(d) With the manual drive lockout cover removed from the CDU, install a ¼-inch extension tool and dial-type torque wrench into the drive pad.

Note: You will need a 24-inch extension to provide adequate clearance for the torque wrench.

(e) Apply 90 pound-inches of torque to the system.

(1) The electro-mechanical brake system is working correctly if the torque is reached before you turn the wrench 450 degrees (1¼ turns).

(2) If the flexshaft turns more than 450 degrees before you reach the specified torque, you must replace the long flexshaft between the CDU and the upper angle gearbox.

(3) If you do not get 90 pound-inches of torque, you must replace the electro-mechanical brake.

(f) Release the torque by turning the wrench in the opposite direction until you read zero pound-inches.

(1) If the wrench does not return to within 30 degrees of initial starting point, you must replace the long flexshaft between the CDU and upper angle gearbox.

(3) Fully retract the thrust reverser.

C. Do a check of the torque of the CDU cone brake:

(1) Pull up on the manual release handle to unlock the electro-mechanical brake.

(2) Pull the manual brake release lever on the CDU to release the cone brake.

Note: This will release the pre-load tension that may occur during a stow cycle.

(3) Return the manual brake release lever to the locked position to engage the cone brake.

(4) Remove the two bolts that hold the lockout plate to the CDU and remove the lockout plate.

(5) Install a ¼-inch drive and a dial type torque wrench into the CDU drive pad.

CAUTION: DO NOT USE MORE THAN 100 POUND-INCHES OF TORQUE WHEN YOU DO THIS CHECK. EXCESSIVE TORQUE WILL DAMAGE THE CDU.

(6) Turn the torque wrench to try to manually extend the translating cowl until you get at lease 15-pound inches.

Note: The cone brake prevents movement in the extend direction only. If you try to measure the holding torque in the retract direction, you will get a false reading.

(a) If the torque is less than 15-pound-inches, you must replace the CDU.

D. Return the airplane to its usual condition:

(1) Re-install the lockout plate.

(2) Fully retract the thrust reverser (unless already accomplished).

(3) Pull down on the manual release handle on the electro-mechanical brake until the handle fully engages the retaining clip (unless already accomplished).

Note: This will lock the electro-mechanical brake.

(4) Close the fan cowl panels.

Issued in Renton, Washington, on December 21, 1999.

D.L. Riggin,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 99–33568 Filed 12–27–99; 8:45 am]

BILLING CODE 4910–13–U

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 99–NM–66–AD]

RIN 2120–AA64

Airworthiness Directives; Boeing Model 747–400 Series Airplanes Equipped With Pratt & Whitney PW4000 Series Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes the adoption of a new airworthiness directive (AD) that is applicable to certain Boeing Model 747–400 series airplanes. This proposal would require installation of a modification of the thrust reverser control and indication system and wiring on each engine; and repetitive functional tests of that installation to detect discrepancies, and repair, if necessary. This proposal is prompted by the results of a safety review, which revealed that in-flight deployment of a thrust reverser could result in a significant reduction in airplane controllability. The actions specified by the proposed AD are intended to ensure the integrity of the fail-safe features of the thrust reverser system by preventing possible failure modes, which could result in inadvertent deployment of a thrust reverser during flight, and consequent reduced controllability of the airplane.

DATES: Comments must be received by February 11, 2000.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM–114, Attention: Rules Docket No. 99–NM–66–AD, 1601 Lind Avenue, SW., Renton, Washington 98055–4056. Comments may be inspected at this location between 9:00 a.m. and 3:00 p.m., Monday through Friday, except Federal holidays.

The service information referenced in the proposed rule may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124–2207. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington.

FOR FURTHER INFORMATION CONTACT: Dorr Anderson, Aerospace Engineer, Propulsion Branch, ANM–140S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055–4056; telephone (425) 227–2684; fax (425) 227–1181.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: ''Comments to Docket Number 99–NM–66–AD.'' The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Transport Airplane Directorate, ANM–114, Attention: Rules Docket No. 99–NM–66–AD, 1601 Lind Avenue, SW., Renton, Washington 98055–4056.

