CHARLES DABUNDO
VICE PRESIDENT, PROGRAM MANAGER, P-8A POSEIDON PROGRAM
THE BOEING COMPANY

SUBMITTED STATEMENT
SENATE ARMED SERVICES COMMITTEE
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Mr. Chairman, Senator McCain, members of the committee:

Thank you for the opportunity to appear before this Committee regarding counterfeit electronic parts in defense systems. This is a serious issue that has commanded the attention of Boeing, the defense industry, and the U.S. government for some time. Unlike my counterparts on this panel, I do not have overall supply chain responsibilities for my company, and accordingly, Boeing will be submitting a separate letter that addresses in detail Boeing's policies and initiatives on suspect counterfeit parts.

Based on my experience working at Boeing for nearly 30 years, I can say that Boeing is fully committed to the safety, quality and integrity of our products, and ensuring that they are able to accomplish the missions required by our military and civilian customers. As an aircraft manufacturer, Boeing purchases and installs thousands of parts from suppliers. We require our suppliers to deliver a conforming product that meets our specification requirements. Addressing nonconforming products is essential, and Boeing and our suppliers have rigorous quality processes to address such parts.

In this statement I will provide an explanation of how this approach was used in the three known instances of such parts being installed on P-8A aircraft. But first I'd like to set a foundation by giving a brief overview of the P-8A and our approach to execution of the program.

P-8A Poseidon Program Overview

Boeing was selected by the U.S. Navy in 2004 to develop the P-8A, a long-range anti-submarine warfare, anti-surface warfare, intelligence, surveillance and reconnaissance aircraft. The P-8A possesses an advanced mission system that enables interoperability in the future battle space. Capable of broad-area maritime and littoral operations, the P-8A will influence how the U.S. Navy's maritime patrol and reconnaissance forces train, operate and deploy. The P-8A is being developed for the Navy by a Boeing-led industry team that consists of CFM International, Northrop Grumman, Raytheon, GE Aviation, BAE Systems and Spirit AeroSystems.

Boeing and its P-8A teammates have built six flight-test and two ground-test aircraft. Four P-8As are currently in flight test at NAS Patuxent River where they have flown in excess of 1,200 flight hours. Two additional aircraft will be delivered to the U.S. Navy for operational evaluation by February 2012. The first Low Rate Initial Production aircraft has completed its maiden flight, and is in the final stages of installation and checkout prior to delivery to the U.S. Navy fleet in February 2012. The program remains on track to meet initial operational capability in 2013.

The P-8A program is being executed by Boeing using a first-in-industry in-line production process that leverages the commercial 737NG production system. The maturity, robustness, and pedigree of this system has been a key enabler to production of a quality product that has met all program-of-record milestones, allowed the U.S. Navy to save in excess of $1B, and achieve a recurring cost reduction of 10% in Initial Production aircraft. The benefits of leveraging a mature commercial aircraft will carry forward as the P-8A is delivered to the fleet and is able to leverage the 737NG support systems.

As a testimony to the successes that the Navy-Boeing team has achieved, the P-8A program recently won Aviation Week's Program Excellence Award for System-Level Research & Development/System Design & Development based on a rigorous assessment of program practices and performance relative to peer programs. Furthermore, positive customer comments about the P-8A program's track record and successes have been numerous. At the ribbon cutting ceremony for Boeing's P-8A Installation and Checkout Facility, Rear Admiral

Steve Eastburg, then Program Executive Officer for Air ASW, Assault and Special Missions Programs, and now Vice Commander for NAVAIR, stated:

> "The P-8A program is quickly becoming the DoD and industry standard for how to do acquisition right. At our recent defense acquisition board, at the end of the meeting, the team was asked to come back with a composite set of lessons learned and best practices from this program that we can feed into all the other programs across the Department of Defense. That's how much confidence and such a high esteem that not only Dr. Carter but many others have in the program at the most senior levels of the DoD."

Boeing Production System

As mentioned above, leveraging of the commercial production system has been a key to the successes demonstrated by the P-8A program. As separate divisions of a single company (The Boeing Company), Boeing Defense, Space and Security (BDS) and Boeing Commercial Airplanes (BCA) are required by the Federal Acquisition Regulations (FAR) to have a contract in place governing the transfer of the commercial item from BCA to BDS.[1] The aircraft that BDS purchases from BCA is manufactured in accordance with BCA's existing, FAA-approved quality system. Once delivered to BDS, BDS completes its work in accordance with the applicable government quality assurance requirements. Both sets of processes are based on many years of experience with a wide range of customers, and with a strict focus on safety, quality, and product integrity.

Addressing nonconforming products (any product that does not meet its specification requirement) is essential, and Boeing and our suppliers have rigorous quality processes to identify and review parts that we or our suppliers identify as nonconforming. Boeing treats all nonconformances with a significant level of concern to ensure the safety and integrity of the product is maintained. This is accomplished by qualified subject matter experts who utilize a comprehensive set of processes and procedures for addressing nonconformances encountered during the build of the aircraft. Suspect counterfeit parts represent a subset of the potential types of nonconformances, and as such, are covered within these processes.

