, or aircraft flight manual. In addition, there are other instruments and equipment requirements listed in Part 91 (e.g., §§ 91.24, 91.90, etc.). Also, there are airworthiness directives (AD) that require certain instruments and equipment to be operational. As an example, AD 82-06-10 requires that a Cessna 210 have two operational vacuum pumps prior to entering IFR conditions. Considering these numerous airworthiness requirements, the FAA has determined that rules, as proposed in Notice No. 81-14A are needed to ensure that aircraft are properly equipped for flight. Therefore, the rules proposed in Notice No. 81-14A remain unchanged.

One commenter believes there must be a safety requirement shown to justify establishing new rules. The commenter suggested that present and past accident rates do not justify issuing new rules. The FAA does not use accident and incident data as the sole basis for proposing or establishing new rules. The FAA agrees that past accident and incident records show a minimal number of accidents and incidents caused by inoperative instruments and equipment, but the purpose of these new rules is to clarify the language in the existing rules to provide greater

flexibility to Part 91 operators. Therefore, the rules as proposed in Notice No. 81-14A remain unchanged.

Several commenters suggested that the FAA expand the provisions of § 91.30(d) to include turbine-powered airplanes.

The FAA decided not to include the turbine-powered airplanes because operators of some of these aircraft may already use an MEL. This relief was granted to operators of multiengine turbine-powered airplanes when the FAA reinstated § 91.30 on December 13, 1985 (Amdt. No. 91-192; 50 FR 51188). In addition, the FAA decided to hold operators of these airplanes to a higher standard of safety, since these airplanes are more complex, are frequently involved in transporting a larger number of passengers, and operate more often in complex, high density airspace. Therefore, the rules as proposed in Notice No. 81-14A remain unchanged.

Several commenters suggested that the FAA expand the provisions of § 91.30 to include aircraft that are operated under Part 135. Currently, the FAA is working on a separate MEL rulemaking project to address aircraft operating under Part 135. Therefore, the rules as proposed in Notice No. 81-14A remain unchanged.

One commenter suggested that gliders be included in § 91.30(d). The FAA's intent in proposing the rules contained in Notice No. 81-14A was to provide a realistic approach to the inoperative instruments and equipment issue in response to the concerns of the general aviation community. Therefore, the FAA has clarified § 91.30(d) to specifically identify gliders and higher-than-air aircraft as falling within the applicability of this rule.

Several commenters objected to the placarding requirements of §§ 43.11(b), 91.30(d)(3), and 91.165(d). The placarding requirement is a very simple procedure that will require a pilot or mechanic to place a placard on the inoperative instrument or cockpit control of an item of equipment marking it "Inoperative." This procedure can be as simple as writing the word "Inoperative" on a piece of masking tape or piece of paper and attaching it to the instrument or cockpit control. The purpose of the placarding requirement is to provide an additional safeguard for future users and maintenance personnel for ensuring they are aware of a discrepancy. Therefore, the rules as proposed in Notice No. 81-14A remain unchanged.

A few commenters requested clarification on who could placard

inoperative instruments or cockpit controls of inoperative equipment. Placards required by § 91.30 are operational in nature, and may be installed by certificated and appropriately rated pilots, or by persons certificated and appropriately rated to perform maintenance on the aircraft. At the first and each succeeding required inspection, placards required by § 91.165 may be installed only by the following certificated and rated persons: (1) The holder of a mechanic certificate; (2) The holder of a repairman certificate when performing those maintenance services for a certificated repair station; (3) Persons working under the supervision of a holder of a mechanic or repairman certificate; (4) The holder of a repair station certificate; (5) The manufacturer of the aircraft who holds a manufacturer's maintenance facility certificate. After further review of these comments, the FAA has revised and rewritten § 91.30(d)(3). The phrase "by a person authorized in § 43.3 of this chapter" has been deleted. The purpose of this change is to alleviate the confusion of who can placard inoperative instruments and cockpit controls.

One commenter questioned whether the kinds of aircraft provided for in these new rules would also be covered if the aircraft were operated in accordance with Parts 133, 137, or 141. Aircraft operated under these parts must comply with the operational and maintenance rules of Part 91, in addition to the rules of Parts 133, 137, or 141. Therefore, these aircraft are also covered by the provisions of these new rules.