Discussion

On May 26, 1991, a Boeing Model 767–300ER series airplane was involved in an accident as a result of an uncommanded in-flight deployment of a thrust reverser. Following that accident, a study was conducted to evaluate the potential effects of an uncommanded thrust reverser deployment throughout the flight regime of the Boeing Model

747 series airplane. The study included a re-evaluation of the thrust reverser control system fault analysis and airplane controllability. The results of the evaluation indicated that, in the event of thrust reverser deployment during high-speed climb using high engine power, these airplanes also could experience control problems. This condition, if not corrected, could result in possible failure modes in the thrust reverser control system, inadvertent deployment of a thrust reverser during flight, and consequent reduced controllability of the airplane.

The FAA has prioritized the issuance of AD's for corrective actions for the thrust reverser system on Boeing airplane models following the 1991 accident. Based on service experience, analyses, and flight simulator studies, it was determined that an in-flight deployment of a thrust reverser has more effect on controllability of twin-engine airplane models than of Model 747 series airplanes, which have four engines. For this reason, the highest priority was given to rulemaking that required corrective actions for the twin-engine airplane models. AD's correcting the same type of unsafe condition addressed by this AD have been previously issued for specific airplanes within the Boeing Model 737, 757 and 767 series.

Service experience has shown that in-flight thrust reverser deployments have occurred on Model 747 airplanes during certain flight conditions with no significant airplane controllability problems being reported. However, the manufacturer has been unable to establish that acceptable airplane controllability would be achieved following these deployments throughout the operating envelope of the airplane. Additionally, safety analyses performed by the manufacturer and reviewed by the FAA, has been unable to establish that the risks for uncommanded thrust reverser deployment during critical flight conditions is acceptably low.

Other Relevant Rulemaking

This proposed AD is related to AD 94–15–05, amendment 39–8976 (59 FR 37655, July 25, 1994), which is applicable to all Boeing Model 747–400 series airplanes, and requires various inspections and tests of the thrust reverser control and indication system, and correction of any discrepancy found. Accomplishment of the actions proposed in this AD would terminate certain inspections and tests required by AD 94–15–05.

Explanation of Relevant Service Information

The FAA has reviewed and approved the following Boeing Service Bulletins:

- 747–78–2155, Revision 2, dated November 5, 1998, which describes procedures for installation of an additional locking system on the thrust reversers;
- 747–45–2016, Revision 1, dated May 2, 1996, which describes procedures for modifications to the central maintenance computer system hardware and software;
- 747–31–2245, dated June 27, 1996, which describes procedures for modifications of the integrated display system software; and
- 747–78–2154, Revision 3, dated December 11, 1997, which describes procedures for the installation of provisional wiring for an additional thrust reverser locking device. This service bulletin references the Boeing Standard Wiring Practices Manual, which describes wire installation and separation procedures.

Accomplishment of Boeing Service Bulletin 747–78–2155, Revision 2, requires prior or concurrent accomplishment of Boeing Service Bulletins 747–45–2016, Revision 1, 747–31–2245; and 747–78–2154, Revision 3. Accomplishment of these actions would eliminate the need for certain repetitive inspections and tests.

The modification procedures described by Boeing Service Bulletins 747–78–2154 and 747–78–2155 were previously validated by the manufacturer, and the necessary changes have been incorporated into the latest revisions of the service bulletins. The FAA has determined that the procedures specified in Boeing Service Bulletins 747–78–2154, Revision 3, and 747–78–2155, Revision 2, as well as the other service bulletins referenced in this proposed AD, have been effectively validated and therefore proposes that this modification be required. Several airplanes have been successfully modified in accordance with the service bulletins, and this past experience should minimize the likelihood for subsequent service bulletin revisions, requests for alternative methods of compliance, and superseding AD's.

