STATEMENT OF THE HONORABLE DAVID R. HINSON, FEDERAL AVIATION ADMINISTRATOR, BEFORE THE SENATE COMMITTEE ON GOVERNMENTAL AFFAIRS, SUBCOMMITTEE ON OVERSIGHT OF GOVERNMENT MANAGEMENT AND THE DISTRICT OF COLUMBIA, CONCERNING THE SAFETY OVERSIGHT OF SUSPECTED UNAPPROVED PARTS. MAY 24, 1995.

Mr. Chairman and Members of the Subcommittee:

I welcome the opportunity to appear before you today on the subject of what we refer to in the aviation industry as Suspected Unapproved Parts or SUPs. With me today are Mr. Tony Broderick, Associate Administrator for Regulation and Certification, and Mr. Bill White, Deputy Director of Flight Standards.

At the outset, let me address the bottom line for us all, and that concerns safety. Simply stated, do SUPs pose a significant safety problem for our air transportation system? No. Are they a safety concern to the FAA? Of course. Could they potentially become a safety problem if we don't continue to address their root causes? Yes, and that is exactly why we have a number of important initiatives underway to do just that, on which I will elaborate in a moment.

Let me briefly put the safety issue into better perspective, giving you some foundation for why we reach the safety conclusions that we do. Perhaps most telling is that there are literally hundreds of millions of parts on our Nation's airlines--a B-747 alone has over 6,000,000 parts--and we estimate that about 26,000,000 parts (some like fuel pumps containing many individual parts) are changed each year. Since 1989, we have received only about 1,100 reports of SUPs. FAA's investigation of those reports has led (as of mid-May) to 114 FAA enforcement actions and 69 initiatives, of which 8 were airworthiness directives. More telling, however, is that the National Transportation Safety Board, or the NTSB, which investigates airline and general aviation accidents in the U.S.,

has never found that an unapproved part has contributed to a U.S. airline accident. An FAA review of the NTSB's computerized accident data from 1983 to 1992 disclosed 11 cases where a "bogus" part was noted as a contributing factor in a general aviation accident, but on further analysis of those records we found, and the NTSB has agreed, that, in each instance, incorrect maintenance rather than a counterfeit or fraudulently documented part was the problem. We have asked the Board to correct this data to eliminate confusion.

NTSB Chairman Vogt also addressed the topic of unapproved parts in testimony before the House Committee on Appropriations, on March 16, 1993, and in record material for that hearing, indicated:

> The Safety Board has not identified the use of an unapproved part or a counterfeit (bogus) part as a cause in any air carrier accident. The Safety Board has, however, cited the use of unapproved parts as a causal factor in general aviation accidents. Typically, this involves the use of automobile parts or hardware available from a local hardware store substituted for the more expensive approved aircraft part. The cause of these accidents is attributed to improper maintenance.
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> We are aware of the Department of Transportation Inspector General's efforts to identify the manufacturers of parts that are purported to be approved, but for which no manufacturer's approval has been issued. While such parts have not been the cause of an accident, the potential safety hazard warrants concern.

Significantly, from a risk assessment perspective, the issue of bogus or unapproved parts is not included in the NTSB's Top Ten Most Wanted List, nor does it find a place on the list of important accident causal factors developed by Boeing in a comprehensive report.

Safety analyses have consistently shown that human error is associated with the vast majority of aircraft accidents. That is not to say that we should ignore this issue. Since becoming Administrator, I have reorganized the agency, created a new safety office, and set a new goal of "0" accidents, which is enabling us to be proactive, not reactive.

