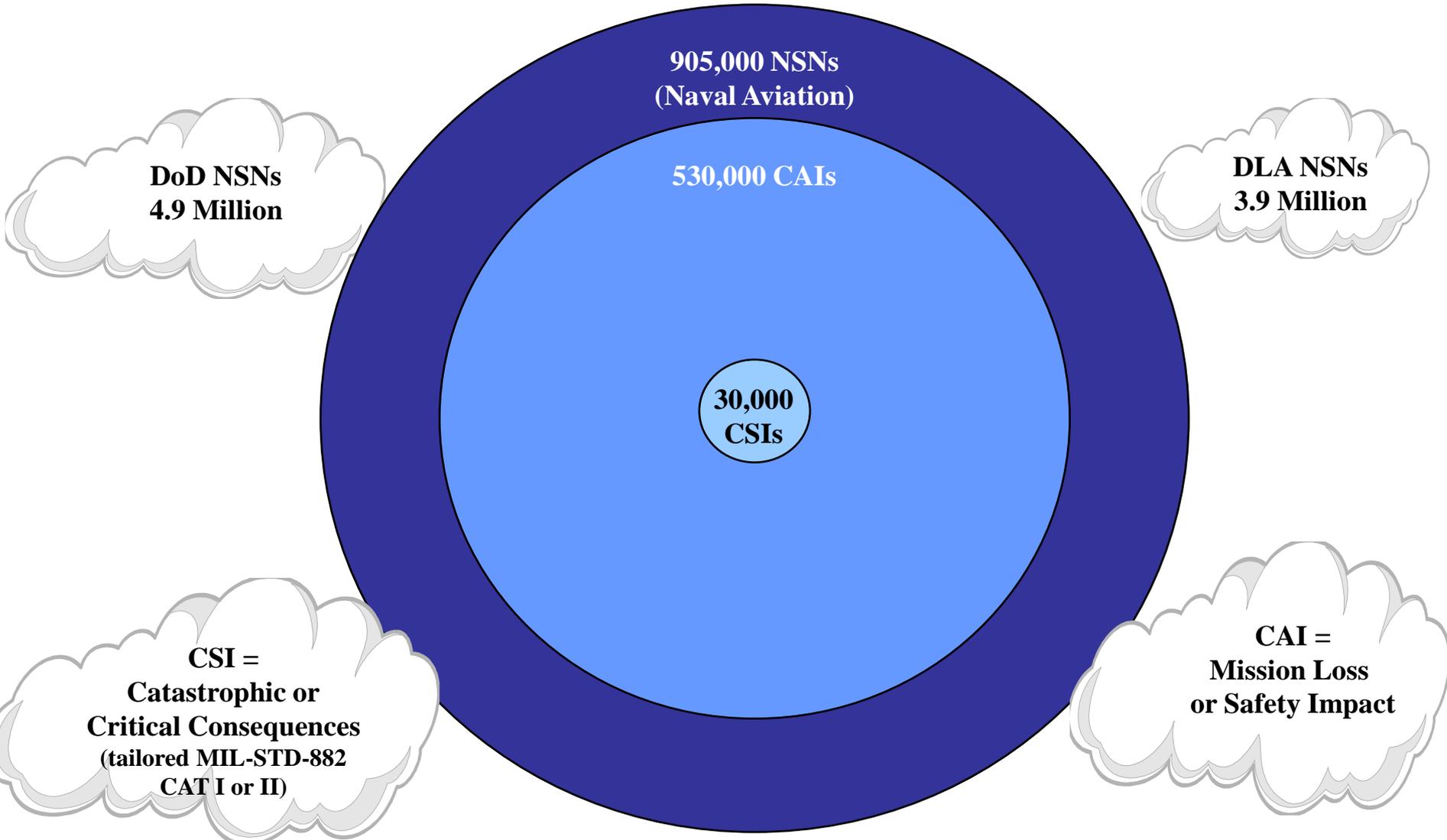


# **Aviation Critical Safety Items (CSIs)**

**Jeff Allan**  
**Chief, Policy and Standards (NAVAIR 4.1C)**  
**301-342-2246**  
**[Jeffrey.Allan@navy.mil](mailto:Jeffrey.Allan@navy.mil)**

# Naval Aviation Critical Items



# Critical Safety Item

## Arresting Wire Socket and Pin

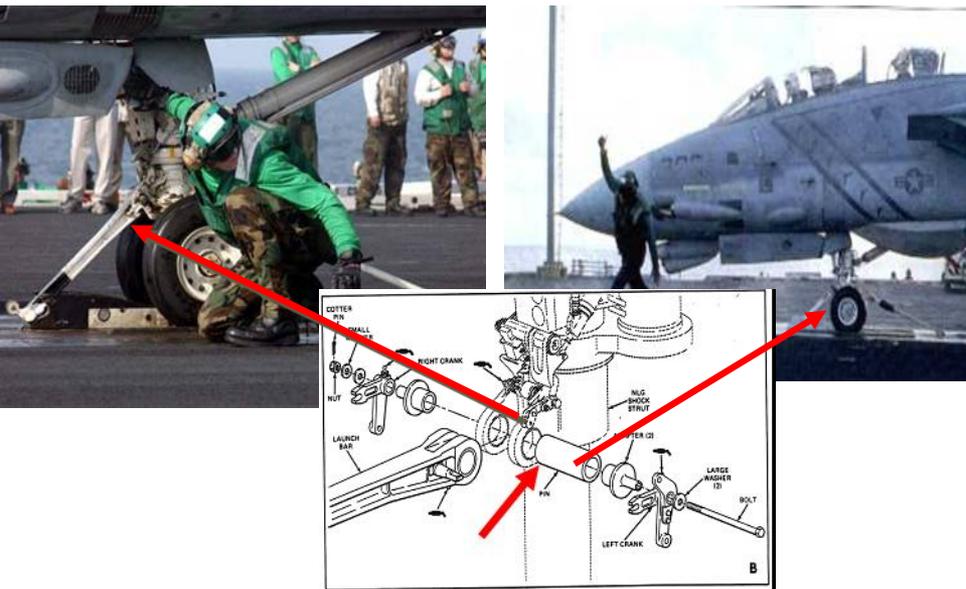


Pin not heat treated to provide proper strength.....

Poured socket with visible cracks.....



# F-14 Nose Tow Launch Bar Pin



**“DURING DROP CHECK OF NOSE LANDING GEAR, MAINTENANCE PERSONNEL NOTED LAUNCH BAR EXTENDED SLOWLY DURING NLG EXTENSION. REMOVAL OF LAUNCH BAR REVEALED LAUNCH BAR PIN CRACKED IN HALF. LAUNCH BAR PIN WAS REPLACED 16JAN01 AND HAD ONLY 21 CATAPULT LAUNCHES. IT IS VERY LIKELY THAT THIS DEFECT WOULD HAVE GONE UNDETECTED HAD UNRELATED MAINTENANCE OF THE NOSE LANDING GEAR DOOR/DROP CHECK NOT BEEN PERFORMED. POSSIBLE LOSS OF AIRCRAFT/POTENTIAL LOSS OF AIRCREW.”**  
 (March 2001 VF-102, USS Theodore Roosevelt)

- **Service Life ... 2000 Catapults** (Inspect Every 100)
  - Failure Discovered ... 21st Launch
- **300M Steel Req'd**
  - 1018 Steel Used
- **Full Hardening Req'd**
  - Case Hardened
- **Markings To Be Vibra-Etched ... No Markings**
- **Unapproved Source ... Wrong Drawing**
- **250+ Pins On-Hand ... 1/2 Unmarked**
- **Bulletin, Red Stripe, Emergency Buy**



# Critical Safety Item

## Holdback Bar Release Element

Crack



### Holdback Bar

- Restrains Aircraft Prior To Catapult Firing

### Release Element

- Calibrated "Weak Link" ... Designed to Break At Precise Pressure/Aircraft
  - EA-6B Breaking Strength = 53,000 LBS
- 100% Magnetic Particle Inspection Required
  - Mag Particle Inspection Symbol Stamped on Both Ends
- 32,000+ Procured