Explanation of Requirements of Proposed Rule

Since an unsafe condition has been identified that is likely to exist or develop on other products of this same type design, this proposed AD would require installation of a modification of the thrust reverser control and indication system and wiring on each engine; and repetitive functional tests of that installation to detect discrepancies, and repair, if necessary. The actions would be required to be accomplished in accordance with the service bulletins described previously, except as discussed below.

Repetitive functional tests to detect discrepancies of the actuation system lock on each thrust reverser would be required to be accomplished in accordance with the procedure included in Appendix 1 of this AD. Correction of any discrepancy detected would be required to be accomplished in accordance with the procedures described in the Boeing 747 Airplane Maintenance Manual.

Differences Between Service Bulletin and This Proposed AD

Operators should note that, although Boeing Service Bulletin 747–78–2155, Revision 2, does not recommend a specific compliance time for accomplishment of the actuation system lock installation, the FAA has determined that an unspecified compliance time would not address the identified unsafe condition in a timely manner. In developing an appropriate compliance time for this AD, the FAA considered not only the manufacturer's recommendation, but the degree of urgency associated with addressing the subject unsafe condition, the average utilization of the affected fleet, and the time necessary to perform the installation. In light of all of these factors, the FAA finds a 36-month compliance time for completing the required actions to be warranted, in that it represents an appropriate interval of time allowable for affected airplanes to continue to operate without compromising safety.

Operators also should note that, although the service bulletin does not specify functional testing of the actuation system lock installation following accomplishment of that installation, the FAA has determined that repetitive functional tests of the actuation system lock on each thrust reverser will support continued operational safety of thrust reversers with actuation system locks.

Cost Impact

There are approximately 177 Model 747–400 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 53 airplanes of U.S. registry would be affected by this proposed AD.

For airplanes identified in Boeing Service Bulletin 747–78–2155, Revision 2, (45 airplanes) it would take approximately 510 work hours per

airplane, to accomplish the proposed installation, at an average labor rate of $60 per work hour. Required parts would be provided by the manufacturer at no cost to the operators. Based on these figures, the cost impact of the installation proposed by this AD on U.S. operators is estimated to be $1,377,000, or $30,600 per airplane.

For all airplanes (53 airplanes) it would take approximately 2 work hours per airplane, to accomplish the proposed functional test, at an average labor rate of $60 per work hour. Based on these figures, the cost impact of the functional test proposed by this AD on U.S. operators is estimated to be $6,360, or $120 per airplane, per test cycle.

The cost impact figures discussed below refer to actions in other service bulletins for the airplanes identified in Boeing Service Bulletin 747–78–2155, Revision 2 (affects 45 U.S.-registered airplanes), that must be accomplished prior to or concurrent with the installation specified in Boeing Service Bulletin 747–78–2155, Revision 2.

It would take approximately 3 work hours per airplane to accomplish the central maintenance computer system modification, at an average labor rate of $60 per work hour. Required parts would be provided by the manufacturer at no cost to the operators. Based on these figures, the cost impact of the modification is estimated to be $8,100, or $180 per airplane.

It would take approximately 2 work hours per airplane to accomplish the changes to the integrated display system, at an average labor rate of $60 per work hour. Required parts would be provided by the manufacturer at no cost to the operators. Based on these figures, the cost impact of the modification is estimated to be $5,400, or $120 per airplane.

It would take approximately 346 work hours per airplane to accomplish wiring provisions for the thrust reverser sync locks, at an average labor rate of $60 per work hour. Required parts would be provided by the manufacturer at no cost to the operators. Based on these figures, the cost impact of the modification is estimated to be $934,200, or $20,760 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the proposed requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted.

Regulatory Impact

The regulations proposed herein would not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this proposed regulation (1) is not a ''significant regulatory action'' under Executive Order 12866; (2) is not a ''significant rule'' under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the draft regulatory evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption **ADDRESSES.**

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

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

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

Boeing: Docket 99–NM–66–AD.