[1] FAR 12.001 - Definition

If nonconformances are encountered during the build of the BCA commercial deliverable, the processes utilized on P-8A are governed by BCA's quality and material review processes, which are AS9100 compliant and part of an FAA-approved quality system under Production Certificate 700. PC 700 was issued to Boeing in 1997 for 737NG production by the FAA after demonstration that Boeing has adequate facilities and quality-control systems to ensure it meets stringent safety and reliability requirements. AS9100 is a widely adopted and standardized quality management system for the aerospace industry.

If nonconformances are encountered during the installation and checkout portion of the build that is executed by BDS, the processes utilized on P-8 are governed by BDS's quality and material review processes which are also AS9100 compliant, overseen by the Defense Control Management Agency, and part of our NAVAIR approved P-8 Quality System Plan in accordance with our contract with the U.S. Navy.

P-8A Suspect Counterfeit Parts

I was recently interviewed by the SASC committee staff regarding the P-8A program's processes for handling nonconforming parts, including those that are suspect counterfeit. Parts that are suspect counterfeit that could potentially present a risk of harm to military personnel or members of the flying public are of critical concern to Boeing, and to me personally.

To my knowledge, there have been three instances of suspect counterfeit parts that have been installed on P-8A aircraft. Each of these instances was addressed in a manner that complies with Boeing's government approved processes and procedures, and our contract with the U.S. Navy. A brief summary of each is included below.

1. Ice Detection Module—Notice Of Escape January 2010

The first incident occurred in January 2010, when BAE Systems notified BCA of a nonconformance associated with the BAE Ice Detection Module (IDM) Assembly. The IDM is optional equipment used to detect ice on the exterior of the aircraft.

In accordance with Boeing's approved processes and procedures, BCA Engineering evaluated the nonconformance, dispositioned it as "No Action Required," and called for repair "on attrition," meaning that the IDM could be replaced if it needed repair for any reason. Per standard BCA approved processes, this disposition does not require action by, nor result in a notification to its contractual customer, in this case BDS. Had there been a nonconformance which created a safety concern or a required maintenance action, BDS would have been notified by BCA, and appropriate action would have been taken to comply with the associated service bulletin instruction.

I became aware of the IDM nonconformance and associated disposition in September 2011. An affected IDM was on one of the P-8A airplanes located at Patuxent River, Maryland (T-3). Although there were no inherent or residual safety concerns or maintenance actions associated with the IDM, BDS decided to remove and replace the IDM on T-3 at a convenient point in time that would not disrupt test activities. T-3's IDM was removed and replaced on 21 October 2011.

2. Distance Measuring Equipment—Notice Of Escape November 2010

The second incident occurred in November 2010, when Honeywell notified BCA of a potentially unapproved component contained in Honeywell's Distance Measuring Equipment (DME). The DME measures the distance between an aircraft and a ground station.

In accordance with Boeing's approved processes and procedures, BCA Engineering evaluated the nonconformance, and dispositioned it as "No Action Required," "use as is." Per standard BCA approved processes, this disposition does not require action by, nor result in a notification to its contractual customer, in this case BDS. Had there been a nonconformance which created a safety concern or a required maintenance action, BDS would have been notified by BCA, and appropriate action would have been taken to comply with the associated service bulletin instruction.

I became aware of the DME nonconformance and associated disposition in October 2011. Affected DMEs were on P-8A airplanes T-1, T-2, T-3, T-4, and T-5. Although there are no inherent or residual safety concerns or maintenance actions associated with the DME, BDS

decided to remove and replace the DME on T-5 prior to delivery to the US Navy. T-5's DME was removed and replaced on 3 November 2011.

3. Receiver-Exciter and HF Power Amplifier—Notice Of Escape July 2010

The third incident occurred in July 2010, when Rockwell Collins notified BDS of a potentially unapproved component contained in Rockwell Collins Receiver-Exciter and HF Power Amplifier. These parts were installed on two P-8As - T-2 and T-3.

In accordance with Boeing's processes and procedures, BDS Engineering evaluated the nonconformance, and dispositioned it as "Remove and Replace at earliest convenience." Per standard BDS approved processes, the government was notified on 27 July 2010, and a Service Letter was issued on 11 November 2010. In accordance with the Service Letter, the nonconforming parts were removed from T-2 on 13 November 2010 and T-3 on 27 February 2011.

Summary

The P-8A program, awarded to Boeing in 2004, has had a long-standing track record of successful execution. The program is executed using a first-in-industry in-line production process that leverages the commercial 737NG production system, and is based on robust, government-approved, military and commercial processes in accordance with BDS's contract with the U.S. Navy. These processes have been key to enabling the program to meet all program-of-record milestones, at a cost that has been consistently below cost projections at program inception.

Suspect counterfeit parts are a serious, industry-wide issue that has affected the P-8A program. Boeing has utilized its government approved quality and material disposition processes to address suspect counterfeit parts in an appropriate manner. While BDS and BCA each have slightly different quality and material disposition systems, they are both under regulatory control (DCMA and FAA, respectively) and ensure that the safety and integrity of the P-8A and the people who operate it are maintained at all times. They also represent a pedigree based on many years of application on Boeing Military and Commercial products which have, and continue to, set the industry standard for safety, quality, and reliability.

This concludes my submitted statement to the committee. Thank you again for the opportunity to appear before you.