One commenter questioned whether an individual who has an approved MEL could alternate between complying with the MEL or the provisions of § 91.30(d). The FAA intended § 91.30(d) to require any person having an approved MEL to use that MEL. If a person has an approved MEL and elects to operate under the provisions of § 91.30(d), then that person will be required to surrender the MEL and Letter of Authorization to the Flight Standards District Office having jurisdiction. Therefore, § 91.30 (c) and (d) have been rewritten to clarify this matter. One commenter pointed out an incorrect reference in the text of § 43.11(b). The commenter's question regarded a reference to "§ 135.41(a)(1)." This was a typographical error, and the reference should have been "§ 135.411(a)(1)." Therefore, § 43.11(b) has been revised to reflect this change.

A few commenters requested clarification of the term "deactivated" in § 91.30(d)(3)(ii). Depending on the specific instrument or item of

equipment, the term "deactivated" may mean a process as simple as the pilot pulling a circuit breaker to the "open" or "off" position, or as complex as rendering instruments or equipment totally inoperable by complex maintenance tasks requiring a certificated and appropriately rated maintenance person to perform the deactivation. For example, the procedures for "deactivating" certain models of gasoline cabin heaters are to disconnect and cap off fuel supply lines at their sources, disconnect all electrical lines at their sources, and disconnect the electrical ignition. In other instances, deactivation may be accomplished by a certificated and appropriately rated pilot, provided the maintenance tasks required to "deactivate" an instrument or item of equipment are preventive maintenance as prescribed in paragraph (c) of Appendix A, Part 43. When these tasks are not preventive maintenance, "deactivation" must be accomplished by a certificated and appropriately rated maintenance person. After further review of these comments, the FAA has revised and rewritten § 91.30(d)(3). The phrase "by a person authorized in § 43.3 of this chapter" has been deleted. The purpose of this change is to alleviate the confusion of who can deactivate inoperative instruments and equipment.

One commenter requested clarification concerning the length of time an inoperative instrument or item of equipment could remain inoperative after deactivation or removal. Sections 91.29 (b) and 91.30(d)(4) require a person to determine whether an aircraft with inoperative instruments and equipment is in condition for safe operation. In addition, § 91.165(c) requires at every required inspection thereafter, the owner/operator of the aircraft to have any inoperative instrument and equipment reevaluated to ensure the discrepancy will not affect the operation of any other installed instrument or equipment. Therefore, the FAA believes compliance with §§ 91.29(b), 91.30(d)(4), and 91.165(c) will provide adequate safeguards without having to impose time limits on the repair or replacement of inoperative instruments and equipment.

Several commenters requested clarification of the phrase "next required inspection" contained in § 91.165(c). The phrase "next required inspections", as contained in § 91.165(c), are those inspections required to be conducted by:

- (1) Section 91.169(a)(1), (b), or (d);
- (2) An inspection program selected under the provisions of § 91.169 (e) and (f);

- (3) Section 135.411(a)(1); or

(4) Inspections and maintenance programs selected under the provisions of Part 125. A few commenters requested advice on whether it would be better for them to operate under an MEL or the provisions of § 91.30(d). An MEL provides a precise list of instruments, equipment, and both operational and maintenance procedures that permit an aircraft to be operated with inoperative instruments and equipment. Under the MEL concept, those instruments and equipment not covered in the approved MEL would be required to be operative at all times regardless of the operation being conducted. The new § 91.30(d) requires only those instruments and equipment listed in § 91.30(d)(2) to be operative. Those instruments and equipment not listed in § 91.30(d)(2) would be permitted to be inoperative.

However, in comparing the two methods, certain instruments and equipment permitted to be inoperative by an MEL would not be permitted to be inoperative by § 91.30(d)(2). As an example, the master MEL for the Cessna 310, 320, 335, and 340 airplanes allow for the fuel quantity indicators of these airplanes to be inoperative. If these same airplanes were operating in accordance with § 91.30(d), these indicators will be required to be operative. However, the master MEL for these airplanes require that specific operational and maintenance procedures be developed to provide an equivalent level of safety.

The FAA believes that individuals must evaluate their own circumstances and situations and make their own decisions. Persons who lease their aircraft to multiple users may want strict, well defined procedures for renters to follow and may elect to obtain an approved MEL. Whereas, a person who is the only user of an aircraft may find the process of obtaining an approved MEL to be burdensome and unnecessary, and may elect to operate under § 91.30(d). Each person electing to obtain an MEL and a Letter of Authorization for an aircraft must ensure that others using that aircraft know the MEL discrepancy and logging procedures.

The term "multiengine" referenced in the proposed § 91.30(d)(1) has been deleted from the final rule, because the FAA is developing master MEL's for single engine aircraft. This deletion allows operators of single engine aircraft to use the MEL concept if desired. Therefore, § 91.30(d)(1)(i) and (ii) have been revised to reflect this change.