Applicability: Model 747–400 series airplanes equipped with Pratt & Whitney PW4000 series engines; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent inadvertent deployment of a thrust reverser during flight and consequent reduced controllability of the airplane, accomplish the following:

Modifications

(a) For airplanes identified in Boeing Service Bulletin 747–78–2155, Revision 2, dated November 5, 1998: Accomplish the requirements of paragraphs (a)(1) and (a)(2) of this AD at the times specified in those paragraphs. Accomplishment of these actions constitutes terminating action for the inspections and tests required by paragraph (a) of AD 94–15–05, amendment 39–8976.

(1) Within 36 months after the effective date of this AD: Install an additional locking system on each engine thrust reverser in accordance with the Accomplishment Instructions of Boeing Service Bulletin 747–78–2155, Revision 2, dated November 5, 1998.

(2) Prior to or concurrent with the installation required by paragraph (a)(1) of this AD, accomplish the requirements of paragraphs (a)(2)(i), (a)(2)(ii), and (a)(2)(iii) of this AD:

(i) Modify the central maintenance computer system hardware and software in accordance with Boeing Service Bulletin 747–45–2016, Revision 1, dated May 2, 1996.

(ii) Modify the integrated display system software in accordance with Boeing Service Bulletin 747–31–2245, dated June 27, 1996.

(iii) Install the provisional wiring for the locking system on the thrust reversers in accordance with Boeing Service Bulletin 747–78–2154, Revision 3, dated December 11, 1997.

Repetitive Functional Tests

(b) Within 4,000 hours time-in-service after accomplishment of paragraph (a) of this AD, or production equivalent; or within 1,000 hours time-in-service after the effective date of this AD, whichever occurs later: Perform a functional test to detect discrepancies of the additional locking system on each engine thrust reverser, in accordance with Appendix 1 of this AD. Prior to further flight, correct any discrepancy detected and repeat the functional test of that repair, in accordance with the procedures described in the Boeing 747 Airplane Maintenance Manual. Repeat the functional test thereafter at intervals not to exceed 4,000 hours time-in-service.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permit

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Appendix 1—Thrust Reverse Sync-Lock—Adjustment/Test

1. *General.*

A. There are two sync-locks for each engine thrust reverser. The sync-lock is installed on the lower non-locking hydraulic actuator of each thrust reverser sleeve.

B. The Thrust Reverser Sync-Lock Integrity Test has two tasks:

(1) The first task does a test of the electrical circuit which controls the operation of the sync-lock on each thrust reverser sleeve.

(2) The second task does a test of the mechanical function of the sync-lock on each thrust reverser sleeve.

C. The thrust reverser sync-lock is referred to as ''the sync-lock'' in this procedure.

2. *Thrust Reverser Sync-Lock Integrity Test.*

A. Equipment—Multi-meter, Simpson 260 or equivalent—commercially available

B. Prepare to do the integrity test for the sync-locks

(1) Supply electrical power

(2) For the applicable engine, make sure these circuit breakers on the Main Power Distribution Panel P6, are closed:

6F12 ENG 1 T/R IND
6E12 ENG 2 T/R IND
6D12 ENG 3 T/R IND
6C12 ENG 4 T/R IND
6F13 ENG 1 T/R CONT
6E13 ENG 2 T/R CONT
6D13 ENG 3 T/R CONT
6C13 ENG 4 T/R CONT
6F11 ENG 1 T/R LOCK CONT
6E11 ENG 2 T/R LOCK CONT
6D11 ENG 3 T/R LOCK CONT
6C11 ENG 4 T/R LOCK CONT

(3) Open the fan cowl panels for the applicable engine.

C. Do the electrical integrity test for the sync-locks.

(1) Do these steps, for the applicable engine, to make sure there are no ''hot'' short circuits in the electrical system which can accidentally supply power to the sync-locks:

(a) Remove the electrical connector, D20194, from the sync-lock, V170, on the left sleeve of the thrust reverser.

(b) Remove the electrical connector, D20196, from the sync-lock, V171, on the right sleeve of the thrust reverser.