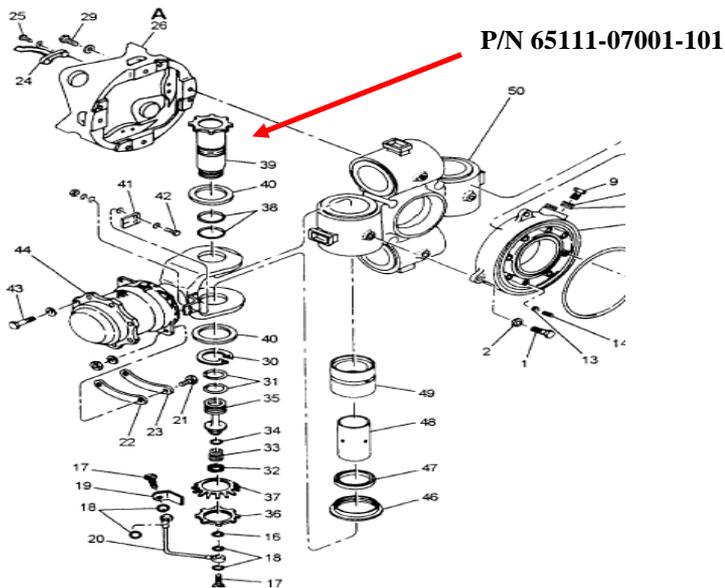


# H-53 Fluid Passage (Shoulder) Bolt

(Navy "D" Models & AF "J" Models)



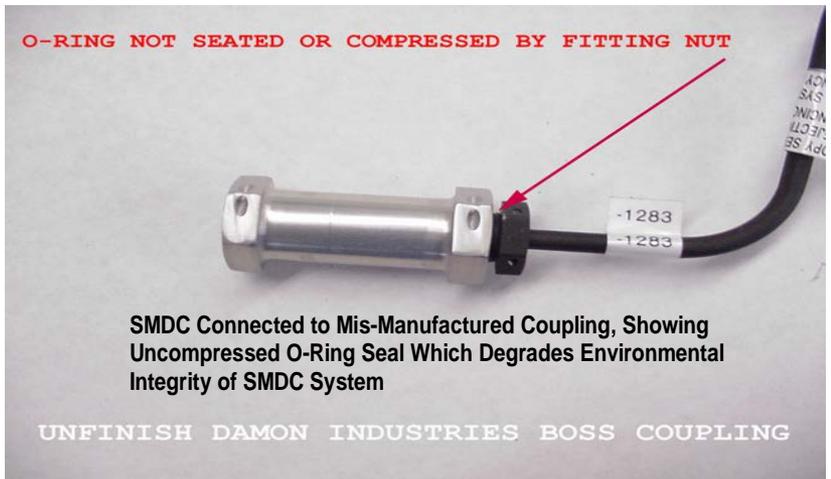
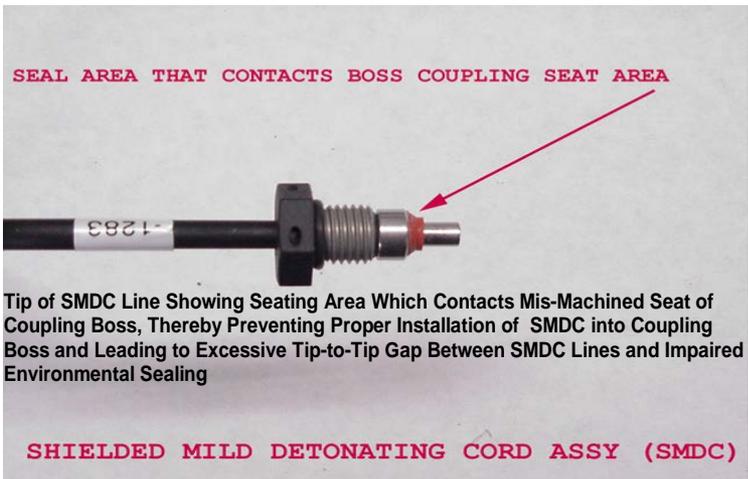
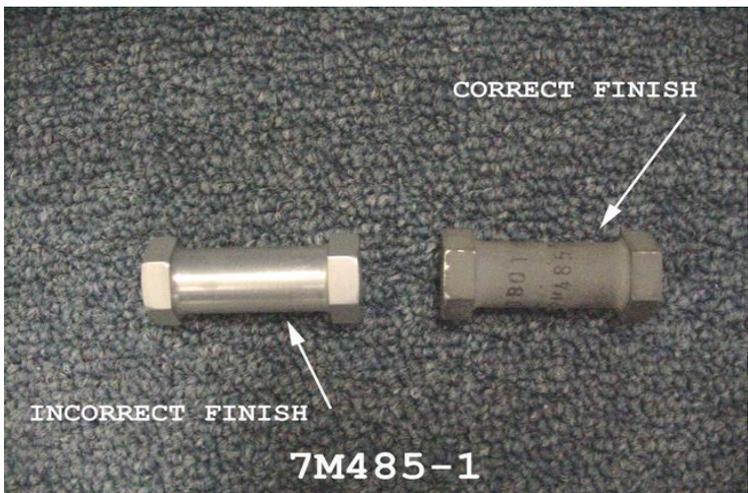
H-53D Head SubAssembly



“This part is critical and needs to be made correctly. The part was not made correctly and the H-53 FST is writing a bulletin to remove these from service. ... It is a concern and a bulletin is being prepared or has been prepared to inspect for nonconforming bolts by manufacturer. We are not going to play what if games or make different assumptions if the bolts will or will not fail because of the nonconformances. If a bolt fails to retain one tail rotor blade, the imbalance will rip off the tail rotor and tail rotor gearbox and the aircraft goes into uncontrolled flight. Catastrophic (category I) failure consequence: LOSS of aircrew/aircraft. We do not want to make some assumptions about failures or not failing when the consequences are catastrophic.”

# Boss Coupling

(Used In T/AV-8B, F/A-18, and T-45 Escape Systems)



# AV-8B Butterfly Valve Gasket

## Problem (April 2000):

- **Gaskets Used in Reaction Control System**
  - **2 MAG-13 Failures**
    - **1 Detected Because of Fire Warning Light and Other During Recurring Inspection**
  - **No Evidence That Manufacturer Was Approved/Qualified**
    - **Wrong Material in 1 out of 3 Contracts**
    - **Bulletin Issued -**
      - **Visual Inspection .. Replace Within 1 Year**
      - **Purge Inventory**

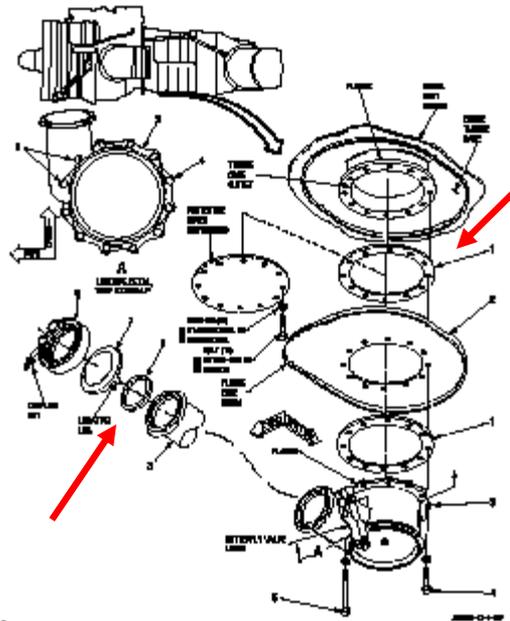
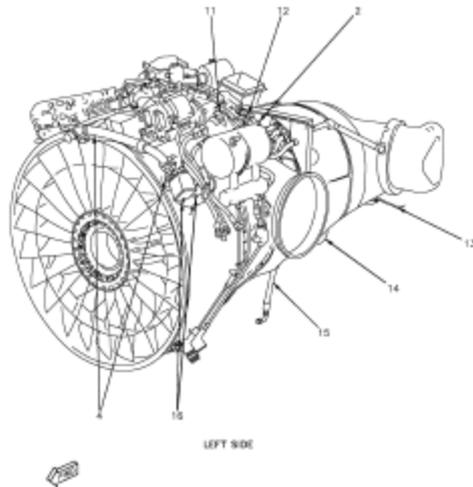
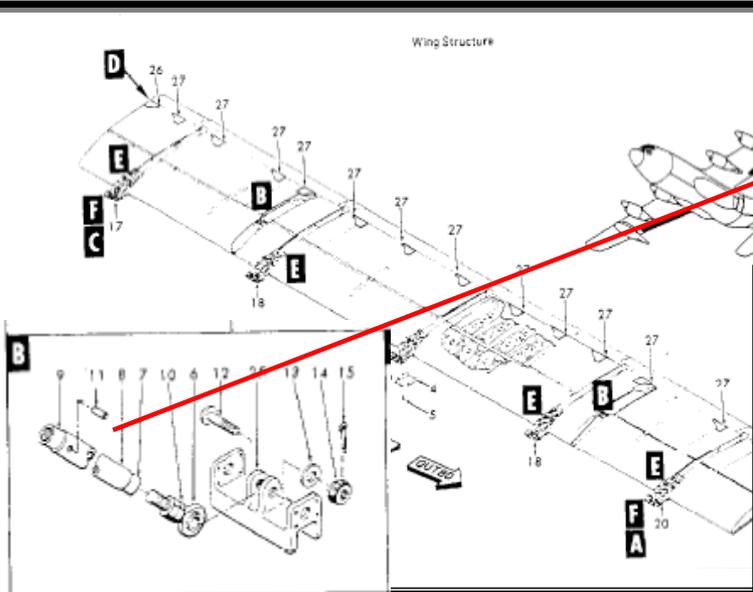


Figure 15. Butterfly Valve (Sheet 1 of 2)

“The one part of this issue that really crumbles my cookies is that this appears to be the same vendor who made other bad gaskets a couple years ago. We had to purge the system then too. It appears that DLA has gone right back to the same vendor. We just don't have the resources to address the same problem twice (nor the intestinal fortitude). ... now, the AV8B program has to wrestle with how to purge the system and more importantly, our aircraft, of this "bad" batch of gaskets. We'll continue to work that issue with our program guys and I think there are ways to mitigate our impact. We don't have a huge safety problem here but it has to be fixed soon. It makes a lot of extra work for our engineers and, especially, the squadron maintenance guys who are already overworked.