The Office of the Inspector General (OIG) conducted an audit of parts at 14 domestic and foreign repair stations, and reported their findings on March 7,1994. The report found that, of a total of 495 types of newly purchased parts, 43% (95% in the case of parts from distributors) had insufficient documentation and were considered by the OIG to be suspected unapproved parts. The report contained specific examples for only 64 part types. FAA then initiated an investigation of the 64 cases cited, finding, however, that there was adequate information to follow up on the OIG findings in only 51 cases. FAA's technical findings were dramatically different from the auditors' findings. Of these 51 cases of suspected unapproved parts, FAA safety inspectors found:

* 31 cases involved parts that did have sufficient documentation to trace them to an approved source.
* 11 cases involved examples of mechanics or repair stations exercising their professional prerogative, under FAA regulations, to substitute similar, equivalent parts in the course of a repair. In fact, 8 of the 11 cases involved standard parts.
* 1 case involved a mistaken assumption by the OIG that a part had been installed, when, instead, it had merely been ordered at the same time as other parts.
* 4 cases did involve suppliers to a Production Approval Holder shipping parts to customers without direct-ship authority. The parts, however, met the same safety standards as the parts they supplied to the PAH.
* 2 cases resulted from improper maintenance--using an approved part but for the wrong application.

* 1 case involved no production approval.

* 1 case involved a counterfeit part. Significantly, though, the FAA and the original manufacturer had learned of this type of counterfeit part and had previously advised the industry and the OIG about it. The repair station had been alerted to the potential problem with this type of part and should not have used it. It should be noted that the use of the part would not have produced a safety hazard, nor was any evidence found that it had been installed on a U.S.-registered aircraft.

Thus, of the 51 cases in which FAA had adequate information upon which to assess the OIG findings, only 8 cases (16%) involved problems of any nature and only 1 case (2%) was directly related to unapproved parts (that being a previously-known counterfeit parts case). Put another way, FAA verified the integrity of 98% of these parts.

I cite the preceding information only as a means of adding perspective to this issue, not to demonstrate that unapproved parts ought not be of concern to us. Clearly, they should be and they are. That's why we have a variety of initiatives underway to better address the problem. But before discussing those efforts, I would like to explain what we mean when we talk about approved or unapproved parts and describe the systems we have in place.

First, it's important to recognize the key distinction between two types of unapproved parts: counterfeit parts or parts with fraudulent documentation—often called bogus parts—that are introduced into the parts inventory by criminal acts, bypassing FAA regulatory standards; and parts that are manufactured either without FAA production authority or without proper quality assurance. Discussions of unapproved parts often merge the two types of unapproved parts, which can create confusion, since the nature of the problems and, indeed, the remedies are quite different. Criminal investigation and prosecution is the

appropriate remedy for those who make or sell counterfeit aviation parts, and we applaud the DOT IG and the Department of Justice for their efforts to seek criminal sanctions against parts counterfeiters. Our experience, however, has been that, by far, most unapproved parts cases are associated with lack of compliance with FAA production and maintenance regulations and procedures rather than counterfeit or fraudulently documented parts.

There are several means through which a part is approved to be installed on an FAA type-certificated aircraft, aircraft engine, or propeller. Although the FAA Administrator may approve other types of systems, parts are typically approved through one of 3 means: 1) a Parts Manufacturing Approval (PMA) issued by FAA under 14 CFR 21.303; 2) a Technical Standard Order (TSO) authorization issued by FAA for products such as avionics; or 3) a production approval issued in conjunction with type-certification procedures for a product.

Under FAA regulations, any replacement or modification parts that are produced for sale for installation on a type-certificated product must be produced under one of the specified means of approval, unless: 1) they are parts produced by an owner or operator for maintaining or altering that person's own product; or 2) they are standard parts (such as bolts or nuts) that conform to established industry standards or U.S. specifications. Naturally, given the complex nature of many aviation products, many manufacturers rely on components or parts manufactured by other sources, some of which may not hold an FAA production approval. In this case, the production approval holder (PAH), who uses those parts from such a supplier, must have a system of quality control in place to oversee the quality of the parts produced by that supplier.

A parts supplier to a particular PAH may use either of 2 approved means to provide replacement parts for products that are in service. The supplier may receive the PAH's approval to ship parts directly to the end user or to a parts distributor, under a method called the "direct-ship" method. In this case, the part is produced under the PAH's approved quality assurance system, and the PAH is responsible for the part's conformance to the type design and with production quality assurance standards. Under the second means, the supplier may obtain its own PMA or TSO approval from the FAA.

