

Supporting Statement For
Paperwork Reduction Act Submission
For
**2120-AH88, Revisions to Cockpit Voice Recorder and Digital Flight Data Recorder
Regulations**

1. Explain the circumstances that make the collection of information necessary. Identify any legal and administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

This final rule is in response to recommendations from the National Transportation Safety Board (the Board). These recommendations require upgrades to the cockpit voice recorder (CVR) and digital flight data recorder (DFDR) systems installed on certain aircraft. These upgrades include:

- Increased DFDR data recording rates for certain parameters.
- DFDRs that record for 25 hours.
- CVRs that record for two hours.
- Separate containers for CVR and DFDR.
- Improved CVR and DFDR reliability.
- Recording datalink messages.
- Installation of an independent back-up power supply for CVRs.

This information collection activity directly supports the Department of Transportation's strategic goal on safety.

The purpose of Title 49 U.S.C. Subtitle VII – Aviation Programs is to encourage and foster the development of civil aeronautics, and to promote safety in air commerce.

Section 49 U.S.C. 40113(a) empowers the Secretary of Transportation (or the Administrator of the Federal Aviation Administration) to issue such regulations as he/she shall deem necessary to carry out the provisions of the Act.

Section 49 U.S.C. 44701 empowers the Secretary of Transportation (or the Administrator of the Federal Aviation Administration) to prescribe reasonable rules and regulations, or minimum standards necessary for safety in air commerce.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for new collection, indicate the actual use the agency has made of the information received from the current collection.

The data collected in a CVR and DFDR is used by the Board for accident and incident investigation. When an accident occurs, the Board is able to retrieve 25 hours of flight data from the DFDR and 2 hours of voice data from the CVR. The upgrades to these units would improve the quality and reliability of that data.

- 3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, and or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.**

Electronic sensors (for data) and microphones (for voice/sound) are located throughout the aircraft that are connected to the DFDR and the CVR. These units record the data and voice information in a crash protected digital memory module (black box). The sensors monitor certain parameters such as pressure altitude, lateral acceleration, and hydraulic pressure systems at precise time intervals and with specified accuracy. This information is transferred to a DFDR system that maintains the most recent 25 hours of information at all times. For voice/sound monitoring, the CVR system is designed to pick up audio signals from the microphones and headphones at each flight crewmember's position and from a cockpit area microphone. The FAA is in compliance with the Government Paperwork Elimination Act (GPEA).

- 4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.**

Some flight data information is collected and used for maintenance purposes for other systems. However this information is not recorded in crash protected digital memory module. Also, not all mandatory information is recorded via these other methods.

- 5. If the collection of information impacts small businesses or other small entities (Item 5 of OMB 83-I), describe any methods used to minimize burden.**

This final rule could have a significant economic impact on small businesses or other small entities. By proposing a four-year compliance schedule, the FAA has minimized the burden on all businesses and other entities.

- 6. Describe the consequences of federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.**

If the collection is not accomplished, when an accident occurs, the information needed to conduct a successful investigation will not be available. If the collection is done less frequently, it becomes difficult to ascertain the aircraft and crew performance up to and at the time of the accident.

- 7. Explain any special circumstances that would cause the collection to be conducted in a manner inconsistent with the guidelines in Title 5 CFR 1320.5(d) (2)(i)-(viii).**

There are no special circumstances; this information collection is consistent with the guidelines in Title 5 CFR 1320.5(d)(2)(i)-(viii).

8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agencies notice, required by 5 CFR 1320.8(d) soliciting comments on the information collection prior to submission to OMB Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.

The notice of proposed rulemaking was published in the Federal Register on February 28, 2005, vol. 70, no. 38, pages 9751-9775. No comments were received.

9. Explain any decision to provide any payment or gift to respondents.

We do not provide any payments or gifts.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

No information requiring confidentiality is collected.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

There are no sensitive questions in this collection of information.