# C-130 Rigid Flap Actuator Connecting Link

P/N 340188-4, NSN 3040-00-096-4861



Low Hardness, Not Re-Heat Treated After Welding

Defective Weld

<20% Circumference Joined by Weld

“ MAINTENANCE PERFORMED ON ACFT BUNO 150687 REQUIRED WING FLAP SYSTEM TO BE CYCLED. AUX PUMP WAS CYCLED FOR REGULAR OPS CHECK WITH NO LOAD. UPON COMPLETION, GROUND PERSONNEL DISCOVERED SHEARED FLAP LINK ON RH OUTBOARD FLAP, OUTBOARD LINK POSITION. FURTHER INSPECTION OF FLAP LINK REVEALED FAILURE OF WELD APPROXIMATELY 2 INCHES FROM ROD END (REF B, PG. 2-212, FIG. 21, ITEM 5). FAILURE CAUSED THE OUTBOARD FLAP SECTION TO DISCONNECT FROM THE ACTUATOR. THIS SUSPECT DEFECT OF WELD DOES NOT SEEM TO BE EXCLUSIVE TO ONLY ONE FLAP LINK. SIXTEEN (16) NEW UNINSTALLED LINKS WITH SAME MFG CODE AND MFG DATE WERE FOUND DEFECTIVE BY NAVAVNDEPOT CHERRY PT ENGINEERING.

SIXTEEN (16) OF THE TWENTY (20) UNINSTALLED FLAP LINKS WERE HAND DELIVERED TO KC-130-FST AS REPORTED IN REF C. LAB ANALYSIS CONFIRMED THAT SUSPECT WELDS OF ALL 16 LINK ASSEMBLIES WERE FAULTY. REQUEST ACTION BE TAKEN TO PREVENT FURTHER ISSUE OR USAGE OF REMAINING ASSETS WITH CAGE CODE 0B011

POSSIBLE LOSS OF ACFT/PERSONNEL”

### Banking and Community Perspectives

Issue 1, 2001  
 Federal Reserve Bank of Dallas  
<http://www.dallasfed.org/ca/bcp/2001/bcp0101.html>

### E-Commerce Resource Centers

Theresa Chavez knows the benefits of e-commerce and the San Antonio Electronic Commerce Resource Center. In 1991, Chavez, her husband and brother-in-law started High Quality Machine Shop in southwest San Antonio with two Air Force contracts for airplane hardware. But the business struggled with only eight full-time employees, and Chavez soon realized the company needed greater operating efficiency—and more business.

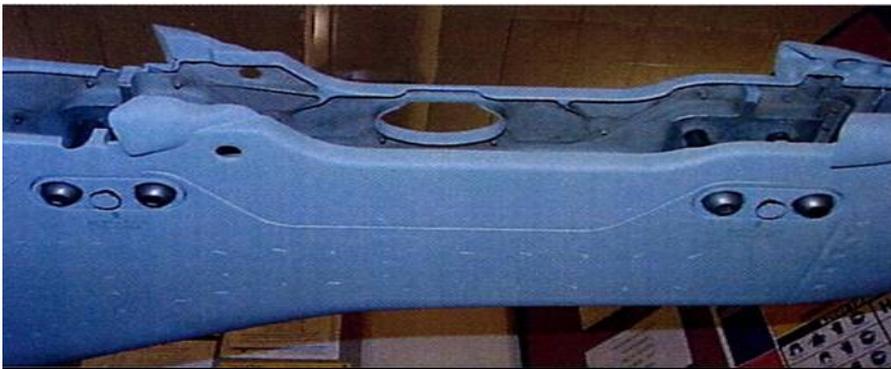
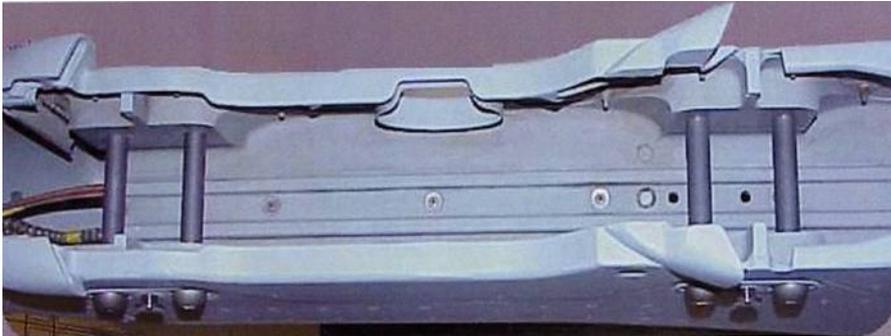
Five years ago, she heard about the San Antonio center's services. With the help of several classes and one-on-one technical assistance, Chavez's company now relies on the Internet for securing government contracts. Today, the machine shop has contracts with seven Air Force bases. Chavez employs 16 people full-time and has doubled her revenues, from \$600,000 in 1991 to more than \$1.2 million last year. None of this would have been possible, she believes, without the Electronic Commerce Resource Center.



## Office of Inspector General

Item: Aircraft Parts Manufacturer Guilty of Inspection Fraud  
 Date: November 6, 2001  
 Type: Investigation  
 Summary: High Quality Machine Shop, an aircraft parts manufacturer in San Antonio, TX, pleaded guilty in U.S. District Court in Raleigh, NC, for falsely representing to the U.S. Coast Guard Aircraft Repair and Supply Center in Elizabeth City, NC, that it had inspected a bellcrank spacer sleeve—a critical part for USCG

# SUU-63/BRU-32 Pylon Bolt



## Bolts Attach Bomb Rack to Pylon

- Pylons Provided w/Bolts By Contractor
- “Forged” Bolt Heads Required
  - 70 Pylons w/Machined Bolt Heads Delivered (293 Bolts Total)
- Non-Approved Source
  - No Supplier Eval Prior To Award
  - QA Not IAW W/Requirements
  - “New” Owners Reported Problem
- Useful Life < 3 Years vice 10 Years

# Army H-60 Planetary Carrier

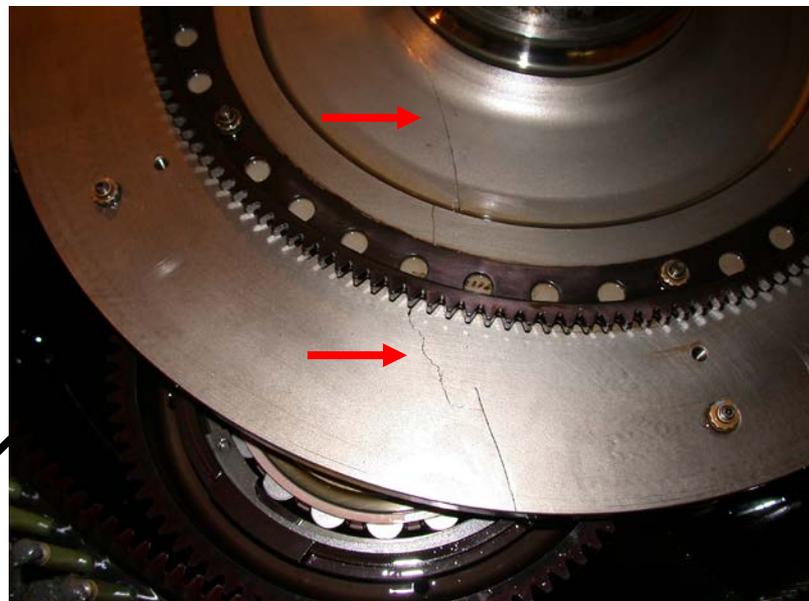
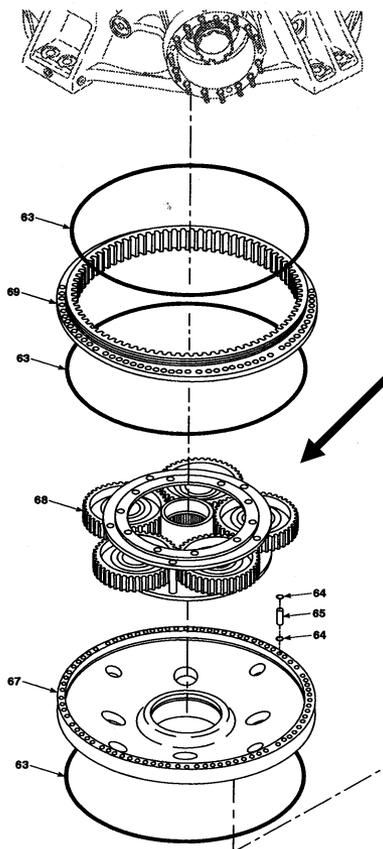
## “Hasn’t Failed Yet” ... “Will Never Fail”