In order to receive a Parts Manufacturing Approval or a Technical Standard Order from the FAA, a supplier must demonstrate that a part's design complies with applicable FAA regulations and must establish an FAA-approved production quality assurance system to assure the quality of the parts produced. We have experienced a problem with some suppliers over the years in this area, with some suppliers shipping parts directly to end users without having received a PMA or TSO from the FAA. Although the parts are identical to the parts they supply to the Production Approval Holder, and thus do not represent a safety threat, they nevertheless are considered unapproved parts. As I will explain shortly, we are acting to tighten up controls over this area to bring such suppliers into conformity with our approval process.

I mentioned earlier that the use of standard parts is permitted under our regulations. All standard parts have part numbers with recognized prefixes. A parts installer may replace a standard part with another identical standard part or may substitute an equivalent standard part. Generally, standard parts are not used for critical applications on transport category aircraft for which a part's failure would have significant safety consequences. Nevertheless, to assist in guarding against standard parts that do not conform to recognized specifications, we participate in the Government/Industry Data Exchange Program, along with other government agencies and industry representatives.

Consistent with the FAA's safety regulatory structure generally, our regulations provide that maintenance personnel, owners, and operators bear responsibility for using approved or otherwise appropriate parts in their maintenance work. This includes certificated repair stations as well as airline maintenance personnel. Repair stations performing maintenance work on air carrier aircraft must also meet the requirements of their customer's FAA-approved maintenance programs.

There are a variety of sources to which maintenance personnel can refer to determine whether a replacement part is appropriate. The manufacturer of each product or appliance prepares a maintenance manual defining the appropriate maintenance and wear limits for some parts of the equipment. There is also a manufacturer's illustrated parts catalogue (IPC), which lists most parts that make up the product and uses recognized standard part numbers to identify whether a part is a standard part. If a part is not a standard part, the IPC typically lists where the part may be purchased. Information may also be available from manufacturers or type-certificate holders or in manufacturers' service bulletins and service letters. Once a part number is properly identified, the installer may use either an acceptable part from stock or order the part from an appropriate source. When a part is received, the installer verifies that it is the correct part. It is important to note that maintenance personnel are trained to spot unusual conditions of parts, and, in fact, many of the unapproved parts reported to the FAA have been detected by installers.

Thus, the FAA's basic regulatory structure for parts provides safeguards to help assure airworthiness of parts at both the manufacturing and the installation/operation phases of the parts process. Distributors, on the other hand, are not regulated by the FAA. They are neither responsible for the production of parts nor for their selection or use in maintenance activities. In fact, as intermediaries, parts brokers may not even have possession of parts. Under FAA's rules, it is the end users--repair stations and certificated

maintenance personnel--who bear responsibility for assuring the airworthiness of parts before they are installed. They may determine parts' conformity to applicable specifications and their airworthiness through documentation, through inspection and maintenance, or through a combination of both methods.

As I noted earlier, FAA's activities in this area show that most problems related to unapproved parts result from the lack of a PMA or TSO or from errors in maintenance or documentation. We have found parts in use and in inventories that suppliers have distributed directly to customers without their production under a Parts Manufacture Approval or without direct-ship authority from the Production Approval Holder. Maintenance personnel also make mistakes. They may, for example, use the incorrect data for a repair or may misread a part number and install the incorrect part which, even if an approved part, becomes an unapproved part for that repair. Since these areas constitute the vast majority of adverse findings related to unapproved parts, we have concentrated our efforts on them. When we do encounter evidence of counterfeit or fraudulently documented parts, we promptly address the safety concerns associated with those parts and refer the case to the OIG for criminal investigation, providing such technical expertise as may assist in their investigative efforts.