12. Provide estimates of the hour burden of the collection of information.

This information is collected electronically without input from the human operator. DFDR data is recorded for 25 hours of aircraft operation and CVR data is collected for 2 hours of aircraft operation. There is no way to determine an hourly burden associated with collection of this information. Old information is overwritten on a continuous basis. A 1-hour burden is submitted only to allow entry in the OMB database.

13. Provide an estimate of the total annual cost burden to respondents or record-keepers resulting from the collection of information.

The following table includes data provided in the Final Regulatory Evaluation that accompanies this final rule.

ANNUAL COSTS FOR CVR AND FDR SYSTEMS
(In Millions 2007 \$, Discounted to 2007)
(Numbers in Parentheses Represent Cost Savings)

| Source of Cost | Undiscounted Annual Costs | Present Value of Annual Costs (7 %) | Present Value of Annual Costs (3 %) |
|---|---------------------------|-------------------------------------|-------------------------------------|
| COST SAVINGS | | | |
| Maintenance Cost Savings from Replacing Magnetic Tape Voice Recorders | (\$ 8.8) | (\$5.9) | (\$7.5) |
| Reduced Fuel Burn from Replacing Magnetic Tape Voice Recorders | (\$ 4.5) | (\$ 3.1) | (\$3.7) |
| TOTAL SAVINGS | (13.3) | (\$9.0) | (\$11.2) |
| COST INCREASES | | | |
| Increased Fuel Burn from Weight of RIPS | \$ 6.8 | \$ 3.8 | \$5.1 |
| Annual RIPS Inspections | \$ 6.6 | \$ 3.6 | \$4.8 |
| RIPS Replacement | \$ 6.6 | \$ 3.8 | \$5.3 |
| RIPS Inventory | <\$ 1.0 | <\$ 1.0 | <\$ 1.0 |
| Change in Airplane Bus Powering the CVR System | \$ 0.000 | \$ 0.000 | \$ 0.000 |
| No Single Flight Crew Member Action Disable Both CVR and FDR Systems | \$ 0.000 | \$ 0.000 | \$ 0.000 |
| Inspection of Data-link Communications Recording Capability | \$11.4 | \$6.5 | \$8.9 |
| Replacement of Data-link Recording Capability | \$ 0.000 | \$ 0.000 | \$ 0.000 |
| Maintenance of Revised CVR and FDR System Wiring | \$ 0.000 | \$ 0.000 | \$ 0.000 |
| Maintenance of FDR System with Higher Sampling Rates | \$ 0.000 | \$ 0.000 | \$ 0.000 |
| TOTAL COST INCREASES | \$ 31.4 | \$ 17.7 | \$24.1 |
| TOTAL NET COSTS | \$ 18.1 | \$ 8.7 | \$13.1 |

Annual Paperwork Costs are \$1.8 million.

All the above costs apply to newly manufactured aircraft.

This final rule requires retrofit of a 2-hour CVR into all existing aircraft that currently require a CVR. The table above shows that replacement of an existing magnetic tape

CVR with a 2-hour CVR would have an annual cost savings of approximately \$26 million dollars. Replacement of a 30-minute solid state CVR with a 2-hour solid state CVR would not realize these savings.

The requirement for collecting datalink messages on existing aircraft would only be incurred if and when data link recording capabilities are installed on those aircraft.

14. Provide estimates of annual cost to the Federal Government and to the respondents.

Data collection cost required by this final rule is a normal cost for the NTSB in pursuit of its statutory mission. Thus, no added costs were estimated for this particular element of the final rulemaking.

15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB Form 83-I.

This is a new collection. There are no changes.

16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

There will be no publication of this information other than that obtained from the DFDR and CVR by the NTSB during the investigation of an accident.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

No such approval is sought.

18. Explain each exception to the certification statement identified in Item 19, "Certification for Paperwork Reduction Act Submissions," of OMB 83-I.

No exceptions to Item 19.