### “Hasn’t Failed Yet”...

- Catastrophic Consequences Well Understood, but because
  - Low Failure Probability
  - Tens of Thousands Hours of Failure Free Use
  - FSP/CSI Not Coded

### “Will Never Fail” ...

- CAT 1 QDR ... Low Main Transmission Oil Pressure
  - CCAD Teardown Revealed Cracked Planetary Carrier
  - Abnormal Gear Loads Damaged Internal Shim
  - Shim Pieces Into Sump & Clogged Filter
- 2<sup>nd</sup> Failure Detected by Subsequent Inspection/Teardown
- 2+ Year Engineering Investigation
  - Poor Traceability/Tracking



“Although in this instance the failure was detected prior to loss of main rotor drive, future planetary carrier failures may not provide an impending failure indication. If undetected, this failure mode could result in loss of drive to the main rotor shaft, which could result in loss of aircraft and/or injury/death of crew. (Hazard Severity – Catastrophic).”

(Army Risk Determination memorandum)

# T64 Compressor Assembly Shouldered Studs (P/N 4026T91 ... NSN 5307-00-151-9238)

04 02:05p PPE 30175/2381  
 JAN-20-2004 09:15 DSCR OUST&EAPH SYS SUP 1500 JOC JACD  
**Alfred Heller Heat Treating Co.** Order No.: 167753  
 Certification Date: 05/28/2002  
 Entry Date: 05/23/2002  
 Page: 1 of 1

To: N-C AUTOMATED IND., INC.  
 90 DAYTON AVE  
 BLDG. 14E  
 PASSAIC NJ 07055

Purchase Order No.: 52302  
 Packing List No.:  
 Material: Hasteloy X

Quantity	Part Number / Part Name / Part Description	Pounds
1	NSNS307001519238	1

**ORDER FOR SUPPLIES OR SERVICES**

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Directorate for Paperwork Reduction Project (0704-0187).

PLEASE DO NOT RETURN YOUR FORM TO EITHER OF THESE ADDRESSES. SEND YOUR COMPLETED FORM TO THE PROCUREMENT OFFICIAL IDENTIFIED IN ITEM 6.

1. CONTRACT/PURCHASE ORDER NO. SP9540-02-M-7465  
 2. DELIVERY ORDER NO.  
 3. POINT OF ORDER (FPO NUMBER) 2001 NOV 28  
 4. REQUEST/PURCHASE REQUEST NO. YF01295001768  
 5. DELIVERY FOR DOC9  
 6. DELIVER TO FOR POINT BY (date) 60 DAYS ADO  
 7. MARK IF BUSINESS (for Schedule of rates)  SMALL  OTHER

**Contract:**  
 See Block 15

**Correct Spec & Drawings cited**  
**Critical Item – Source Inspection Req'd**  
**Critical Application Item**

CRITICAL ITEM - SOURCE INSPECTION REQUIRED.  
 CRITICAL APPLICATION ITEM



SPECIFICATION NO. C50  
 ISSUE NO. 56  
 DATE  
 PAGE 1 OF 3  
 CAGE CODE 074  
 SUPERSEDES C50T25-55

**Waspaloy Req'd**  
**Hastalloy Provided**

1. SCOPE: This specification presents requirements for bolts and screws manufactured from Waspaloy.

1.1.1.1 Classification: This specification covers the following class(es). Unless otherwise specified, the requirements herein apply to all classes.

CLASS A

1.2 Definitions: For purposes of this specification, the following definitions shall apply:

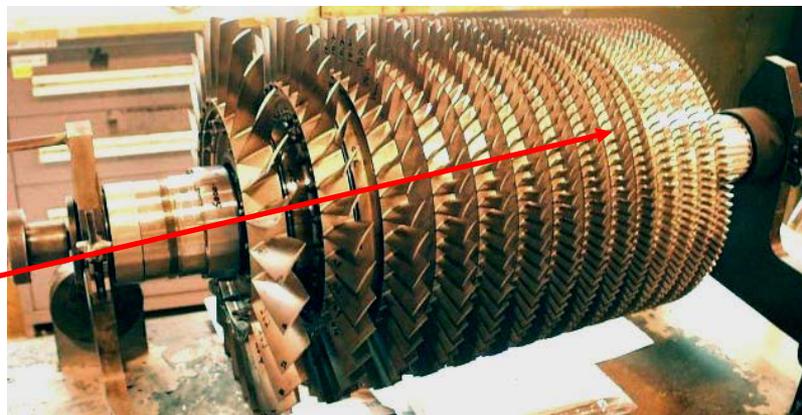
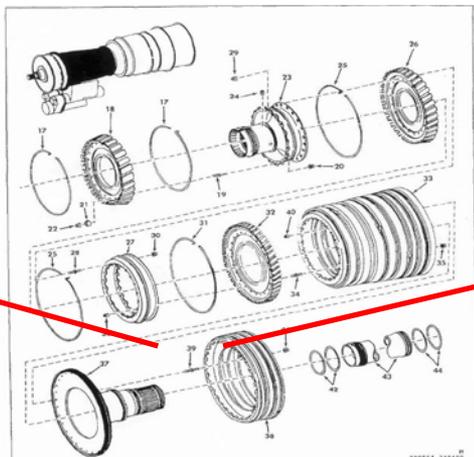
**CERTIFICATE OF TESTS**  
 SERIAL# 00022525  
**CARPENTER**  
 Carpenter Technology Corporation  
 P.O. Box 14883, Reading, PA 19612-1883

ABNAHMEPRUEFZEUGNIS CERTIFICAT DE CONTROLE

ROLLED ALLOYS

PRODUCT DESCRIPTION: PYROMET 680 HI TEMP ALLOY SOLUTION ANNEALED GROUND  
 SPECIFICATION: AMS 5754 REV X (12/795)

SIZE 0.250000 DIA (---0.35-064) RD---ENR

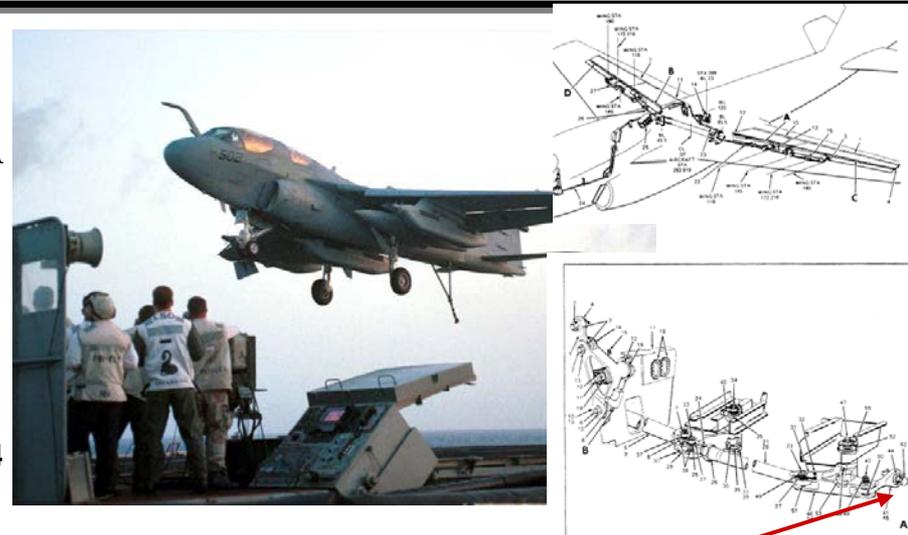


# EA-6B Flaperon Hollow Pin

## P/N 1128CM42207-13 -- NSN 5315-01-240-7559

**“VAQ-139 WAS UNABLE TO REMOVE WORN PIN ATTACHED TO FLAPERON AND AS SENT TO WORK CENTER 51A FOR REPAIR. UPON REMOVAL OF PIN THE TECHNICIAN NOTICED PIN WAS TOO SOFT OF A MATERIAL. AFTER TESTING THE PIN FOR HARDNESS TESTING THE RESULTS SHOWED AN **ROCKWELL OF 10 INSTEAD OF ROCKWELL 39-45 OF 410 STAINLESS STEEL.** THIS IS IAW GRUMMAN PRINT FROM NATEC (GAC515 REV 21076 200M REV 076)”**

