

Suspected Unapproved Parts

**Why should I worry
&
What can I do**

What will we talk about?

- 3 type of parts in the aviation system
- Why should we worry about SUP's
- What kind of parts are being found
- Where do they come from
- What is the solution to stopping them
- What can WE do about them
- Who can we count on to resolve this problem

We have to deal with 3 types of parts

**Approved,
Unapproved,
or**

Suspected Unapproved?

WHAT IS AN “APPROVED PART?”

“Approved part” is a part that has been:

Properly Designed

Properly Produced

Properly Maintained

Properly Documented

“APPROVED PART”

The term “approved part,” in quotations, is a colloquial term that means a part that has been designed & produced in accordance with Part 21, maintained in accordance with Parts 43 and 91, and meets applicable design standards, and is **in a condition for safe operation** and has documents to show this.

WHAT IS AN UNAPPROVED PART?

An unapproved part is a part or material that does not meet any ONE (1) of the 4 requirements of an “Approved Part.”

Approved Design

Properly Produced

Properly Maintained

Properly Documented

THEN WHAT IS A SUSPECTED UNAPPROVED PART?



SUSPECTED UNAPPROVED PART

A **Suspected Unapproved Part**, a “SUP”, is a part, component, or material that is suspected of not meeting the requirements of an “approved part.” **A part that, for any reason, YOU suspect may not be “approved.”**

Indicators of SUPs have included: a different finish, size, color, improper (or lack of) identification, incomplete or altered documentation and many others.

IS A SUP AN UNSAFE PART?

The problem is - we don't know.



It could take Costly & Extensive testing and evaluation to make this determination.

Suspected Unapproved Parts

Why should I worry?

Why should I worry?

- **Loss of Life**
- **Flight Safety**
- **Structural/Operational Integrity**
- **Manufacturer's/Operator's, Repair Stations And Your Reputations**
- **Lost Customers & Future Business**
- **Recall Costs**
- **Rework Costs**
- **Down Time**
- **Legal Action**

SUP FACTS

The airworthiness of aeronautical products is in question if:

The design, manufacture, repair and or quality of the parts and documents are unknown.

- Number of SUP Cases from 1995 to 2000 = 1860**
- Number of Cases with Unapproved Parts = 478**

SUP FACTS

- There are people and facilities who are using you and your Certificates as a way to make a living by introducing Unapproved Parts into the aviation system.
- When **YOU** accept and install these parts **YOU** have taken on the **responsibility for the Airworthiness of the Parts and Products involved.**

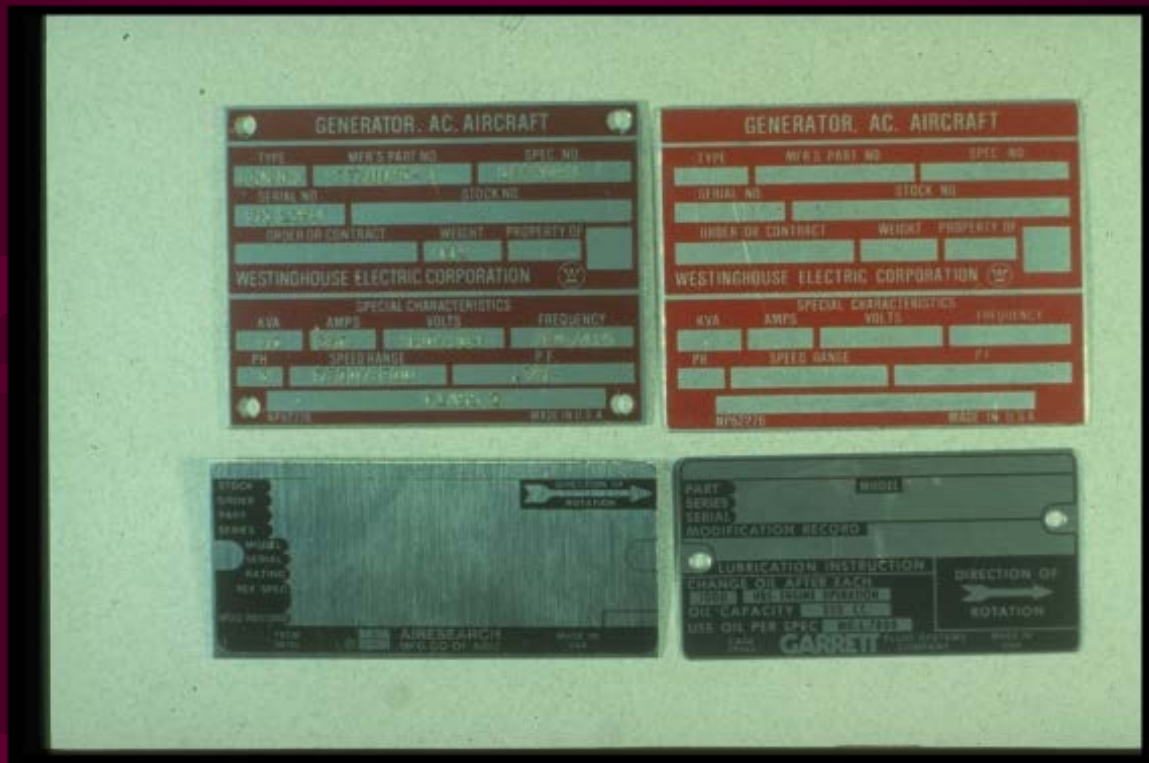
What kind of parts are being found?