One commenter suggested that the removal of certain kinds of avionics

equipment be added to the list of items classified as preventive maintenance in Part 43. The FAA recognizes that in some instances this may be appropriate. However, the FAA has determined there is not sufficient data on which to base a decision that any and all such removals can be safely classified as preventive maintenance. Therefore, the rules as proposed in Notice No. 81-14A remain unchanged.

One commenter questioned the use of upper case letters for the phrase "Type Certificate Data" contained in text of § 91.30(d)(2)(i). The commenter stated that the use of upper case letters is misleading and would imply there is a document by that name. Subsequently, the FAA has determined that type certificate data information is not readily available to pilots, and the airworthiness certification regulations already cover this information. Therefore, the phrase, "Type Certificate Data" has been deleted, and § 91.30(d)(2)(i) has been revised to reflect this change.

Two commenters point out that some aircraft manufacturers have not made "aircraft equipment lists" or "kinds of operation equipment lists" available to aircraft owners. The commenters recommend the phrase "if available" be added to § 91.30(d)(2)(ii). The commenters did not provide any specific examples to support their claim, and the FAA is not aware of any aircraft not having an Aircraft Equipment List, a Kinds of Operation Equipment List, or some other acceptable equipment list. The rules (i.e., §§ 23.1583(h), 25.1583(e), 25.1525, 27.29, 27.1525, 27.1583(e), 29.29, 29.1525, and 29.1583(e)) contained in the aircraft certification regulations require an aircraft manufacturer to make information available on the kinds of operation in which an aircraft may or may not be used. Any installed equipment that affects any operating limitation must be listed and identified as to the operational function. Therefore, the rules as proposed in Notice No. 81-14A remain unchanged.

Fairchild Industries proposed an alternative to these new rules. Fairchild Industries petitioned the FAA to amend §§ 91.30 and 135.179 to require the FAA and aircraft manufacturers to establish a list of required instruments and equipment to be included in each airplane and rotorcraft flight manual. This list would be used by a pilot to determine what instruments and equipment are required to begin and/or continue a flight. The FAA has determined this petition has merit and will give it further consideration. However, since the petition is outside

the scope of Notice Nos. 81-14 and 81-14A, the rules as proposed in Notice No. 81-14A remain unchanged.

Several commenters incorrectly believed that proposed § 91.30(d) would require an aircraft's instruments and equipment to be operative at all times. Operators complying with § 91.30(d) may operate aircraft with certain instruments and equipment inoperative. Persons who elect to operate their aircraft in accordance with § 91.30(d) will not have to go through the process of developing an MEL and getting it approved. The FAA sent a copy of Notice No. 81-14A and a letter explaining these new rules to every commenter who had this misunderstanding of § 91.30(d).

#### Regulatory Evaluation

##### *Regulatory Evaluation Summary*

The FAA conducted a regulatory evaluation of this final rule, which is included in the regulatory docket. The FAA determined that this final rule is consistent with the objective of Executive Order 12291 as part of the President's regulatory reform program to reduce regulatory burdens on the public.

##### *Benefits*

Implementing these rules enhances the flexibility of a regulatory requirement necessary for safety, provides greater operational flexibility to general aviation operators, and reduces the administrative workload for the FAA.

These amendments provide relief to Part 91 operators of rotorcraft and nonturbine-powered airplanes (not being utilized in an air carrier operation) from current rules that absolutely prohibit operation of these aircraft with inoperative instruments or items of equipment. These aircraft will be permitted to operate with inoperative instruments and equipment that are not needed for a particular type of operation (e.g., night lighting equipment would not be required to be operable during day VFR operations) pursuant to § 91.30.

These revisions to §§ 91.30, 91.165, and 43.11 provide cost savings to Part 91 operators by reducing aircraft downtime and eliminating the cost to repair the inoperative instrument or item of equipment not needed for a particular type of operation.

##### *Costs*

Part 91 operators of rotorcraft, gliders, nonturbine-powered airplanes, and lighter-than-air aircraft who use § 91.30 to operate with inoperative instruments or items of equipment, will incur negligible costs as a result of the

placarding requirements. These additional costs result from having a person, who is returning an aircraft to service after completion of a required inspection, determine that the inoperative instrument or equipment does not affect the intended function of any operable instrument or equipment or the airworthiness of the aircraft, and then placard the inoperative instrument and/or cockpit control of an item of equipment. Placarding an inoperative instrument or item of equipment may be as simple as writing the word "Inoperative" on piece of masking tape and placing the tape on the instrument or cockpit control. Therefore, these revised rules impose only negligible costs, satisfy the airworthiness requirements of the maintenance rules, increase operational flexibility, and reduce costs by allowing an aircraft to be operated with certain inoperative instruments and equipment.