**Engineering Investigation: RCN N44329-04-0445, 23 Dec 04**



Contract#	Clin	CAGE	SOURCE	Date	Unit Price	Quantity	Total Price
PIN, HOLLOW P/N 1128CM42207-13 NSN 5315-01-240-7559							
SP050003AB3120231	0001	5U074	DISC	2003-08-04	5.63	380	2,139.40
SP050003AB3120102	0001	5U074	DISC	2003-02-12	6.78	195	1,322.10
SP050002AB3523585	0001	1DAF1	DISC	2002-05-15	12.08	129	1,558.32
SP050000AA5711103		51792	DISC	2000-04-26	17.44	120	2092.80
SP054000MG441		66841	DISC	2000-03-22	11.25	125	1,406.25
SP050099AA6280715		06329	DISC	1999-05-28	20.45	100	2045.40
SP050098AB2181130		023T7	DISC	1998-08-26	21.50	100	2,150.00
SP050098AB2180183		023T7	DISC	1997-11-14	24.95	100	2,495.00
SP050096W4193MODF		5U074	DISC	1996-08-29	10.30	130	1339.00
DLA50093AA8610304		65811	DISC	1993-01-11	16.30	48	782.40
DLA50093AA8610305		65811	DISC	1993-01-11	16.30	134	2,184.20
DLA50093M8778MODF		5U074	DISC	1992-12-09	6.42	130	834.60
DLA50090MR046MODF		65777	DISC	1990-07-04	18.70	90	1683.00
DLA50090AA8610281		65811	DISC	1990-02-03	20.85	100	2085.00
DLA50090AA8610282		65811	DISC	1990-02-03	30.85	30	925.50
DLA50089W7337MODF		8N056	DISC	1989-05-03	17.75	38	674.50

**Search Criteria:** Date From = '1-JAN-2005'; Date To = '24-JAN-2005'; Website Action = 'DR Submission'  
**Discrepancy Report Search has returned 392 records**

Pages: [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#)

RCN	ICN	Nomen	Type	Last Completed Step	Date
<a href="#">N09159-04-0014</a>		TRANSMISSION ASSY	CAT I PQDR	Closed - Reclassified as EI	13-JAN-2005
<a href="#">N09239-05-0009</a>		FUEL CONTROL UNIT	CAT I PQDR	Data Review Approved	12-JAN-2005
<a href="#">N09560-05-0001</a>	<a href="#">WC3PQDR-F14-0001-05S</a>	DAMPER UNIT NOSE WHEEL STEERING DAMPER	CAT I PQDR	Preliminary Report Approval	24-JAN-2005
<a href="#">N44326-05-0008</a>		MAIN ROTOR TIP CAP	CAT I PQDR	Data Review Approved	24-JAN-2005
<a href="#">N55138-05-0001</a>	<a href="#">WC2PQDR-H60-0008-05S</a>	MIXER ASSEMBLY	CAT I PQDR	Preliminary Report Approval	20-JAN-2005
<a href="#">N55616-05-0001</a>		POWERTURBINE ASSEMBLY	CAT I PQDR	Acknowledge Receipt	21-JAN-2005
<a href="#">N65886-05-0003</a>	<a href="#">WC3PQDR-EA6B-0003-05S</a>	CLAMP, HOSE	CAT I PQDR	Tracer Request Submitted	24-JAN-2005
<a href="#">N65886-05-0006</a>	<a href="#">WC3PQDR-F18-0001-05S</a>	Transducer, Motional Pickup	CAT I PQDR	Tracer Request Submitted	24-JAN-2005
<a href="#">R09199-05-0004</a>		INDICATOR SPECIAL	CAT I PQDR	Data Review Approved	19-JAN-2005
<a href="#">R09412-05-0050</a>		STRUT, MAIN LANDING GEAR	CAT I PQDR	Closed - Reclassified as HMR/EI	04-JAN-2005
<a href="#">R09930-05-0006</a>		ANTENNA, DOGLEG	CAT I PQDR	PQDR Submitted	24-JAN-2005
<a href="#">R09969-05-0002</a>	<a href="#">WC3PQDR-EA6B-0005-05S</a>	POWER LEVEL CONTROL QUADRANT	CAT I PQDR	Preliminary Report Approval	14-JAN-2005
<a href="#">R09985-05-0001</a>		EVAPORATOR UNIT	CAT I PQDR	PQDR Record Closed	05-JAN-2005
<a href="#">R53973-05-0001</a>	<a href="#">WC2PQDR-H46-0002-05S</a>	GYRO, DISPLACEMENT	CAT I PQDR	Tracer Request Approval	24-JAN-2005
<a href="#">R63923-04-0027</a>		OUTBOARD LEADING EDGE FLAP TRANSMISSION	CAT I PQDR	PQDR Record Closed	12-JAN-2005
<a href="#">V09287-05-0004</a>	<a href="#">WC3PQDR-S3-0002-05S</a>	BAR, CATAPULT LAUNCH	CAT I PQDR	Preliminary Report Approval	19-JAN-2005
<a href="#">V09526-05-0001</a>		NP2000 PROPELLER SYSTEM	CAT I PQDR	PQDR Record Closed	21-JAN-2005
<a href="#">V55149-05-4001</a>		Navigational Switching Unit	CAT I PQDR	Acknowledge Receipt	10-JAN-2005
<a href="#">078286-05-0004</a>	<a href="#">WC2PQDR-H60-0007-05R</a>	RECEIVER-TRANSMITTER RADIO	CAT II PQDR	Preliminary Report Approval	20-JAN-2005
<a href="#">078286-05-0005</a>	<a href="#">WC2PQDR-H60-0009-05R</a>	AI TIMETER ENCODER	CAT II PQDR	Preliminary Report Approval	20-JAN-2005



GS-15 Jeffrey S Allan  
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[Report Criteria](#) [View Graph](#) [Print Page](#) [Export Results](#)

### HMRs Submitted Report Details

Generated By: **GS-15 Jeffrey S Allan** on **24-JAN-2005 12:17**

Specified Report Criteria: **Date Range = '1-JAN-2005' to '31-DEC-2005'; Report Type = 'EI,HMR,HMR/EI'; Classification = 'S'**

Search Results: 33

ICN	FST	ICN	NOMENCLATURE	TYPE	SUBMITTING UNIT	EIR DATE	Last Step Completed	Date of Last Step	Reassignment	Re-addressal
<a href="#">09971-05-0003</a>	AES FST	WC2EI-AES-0002-05S	GUN ASSEMBLY, DROGUE	HMR/EI	VAQ-135	06-JAN-05	Exhibit Receipt	20-JAN-05		
<a href="#">11853-04-6002</a>	ALRE Launcher FST		Repeatable Release Holdback Bar, F-18	HMR	USS Harry S Truman V-2 Division	18-JAN-05	Go / No Go Recommend Submitted	20-JAN-05		
<a href="#">144321-05-0001</a>	AOS FST	WEIEI-AOS-0005-05S	OXYGEN MANIFOLD	EI	COMSTRKFIGHTWINGPAC DET AIMD	05-JAN-05	Preliminary Report Approval	19-JAN-05		
<a href="#">144321-05-0002</a>	AOS FST	WEIEI-AOS-0006-05S	OXYGEN MANIFOLD	EI	COMSTRKFIGHTWINGPAC DET AIMD	05-JAN-05	Preliminary Report Approval	19-JAN-05		
<a href="#">144321-05-0005</a>	AOS FST	WEIEI-AOS-0008-05S	OXYGEN MANIFOLD	EI	COMSTRKFIGHTWINGPAC DET AIMD	11-JAN-05	Preliminary Report Approval	19-JAN-05		
<a href="#">09173-05-0001</a>	AOS FST	WEIEI-AOS-0010-05S	VALVE, REGULATING, SYSTEM PRESSURE	HMR/EI	VP-65	14-JAN-05	Exhibit Shipped	20-JAN-05		

## Rebuilt Parts Sold As New

**Item:** Supplier Pleads Guilty to Selling Substandard Military Helicopter Parts  
**Date:** March 4, 2002  
**Type:** Investigation

**Summary:** Gunter Kohlke, owner of Aircraft Components, Zurich, Switzerland, pleaded guilty in U.S. District Court in New York, NY, to selling substandard military helicopter parts to foreign countries in violation of the Arms Export Control Act. A middleman, Kohlke purchased parts from Mike Turner, president of Air Technology, in Naples FL., and resold them, 2000 Kohlke told an aviation parts. In the price of \$107,000, the cost of the parts was \$10,000. May 14. OIG was aided

**FOR IMMEDIATE RELEASE**  
 Wednesday, March 11, 1998  
 Contact: Jeff Nelligan  
 (202) 366-6312  
 OIG 8-98

**STIFF SENTENCES GIVEN TRAFFICKERS IN STOLEN AIRCRAFT PARTS**

The Department of Transportation's Office of Inspector General (OIG) today announced the sentencing of two traffickers in stolen aircraft parts, including some obtained by armed robbery.