I would like to take a few moments now to discuss some of the steps we have taken and will be taking to address the unapproved parts issue. Many of these initiatives also respond to OIG recommendations. In the past several years, we have issued several Advisory Circulars, providing guidance to the aviation community on suspected unapproved parts. Last July, we issued 3 such circulars concerning "Supplier Surveillance Procedures," "Detecting and Reporting Suspected Unapproved Parts," and "Disposition of Unsalvageable Aircraft Parts and Materials." Last year we also issued a revision to our

old Airworthiness Approval Tag, as a first attempt at creating a combination universal parts control tag and maintenance release acceptable anywhere in the world.

We chartered a Parts Approval Action Team in September 1992, and followed that up in August 1993, with the establishment of a formalized FAA Suspected Unapproved Parts Program. Since 1989, we have had a headquarters office and an office at Dulles Airport overseeing FAA's involvement with SUPs.

We have actively involved our Aviation Rulemaking Advisory Committee, comprised of industry and public representatives, with this issue. Based on their work and recommendations, including minority opinions that resulted from these efforts, we are developing a new advisory circular on "Determining Disposition of Undocumented Parts." This will address the appropriate means of returning to service or otherwise disposing of inadequately documented parts sitting in inventories. In addition to other guidance types of material that we have issued and on which we are working, we have conducted approximately 150 public seminars on the SUPs problem, both domestically and internationally.

In a major commitment to deal with the issue of military surplus parts, we have jointly chartered an effort with the Defense Department, pursuant to which we are establishing a process for identifying dual use (military-civil) flight safety critical aircraft parts. Through that effort, FAA and DOD experts are working to define a process to ensure that critical parts lacking documentation, proper configuration, or serviceability are identified and mutilated prior to their disposal. Their value will only be as salvage, not as possible unapproved replacement parts for our commercial fleet.

With regard to parts suppliers who do not hold a PMA, we issued a Federal Register notice in March to offer strong encouragement to suppliers to seek an FAA PMA for their products. Suppliers were given until May 30, to apply for an appropriate PMA or to subject themselves to FAA penalties. Not surprisingly, we have received numerous PMA applications in response to that notice. We are also working with an industry team, chaired by the Aerospace Industries Association, to develop a comprehensive PMA data base to be available to industry.

There is also underway a significant effort concerning parts distributors and brokers. The OIG had recommended to us that we take action to directly regulate these distributors, of which there are some 2,000-5,000, depending on how you define them. We have declined to accept that recommendation, believing that the need to formally regulate distributors has not been shown. Thus, the imposition of new Federal regulations that could be costly and burdensome without producing corresponding safety benefits would simply be unwarranted. Licensing of parts distributors could also logically lead to pressure for the added regulation of airlines to require them to document for each part whether it was purchased from an original equipment manufacturer, a PMA, or a licensed distributor. Further, at a time of government downsizing, the licensing of distributors by the FAA would needlessly add to the heavy workload of our safety workforce and create unnecessary cost for the government as well. Instead, we believe that a far better approach is for an accreditation program for parts distributors to be established.

We are working cooperatively with an industry-run, voluntary accreditation program, under development by the Aerospace Industry Regulation of Distributors Task Force. We plan to work aggressively with industry to implement and use this program for distributors. An advisory circular is under development by the FAA that will specify quality standards and auditing criteria. As part of this effort, we are considering what

incentives we can offer to certificate holders who obtain parts only from distributors that have been accredited. In a corresponding effort, we are developing an FAA rulemaking proposal that would make it a regulatory violation for a distributor or other person to misrepresent that a product is an FAA-approved product. Even though a distributor's activities would not directly be licensed by the FAA, their false assertions would be subject to FAA's regulatory authority.

In closing, Mr. Chairman, let me assure you and the Members of the Subcommittee that the FAA does not take lightly the issue of unapproved parts. On the contrary, it is our expectation that all parts used on aircraft be approved for that purpose. Although we have taken a variety of actions to address this issue, we recognize that there is much ahead of us. Aviation safety is a serious responsibility, and one that rightfully must be shared by industry and government. I am confident that, in concert with industry, we are heading in the right direction, and that we will continue to show progress.

That completes my prepared statement. I would be pleased to respond to questions you may have at this time.