This rule imposes no new requirements on Part 91 operators of aircraft for which master MEL's have been developed. Finally, this rule imposes no new requirements on the Federal Government (FAA). Based on the aforementioned discussion of the benefit and cost aspects of the proposed rule, the FAA finds these revised rules to be cost effective.

##### *International Trade Impact Statement*

This rule will not influence or affect international trade involving aviation products or services. Furthermore, no comments on Notice Nos. 81-14 and 81-14A concerning international trade were received. Therefore, the FAA certifies that this rule will not eliminate existing or create additional barriers to the sale of foreign aviation products or services in the United States and will not eliminate existing or create additional barriers to the sale of U.S. aviation products and services in foreign countries.

##### *Regulatory Flexibility Determination*

The Regulatory Flexibility Act (RFA) of 1980 was enacted by Congress to ensure that small entities are not disproportionately affected by Government regulations. The RFA requires agencies to review rules which may have a "significant economic impact on a substantial number of small entities."

These revised rules will impose negligible costs, as a result of the new requirement to placard inoperative instruments and equipment, on some operators of general aviation rotorcraft, gliders, non-turbine powered airplanes, and lighter-than-air aircraft.

Therefore, the FAA certifies that these revised rules will not have a significant economic impact on a substantial number of small entities.

#### Comments Received on NPRM

Twenty-eight comments concerning the regulatory evaluation were received in response to Notice Nos. 81-14 and 81-14A. These comments do not affect the regulatory evaluation of this final rule and are discussed above in the section titled "Discussion of Comments to Notice No. 81-14" and "Discussion of Comments to SNPRM No. 81-14A" of this document.

#### Paperwork Reduction Act

Information collection requirements contained in §§ 43.11 and 91.30 have been approved by the Office of Management and Budget under the provisions of the Paperwork Reduction Act of 1980 (Pub. L. 96-511) and have been assigned OMB Control Nos. 2121-0020 and 2120-0522, respectively.

#### Federalism Implications

These revised rules will be enacted under the authority of the Federal Aviation Act of 1958, as amended (49 U.S.C. 1301, et seq.). This statute preempts State law regulating aviation safety. Therefore, in accordance with Executive Order No. 12612, these revised rules do not have federalism implication warranting the preparation of a federalism assessment.

#### Conclusion

Amendment Nos. 43-30 and 91-206 permit rotorcraft, gliders, nonturbine/powered airplanes, and lighter-than-air aircraft, to be operated with certain instruments and equipment inoperative that are not essential for the safe operation of the aircraft. As was previously stated in the Regulatory Evaluation section of this document, unnecessary maintenance and operational costs may be required by the current rules in Part 91. Operators of these types of aircraft will benefit from the relief permitted by Amendment Nos. 43-30 and 91-206, and the additional costs are minimal. Accordingly, the FAA has determined that these amendments do not involve a rule change that is major under Executive Order 12291 or significant under Department of Transportation Policies and Procedures (44 FR 11034; February 26, 1979). Although numerous small operators may be impacted by these amendments, the impact will be minimal since the costs of operating pursuant to § 91.30 do not exceed the FAA's criteria for "significant economic impact." For the reasons stated above, and in accordance

with the Regulatory Flexibility Act, I certify that these amendments will not have a significant economic impact on a substantial number of small entities.

#### List of Subjects

##### 14 CFR Part 43

Air carriers, Air transportation, Aircraft, Aviation safety, Safety, Maintenance, Preventive maintenance.

##### 14 CFR Part 91

Aviation safety, Safety, Aircraft, Pilots, Airworthiness directives, Flight rules general, Visual flight rule, Instrument flight rules.