A 12-year prison term and a fine of \$1.3 million were given to Jose Costales Jr., 32, a resident of Davie, Fla., followed by 3 years of supervised release. Costales was convicted by a U.S. District Court in Florida.

A second defendant, Guy Salam, who pleaded guilty to the same criminal trial, was sentenced to 18 months in prison and 3 years of supervised release.

"These sentences are the result of a very serious case," said Inspector General Jeff Nelligan. "The traffickers sold parts that are not airworthy and that could have caused serious injuries or deaths if the parts had been used on an aircraft."

Costales was convicted in September 1997 of conspiracy to communicate false information endangering the safety of an aircraft, unlawfully transporting stolen aircraft parts in interstate commerce, and committing mail and wire fraud by lying to unknowing buyers about the origin of aircraft parts so as to disguise the fact they were stolen. The federal jury also convicted Costales of the armed robbery of \$1.5 million in jet aircraft parts from two Federal Aviation Administration (FAA) certified repair stations, Aerothrust Corporation and Aviation Enterprises International, Inc., both in Miami. The robberies occurred in November 1994 and March 1995. Included in the robbery were stolen aircraft jet engines, Allison turbine engine blades, and other engine components. The stolen parts subsequently were sold or "laundered" by an FAA-approved repair station, Nation's Air Corp., and a parts distributor, World Air Sales and Services, Inc., both located in Miami and owned by Costales Jr. He falsely represented the parts' traceability and airworthiness by issuing false vendor material certifications. Many of the parts were then sold to co-defendant Thomas David Hinton, who in turn sold them to various parts distributors and major airlines, including TWA and Delta Airlines. The investigation was the joint effort of the department's Office of Inspector General, the Federal Bureau of Investigation, the Metro-Dade Police Department, the Drug



U.S. Department of Transportation  
 Office of Public Affairs  
 Washington, D.C. 20580  
 www.dot.gov/brn

**FOR IMMEDIATE RELEASE**

Wednesday, July 7, 1999  
 Contact: Jeff Nelligan  
 Telephone: (202) 366-6312  
 OIG 11-99

**FIRM, VICE-PRESIDENT PLEAD GUILTY IN SUBSTANDARD AIRCRAFT PARTS CASE**

A Florida maker and distributor of aircraft hoses and its vice president have pleaded guilty to making false representations about the regulatory conformance of products made by the firm, the U.S. Department of Transportation's Office of Inspector General announced today.

Air-Pro Inc. and John Wilson, its vice president, pleaded guilty on June 30, 1999 in U.S. District Court in Miami. Though sentencing is set for September, the firm has agreed to pay a fine of \$200,000, offered to replace substandard parts and improve its quality control system. The firm's operations manager, faces up to five years in prison.

The hoses to both military and commercial aircraft on the hoses to make them safe for use in aircraft. The Federal Aviation Administration announced today that the hoses are critical to flight safety. Some hoses carry aircraft fuel, oil or hydraulic fluid and are parts critical to flight safety. The investigation also found that Air-Pro had substituted polyolefin for teflon in making protective sleeves for certain hoses. Teflon is more abrasion-resistant and can withstand temperatures of up to about 400 degrees, while polyolefin may fail at 250 degrees or less.

**False Certifications – Material Substitution**

## Untested Parts

**Item:** Aviation Parts Manufacturer and Owner Fined, Incarcerated  
**Date:** February 2, 2001  
**Type:** Investigation

**Summary:** Dan Massey, owner of RHIMCO Industries, Inc., was sentenced by a U.S. District Court judge in Philadelphia to 5 months in a Federal halfway house followed by 5 months' home confinement, 24 months' supervised release and a \$25,000 criminal fine for supplying untested critical application aircraft parts to the United States military and commercial aviation customers. RHIMCO was also sentenced to 12 months' probation and a \$115,000 criminal fine. Untested RHIMCO parts were traced through purchase orders to several commercial aviation businesses, including Lockheed Aircraft Service. OIG investigated this case with the FBI and the DCIS.

## UNAPPROVED PARTS NOTIFICATION

SUSPECTED UNAPPROVED PARTS PROGRAM OFFICE, AVR-20  
 5005 AVIATION DRIVE, SUITE 214  
 DULLES, VA 20166-7541

VPNs are posted on the internet at <http://www.faa.gov/avr/sups.htm>

Published by: FAA, AFS-610, P.O. Box 26460, Oklahoma City, OK 73125

**AFFECTED PARTS**  
 Assorted O-rings, seals, and gaskets manufactured for military aircraft.

**PURPOSE**  
 The purpose of this notification is to advise all aircraft owners, operators, maintenance organizations, manufacturers, and parts distributors regarding the manufacture of non-conforming parts produced by L&T Seals, Inc.

**BACKGROUND**  
 Information received during a Defense Criminal Investigation Service suspected unapproved parts investigation revealed that L&T Seals, Inc. (CAGE Code 0ZF09), 319 West 17<sup>th</sup> Street, Galena, KY, produced non-conforming O-rings, seals, and gaskets of various sizes and cost. These parts were being manufactured to a military specification (MIL-SPEC). Further investigation revealed that some of the parts failed during use, and when tested, were found to be manufactured using incorrect materials. The MIL-SPEC required that the parts be made of nitrile; however, testing disclosed that the parts were neoprene. After this disclosure, L&T Seals, Inc., ceased operation.

The following O-rings have been identified by N&T Seals, Inc. as being produced to MIL-SPEC:

5330002913077 = MS2951
5330010142605 = NAS160
5330008078993 = MS2871
5331002519378 = MS2951
5330009531885 = NAS161

**Incorrect Materials False Certifications Failed in Use**

Although produced for military aircraft, the parts produced by L&T Seals, Inc., may have been used on civil aircraft. At the present time, there is no indication that the referenced parts produced by L&T Seals, Inc. have been installed on civil aircraft.

to for use in oxygen supply application. At the present time, there is no indication that the referenced parts produced by L&T Seals, Inc. have been installed on civil aircraft.

January 9, 2002

**Investigation:** Bo Baker, president and owner of 3D Industries, Dallas, TX, was sentenced to 56 months in prison and ordered to pay \$198,268 in restitution by a U.S. District Court judge in Dallas, for misrepresenting counterfeit aircraft parts as approved parts. Baker told the FAA that inner combustion shells for Lear Jets were shipped directly to 3D by the authorized manufacturer, General Electric Engine Services, when in fact, they were fakes. Baker pleaded guilty in August 1999. A second defendant, Richard M. Teubner is scheduled for sentencing on January 28, 2002. OIG investigated this case with the FBI and Dallas Flight Standards District Office.