(c) Use a multi-meter on the plug end of the applicable electrical connector to make sure that these conditions are correct:

D20194 PIN 1 D20194 PIN 2 −3 to +1 VDC and continuity (less than 5 ohms)
D20196 PIN 1 D20196 PIN 2 −3 to +1 VDC and continuity (than 5 ohms)

(d) If you find the correct conditions, do the mechanical integrity test for the sync-locks.

(e) If you did not find these conditions to be correct, you must do these steps:

(1) Make a careful visual inspection of all the electrical wires and connectors between the sync-lock and its power circuit.

(2) Repair all the unserviceable electrical wire and connectors that you find.

(3) Use the multi-meter again to make sure there are no ''hot'' short circuits in the electrical system which can accidentally supply power to the sync-locks.

D. Do the mechanical integrity test for the sync-locks.

(1) Supply hydraulic power.

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE AREA BEHIND EACH THRUST REVERSER. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR IF THE SYNC-LOCKS DO NOT OPERATE CORRECTLY AND THE THRUST REVERSER EXTENDS.

(2) Move the applicable reverser thrust lever aft to try to extend the thrust reverser with hydraulic power.

Note: If the thrust reverser sleeves do not extend, the sync-locks are serviceable. If the thrust reverser sleeves extend, the applicable sync-lock did not operate correctly.

(3) Replace the sync-lock(s) on the thrust reverser sleeve(s) that did extend when you moved the reverse thrust levers. Repeat steps 2.D.(1) and 2.D.(2) to verify that functional sync-locks are installed.

(4) Move the applicable thrust reverser lever forward to the stow position.

(5) Install the electrical connector, D20194, on the sync-lock, V170 on the left sleeve of the thrust reverser.

(6) Install the electrical connector, D20196, on the sync-lock, V171, on the right sleeve of the thrust reverser.

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE AREA BEHIND EACH THRUST REVERSER. IF YOU DO NOT OBEY THIS INSTRUCTION, INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN THE THRUST REVERSERS ARE EXTENDED.

(7) Move the applicable thrust reverser aft to try to extend the thrust reverser with hydraulic power.

Note: If the thrust reverser sleeves extended, the sync-locks are serviceable. If the thrust reverser sleeves did not extend, the applicable sync-lock is not serviceable.

(8) Replace the sync-lock(s) on the thrust reverser sleeve that did not extend when you moved the reverse thrust levers. Repeat steps 2.D.(4) through 2.D.(7) to verify that functional sync-locks are installed.

(9) Repeat steps 2.A. through 2.D. for all other engine positions.

E. Put the airplane back to its usual condition.

(1) Move the reverse thrust levers forward to fully retract the thrust reversers on the applicable engine.

(2) Remove the hydraulic power if it is not necessary.

(3) Remove the electrical power if it is not necessary.

(4) Close the fan cowl panels.

Issued in Renton, Washington, on December 21, 1999.

D.L. Riggin,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 99–33569 Filed 12–27–99; 8:45 am]

BILLING CODE 4910–13–U

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 99–NM–206–AD]

RIN 2120–AA64

Airworthiness Directives; Boeing Model 747 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes the adoption of a new airworthiness directive (AD) that is applicable to certain Boeing Model 747 series airplanes. This proposal would require a one-time inspection to determine whether H–11 steel bolts are installed as attach and support bolts at the trailing edge flap transmissions, and replacement of any H–11 steel bolt with an Inconel bolt. This proposal is prompted by reports of fracture or cracking of H–11 steel bolts at the flap transmissions. The actions specified by the proposed AD are intended to prevent loss of a flap transmission, which could reduce lateral controllability of the airplane.

DATES: Comments must be received by February 11, 2000.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM–114, Attention: Rules Docket No. 99–NM–206–AD, 1601 Lind Avenue, SW., Renton, Washington 98055–4056. Comments may be inspected at this location between 9 a.m. and 3 p.m., Monday through Friday, except Federal holidays.

The service information referenced in the proposed rule may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124–2207. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington.

FOR FURTHER INFORMATION CONTACT: Barbara Mudrovich, Aerospace Engineer, Systems and Equipment Branch, ANM–130S, FAA, Transport