#### Adoption of the Amendment

Accordingly, Parts 43 and 91 of the Federal Aviation Regulations (14 CFR Parts 43 and 91) are amended as follows:

#### PART 43—MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING, AND ALTERATION

1. The authority citation for Part 43 continues to read as follows:

Authority: 49 U.S.C. 1354, 1421 through 1430; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

2. By amending § 43.11 by revising the title and paragraph (b) to read as follows:

**§ 43.11 Content, form, and disposition of records for inspections conducted under Parts 91 and 125 and §§ 135.411(a)(1) and 135.419 of this chapter.**

(b) *Listing of discrepancies and placards.* If the person performing any inspection required by Part 91 or 125 or § 135.411(a)(1) of this chapter finds that the aircraft is unairworthy or does not meet the applicable type certificate data, airworthiness directives, or other approved data upon which its airworthiness depends, that persons must give the owner or lessee a signed and dated list of those discrepancies. For those items permitted to be inoperative under § 91.30(d)(2), that person shall place a placard, that meets the aircraft's airworthiness certification regulations, on each inoperative instrument and the cockpit control of each item of inoperative equipment, marking it "Inoperative," and shall add the items to the signed and dated list of discrepancies given to the owner or lessee.

#### PART 91—GENERAL OPERATING AND FLIGHT RULES

3. The authority citation for Part 91 continues to read as follows:

Authority: 49 U.S.C. 1301(7), 1303, 1344, 1348, 1352 through 1355, 1401, 1421 through 1431, 1471, 1472, 1502, 1510, 1522, and 2121 through 2125; Articles 12, 29, 31, and 32(a) of the Convention on International Civil Aviation (61 Stat 1180); 42 U.S.C. 4321 et seq.; E.O. 11514; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

4. By amending § 91.30 by revising the title, the introductory text of paragraph (a), and paragraph (c); by redesignating paragraph (d) as (e); and by adding a new paragraph (d) to read as follows:

#### § 91.30 Inoperative instruments and equipment.

(a) Except as provided in paragraphs (d) of this section, no person may takeoff an aircraft with inoperative instruments or equipment installed unless the following conditions are met:

(c) A person authorized to use an approved Minimum Equipment List issued for a specific aircraft under Part 121, 125, or 135 of this chapter shall use that Minimum Equipment List in connection with operations conducted with that aircraft under this part without additional approval requirements.

(d) Except for operations conducted in accordance with paragraphs (a) or (c) of this section, a person may takeoff an aircraft in operations conducted under this part with inoperative instruments and equipment without an approved Minimum Equipment List provided—

(1) The flight operation is conducted in a—

(i) Rotorcraft, nonturbine-powered airplane, glider, or lighter-than-air aircraft for which a Master Minimum Equipment List has not been developed; or

(ii) Small rotorcraft, nonturbine-powered small airplane, glider, or lighter-than-air aircraft for which a Master Minimum Equipment List has been developed; and

(2) The inoperative instruments and equipment are not—

(i) Part of the VFR-day type certification instruments and equipment prescribed in the applicable airworthiness regulations under which the aircraft was type certificated;

(ii) Indicated as required on the aircraft's equipment list, or on the Kinds of Operations Equipment List for the kind of flight operation being conducted;

(iii) Required by § 91.33 or any other rule of this part for the specific kind of flight operation being conducted; or

(iv) Required to be operational by an airworthiness directive; and

(3) The inoperative instruments and equipment are—

(i) Removed from the aircraft, the cockpit control placarded, and the maintenance recorded in accordance with § 43.9 of this chapter; or

(ii) Deactivated and placarded "Inoperative." If deactivation of the inoperative instrument or equipment involves maintenance, it must be accomplished and recorded in accordance with Part 43 of this chapter; and

(4) A determination is made by a pilot, who is certificated and appropriately rated under Part 61, or by a person, who is certificated and appropriately rated to perform maintenance on the aircraft, that the inoperative instrument or equipment does not constitute a hazard to the aircraft.

An aircraft with inoperative instruments or equipment as provided in paragraph (d) of this section is considered to be in a properly altered condition acceptable to the Administrator.

5. By revising § 91.165 to read as follows:

**§ 91.165 Maintenance required.**

Each owner or operator of an aircraft—

(a) Shall have that aircraft inspected as prescribed in Subpart C of this part and shall between required inspections, except as provided in paragraph (c) of this section, have discrepancies repaired as prescribed in Part 43 of this chapter;

(b) Shall ensure that maintenance personnel make appropriate entries in

the aircraft maintenance records indicating the aircraft has been approved for return to service;

(c) Shall have any inoperative instrument or item of equipment, permitted to be inoperative by § 91.30(d)(2) of this part, repaired, replaced, removed, or inspected at the next required inspection; and

(d) When listed discrepancies include inoperative instruments or equipment, shall ensure that a placard has been installed as required by § 43.11 of this chapter.

Issued in Washington, DC, on December 8, 1988.

T. Allan McArtor,  
Administrator.

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