**Counterfeit Parts Sold As OEM**

COMMERCE BUSINESS DAILY ISSUE OF JULY 10, 2001 PSA #288 AWARDS

15 -- SKIN, RIB ASSEMBLY, AIRCRAFT

Notice Date July 6, 2001  
 Contracting Office Supply Directorate, Contracting Department, PSC Point, NC 28533-0018  
 ZIP Code 28533-0018  
 Point of Contact  
 Award Number M00146-01-M-9015  
 Award Date July 5, 2001

**JOHN S. GORDON**  
 United States Attorney  
 Central District of California  
 Thom Mrozek, Public Affairs Officer  
 (213) 894-6947  
[thom.mrozek@usdoj.gov](mailto:thom.mrozek@usdoj.gov)

April 4, 2002  
 TWO ORANGE COUNTY MEN INDICTED IN FRAUD SCHEME INVOLVING AIRCRAFT PARTS  
 Two men were arrested today on federal fraud charges that alleged false certifications concerning aircraft parts that they sold. A federal grand jury in Santa Ana yesterday indicted Amanullah Ziad Jamil Gammoh, 52, of Tustin, on charges of conspiracy and parts. Khan was arrested this morning by federal agents, and Gammoh in custody when he surrendered this morning at the United States Courthouse. Both men are scheduled to make their initial court appearance this morning. Khan and Gammoh operated United Aircraft & Electronics in Anaheim and sold aircraft parts. The indictment alleges that Khan and Gammoh



Defense Criminal Investigative Service

Press Release

The Office of the Inspector General (OIG), Department of Defense (DoD), announced today that on April 4, 2002, Amanullah Khan, a.k.a. "Wali Merchant," was arrested subsequent to being indicted on April 3, 2002, by a Federal grand jury within the Central District of California, Santa Ana, CA. Fellow defendant, Ziad Jamil Gammoh, a.k.a. "Al Gammoh," voluntarily surrendered himself through his attorney on April 4, 2002, in lieu of bond. The April 3, 2002, indictment charged each Khan and Gammoh with one count of alleged conspiracy and nine counts of representing material facts regarding the sale of aircraft parts to the Aircraft Safety Act of 2000.

**United Aircraft and Electronics**

It was also observed during the search, that UAE was apparently purchasing used and/or surplus fan blades known to be components used on Boeing 737 and Whitney JT9D and JT3D jet engines. These fan blades were in various stages of repair, to include stages wherein welded material had been added to the surface gouges or cracks. Hundreds of fan blades, apparently refinished and packaged for sale, were viewed next to documents indicating UAE was to sell the repaired blades back to commercial customers as if they were new.

Further investigation disclosed that, to date, Oscar Munoz' signature has been observed on every CoC that UAE issued with parts destined for commercial customers. However, there is no evidence that Oscar Munoz actually signed any of the CoCs. None of the other UAE employees questioned had ever heard of Oscar Munoz. In addition, when subpoenaed, UAE could not produce documentation of any CoCs.

Office of Inspector General

Item: Aircraft Parts Owner Jailed for Violating Pretrial Order Regarding SU  
 Date: May 22, 2002  
 Type: Investigation

The investigation also disclosed that Khan had previously been convicted during the early 1990s and served time in Federal prison for prior crimes involving Defense contracting fraud and tax evasion. As a result of that earlier conviction, the U.S. Air Force, in March 1995, officially debarred Khan from contracting with the U.S. Government until July 21, 2010.

If convicted of conspiracy, Khan and Gammoh each face



No. of Debar Transactions : 1  
 Name: United Aircraft & Electronics, Inc.  
 Class: Firm  
 Exclusion Type: Reciprocal  
 Address: 1140 North Kraemer Ave, Anaheim, CA 92705  
 Action Date: 16-OCT-2002  
 Term Date: 07-JUL-2052



VICE CHIEF OF NAVAL OPERATIONS  
 FAX COVER SHEET

TO: CDR Andy NANSOP, Donna, Anos.  
 Phone number: 1-717  
 Fax number: 1-717  
 Total number of pages (if more than one):  
 Comments: A: GUESS WE WILL HAVE TO SEND ANOTHER MAIL SCREEN AS USUAL

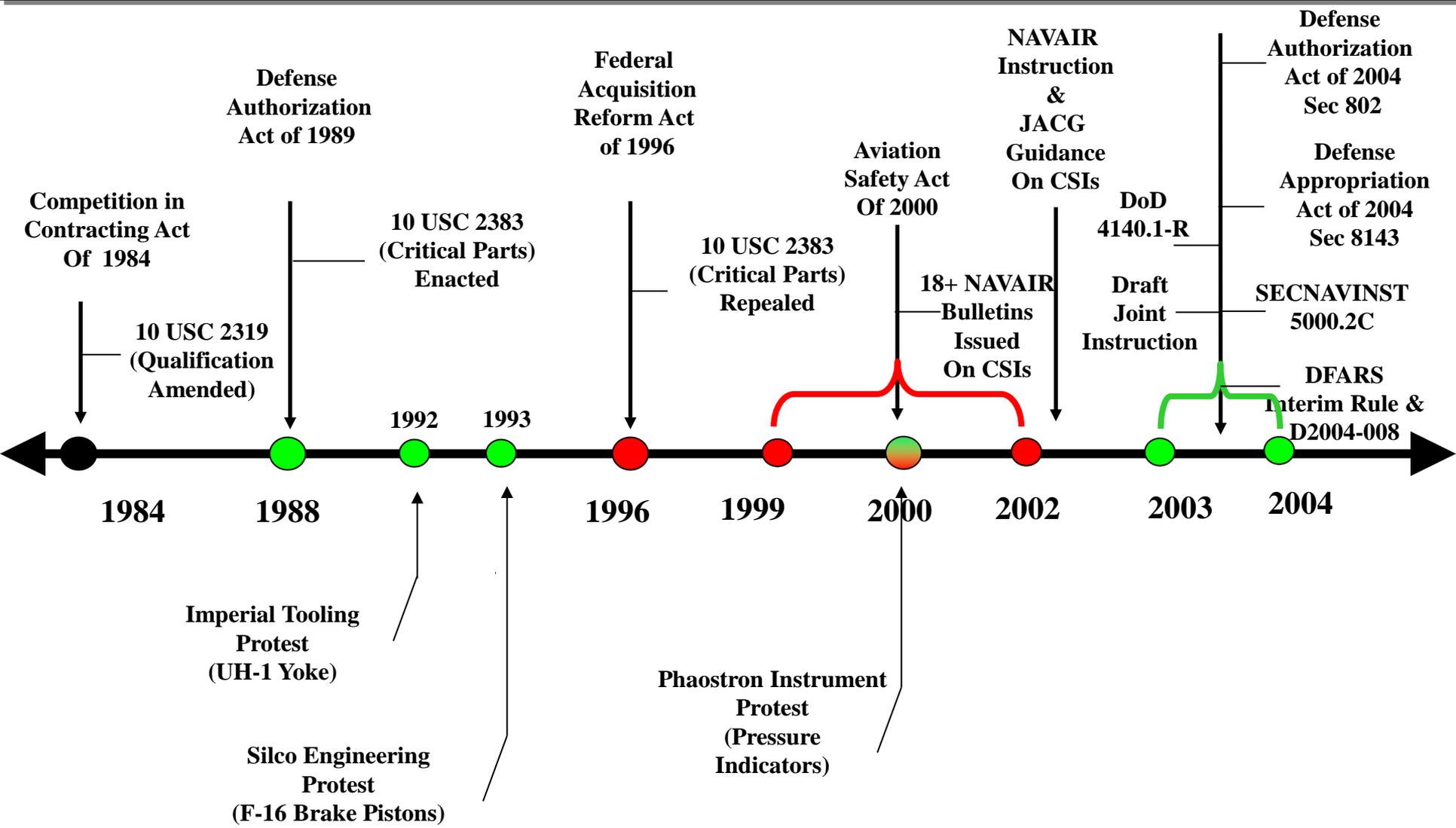
The DOTIG and FBI investigation determined that, in or about August 2001, UAE delivered sixty "steel" grip assemblies (Bell-Textron part number 205-011-711-101) to a company called Turboanalysis, Inc., located in Phoenix, AZ. The grip assemblies connect the tail rotor to the hub on the Bell 205 helicopter, and are considered to be critical to flight safety. UAE included a CoC signed by "Oscar Munoz", UAE's quality control manager, as well as an FAA Form 8130-3. The DOTIG and FBI subsequently determined that the "grip assemblies" UAE supplied were, in fact, sixty surplus Bell-Textron part number 204-011-728, manufactured from "aluminum". Their investigation likewise determined that the FAA Form 8130-3 provided by UAE with the grip assemblies was a fabrication, and that UAE was a fictitious business formed by a college student named Tony Khan.

of United Aircraft and Electronics, Inc. at the time, in this business concerning the first arrested on Aircraft parts used in the case. Khan was released on bail after being charged with fraud. UAE, on charges of fraud and false certifications. A third defendant, Oscar Munoz, that Kahn sold the parts to the Air Force F-15 fighters until his scheduled trial.

# Aviation Critical Safety Items (Pre-2002)

ISSUES	Law	Policy & Regs
<b>CSIs &amp; Critical Characteristics Not Always Identified</b>		<b>Confusing</b>
<b>Different Qual Req's, Incomplete Approved Source List, &amp; No Reciprocity</b>		
<b>Acquisition &amp; Log Processes Not Bound By CSI Procedures</b>	<b>Counter</b>	<b>Counter</b>
<b>Defective Surplus CSIs Repurchased &amp; Local Purchases Work-Arounds</b>		<b>Minimum</b>
<b>1-Time Mfg &amp; Reverse Eng</b>		
<b>QA Requirements Waived or Ignored (QALIs, FAT, PLT)</b>		<b>Changing</b>
<b>Technical Changes (ECPs &amp; Waivers) Approved Without Consultation</b>		<b>Counter</b>
<b>Technical Directives (e.g., Bulletins) Not Always Fully Followed</b>		
<b>Disposal Did Not Mutilate Defective/Suspect CSIs</b>		
<b>Management Oversight &amp; Awareness Spotty</b>		
<b>Poor Notification By Suppliers of Safety Deficiencies In Delivered Products</b>		

# CSI Timeline (Current)



# Phaostron Instrument & Electronic Company (GAO B-284-456, 2000 CPD P 65)

- **Background:**

- **Qualified Products List (QPL) For Critical Pressure Indicators**
  - **2 Firms Listed on QPL ... Phaostron Was Listed**
- **DSCR Contract Award to Unlisted Firm (AIC) in November 1999**
  - **Determined AIC Was Qualified And Should Be Added To QPL**
- **Phaostron Protested Award As Improper**

- **GAO Determination (April 20, 2000):**

“... applicable statute, 10 U.S.C. 2319 (1998) is designed to encourage competition ... by providing prospective offerors an enhanced opportunity to have their products qualified prior to award of a contract. To that end, the statute affords contracting officers the authority to find that a product meets (or will meet) a qualification requirement by the time of contract award, regardless of whether the item is listed on the QPL (10 U.S.C S 2319(c)(3); FAR 9.202(c). **Nothing in statute limits the contracting officer’s authority to approve a product for a procurement based on whether the product has been tested or approved by a particular entity.**”

# 10 U.S.C. 2319

## “Encouragement of New Competitors”

10 U.S.C. 2319 (pertains to qualification req'ts after Oct 19, 1984):

- a) “... qualification requirement means a requirement for testing or other quality assurance demonstration that must be completed by an offeror before award of a contract”
- b) “... The head of the agency shall, before establishing a qualification requirement:”
  - 1) Prepare written justification
  - 2) Make all qualification requirements available to offers ... limited to least restrictive to meet purposes
  - 3) Estimate costs of testing & evaluation
  - 4) Prompt opportunity to demonstrate ability
  - 5) If testing provided under contract, use contractor not expected to benefit by results
  - 6) Advise offerors of results promptly
- c) ((3) “A potential offeror may not be denied the opportunity to submit and have considered an offer ... if the potential offer can **demonstrate to the satisfaction of the contracting officer** that the potential offeror or its product meets the standards established for qualification or can meet such standards before the date specified for award of the contract”.
- (d)(2)(f) “Except in an emergency as determined by the head of the agency, whenever the head of the agency determines not to enforce a qualification requirement for a solicitation, the agency may not thereafter enforce that qualification requirement unless the agency complies with the requirements of subsection (b).”

# Aviation Critical Safety Items

## Policy, Regulation, & Statutory Initiatives

ISSUES	NAVAIRINST 4200.25D (June 02)	JACG CSI Guidance (August 2002)	Numbered DoD- Wide Instruction (Coordinated)	DoD Regulation 4140.1-R (May 03)	DFARS (Interim Rule)	P.L 108-136 (FY04 Auth Act Sec 802 (Nov 03)	SECNAV INST 5000.2C & Guides
ID CSIs & Critical Char's	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Qual Req'ts, App'd Sources & Reciprocity	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Acquisition & Log Processes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Surplus CSIs & Local Purchases	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Local Purch		
1-Time Mfg & Reverse Eng	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Rev Eng		
QA Req'ts (QALIs, FAT, PLT)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Tech Changes (ECPs, W & Ds)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Tech Directives (e.g., Bulletins)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Disposal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
Notification of Safety/ Supplier Deficiencies			<input checked="" type="checkbox"/>		2004 -D008		

**QUALITY CONTROL IN PROCUREMENT OF AVIATION  
CRITICAL SAFETY ITEMS AND RELATED SERVICES.****(P.L. 108-136, Sec 802 ... FY 2004 National Defense Authorization Act)**

**(a) QUALITY CONTROL POLICY.**—The Secretary of Defense shall prescribe a quality control policy for the procurement of aviation critical safety items and the procurement of modifications, repair, and overhaul of such items.

**(b) CONTENT OF POLICY.**—The policy shall include the following requirements:

**(1) That the head of the design control activity for aviation critical safety items establish processes to identify and manage aviation critical safety items and modifications, repair, and overhaul of such items.**

**(2) That the head of the contracting activity for an aviation critical safety item enter into a contract for such item only with a source approved by the design control activity in accordance with section 2319 of title 10, United States Code.**

**(3) That the aviation critical safety items delivered, and the services performed with respect to aviation critical safety items, meet all technical and quality requirements specified by the design control activity.**

**(c) DEFINITIONS.**—In this section, the terms “aviation critical safety item” and “design control activity” have the meanings given such terms in section 2319(g) of title 10, United States Code, as amended by subsection (d).

**(d) CONFORMING AMENDMENT TO TITLE 10.**—Section 2319 of title 10, United States Code, is amended—

**(1) in subsection (c)(3), by inserting after “the contracting officer” the following: “(or, in the case of a contract for the procurement of an aviation critical item, the head of the design control activity for such item)”;** and

**(2) by adding at the end the following new subsection:**

**“(g) DEFINITIONS.**—In this section:

**“(1) The term ‘aviation critical safety item’ means a part, an assembly, installation equipment, launch equipment, recovery equipment, or support equipment for an aircraft or aviation weapon system if the part, assembly, or equipment contains a characteristic any failure, malfunction, or absence of which could cause a catastrophic or critical failure resulting in the loss of or serious damage to the aircraft or weapon system, an unacceptable risk of personal injury or loss of life, an uncommanded engine shutdown that jeopardizes safety.**

**“(2) The term ‘design control activity’, with respect to an aviation critical safety item, means the systems command of a military department that is specifically responsible for ensuring the airworthiness of an aviation system or equipment in which the item is to be used.”.**

# Interim DFARS Rule

Sept 17, 2004 Federal Register:

## **PART 209 CONTRACTOR QUALIFICATIONS**

### **209.270 Aviation Critical Safety Items**

#### **209.270-3 Policy**

- (a) Contracts only with Design Control Activity Approved Sources**
- (b) Approval Authorities Specified in This Section Apply To CSIs**

#### **209-270-4 Procedures**

##### **(a) Design Control Activity Shall:**

- (1) Approve Qualification Requirements**
- (2) Qualify & ID Aviation CSI Suppliers and Products**

##### **(b) Contracting Officer Shall:**

- (1) Ensure Design Control Activity Approves CSI Contractors**
- (2) Refer Unapproved Sources to Design Control Activity**

## **PART 246 QUALITY ASSURANCE**

### **246.407 (S-70) Nonconforming Supplies or Services**

**Design Control Activity Approves --- May Delegate “Minors”**

### **246.504 Certificate of Conformance**

**Design Control Activity Concurrence Required**

### Application:

- All Aviation Programs (Acquisition and Repair/Overhaul)

### Criticality Determination

- Service Design Control Activity Decision
  - Determining Factor Is Failure Consequence ... Not Probability

### Sourcing

- Approved Sources Only ... 3-Year Re-Evaluation
- Source Approval Reciprocity Across Services
- Surplus Buys, Local Purchase, & Organic Mfg ... When Approved

### Quality

- ECPs, Waivers, & Deviations Approved by Design Control Activity
  - Minors may be delgated
- Government Source QA Required
- Reverse Engineering As Last Resort

### Disposal

- Mutilate Defective, Suspect, & Undocumented CSIs

# Aviation Critical Item Management “User’s Guide”

<b><u>NEW</u> *</b> Process Coverage Areas	NAVAIR ASQ Desktop Guide 1999	NAVAIR CIM Desktop Guide 2004	JACG DOD CSI Management Handbook**
Checklist for CSI Determination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Detailed Service Process Flowcharts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Logistics Documentation of CSIs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Organic CSI Manufacturing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1-Time Mfg & Reverse Eng	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Procedures/Checklists	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Manufacturing Capability Surveys	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tie-in to DLA 339 System	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Disposal	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Common Use Item Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<input type="checkbox"/>	No Coverage
<input type="checkbox"/>	Partial Coverage
<input checked="" type="checkbox"/>	Guidance Coverage
<input type="checkbox"/>	Planned Coverage

\* Existing Comparable Coverage Areas Not Indicated

\*\* Will Only Address Aviation CSIs