- Lets look at a small sample of Unapproved parts we are finding in the aviation system as we speak.
- Most of these parts were already into the system and installed or in the process of being installed when found.

Counterfeit identification plates

APPROVED

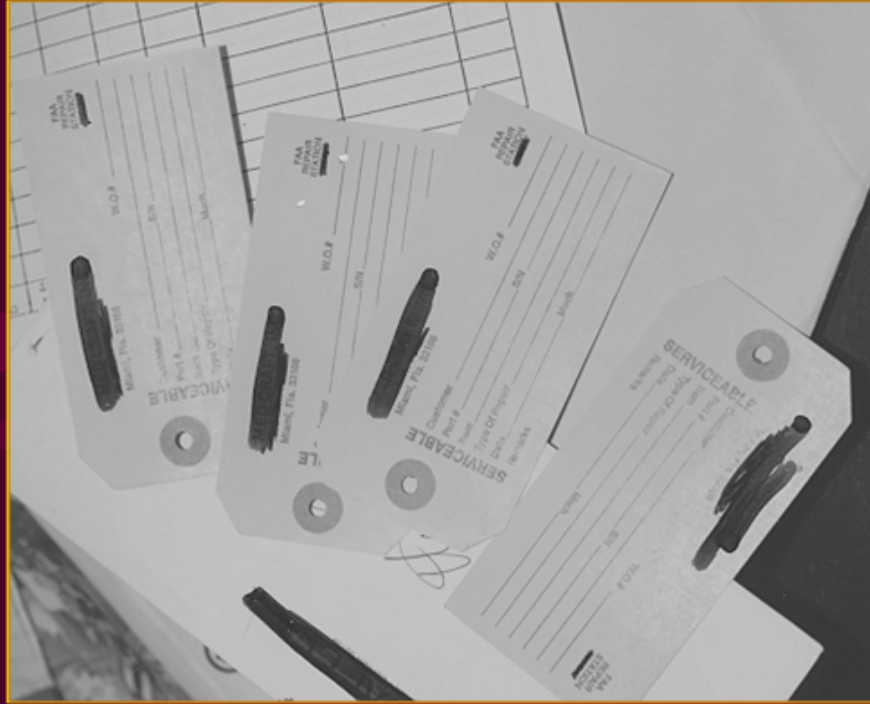
UNAPPROVED



UNAPPROVED

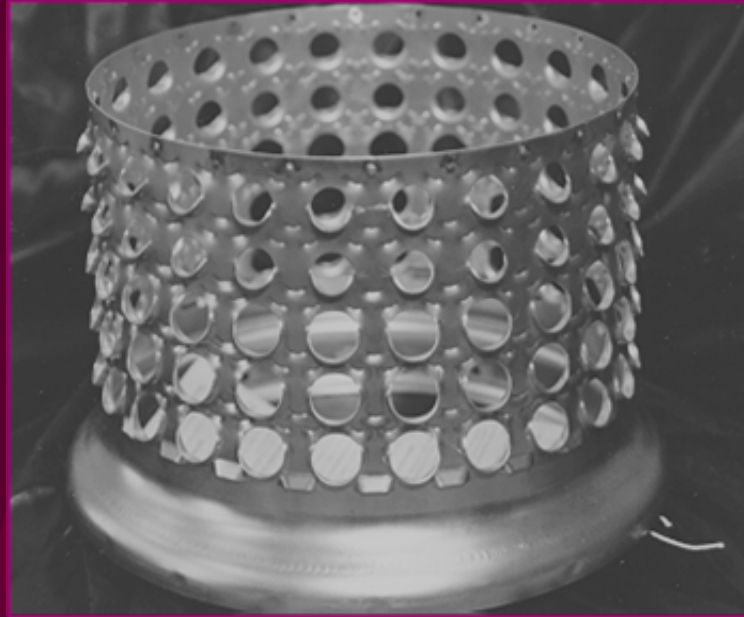
APPROVED

Counterfeit yellow tags



**COUNTERFEIT YELLOW TAGS, REQUEST A COPY OF
WORK ORDER AS REFERENCED ON THE TAG**

Counterfeit combustion liners



COUNTERFEIT WITH A LIFESPAN FROM 110 - 125
HOURS OF OPERATION

Counterfeit Swash plate support

PARTS SHOULD FIT
WITHOUT ANY
ADJUSTMENTS

COUNTERFEIT INCLUDING THE ID PLATE



Counterfeit logos



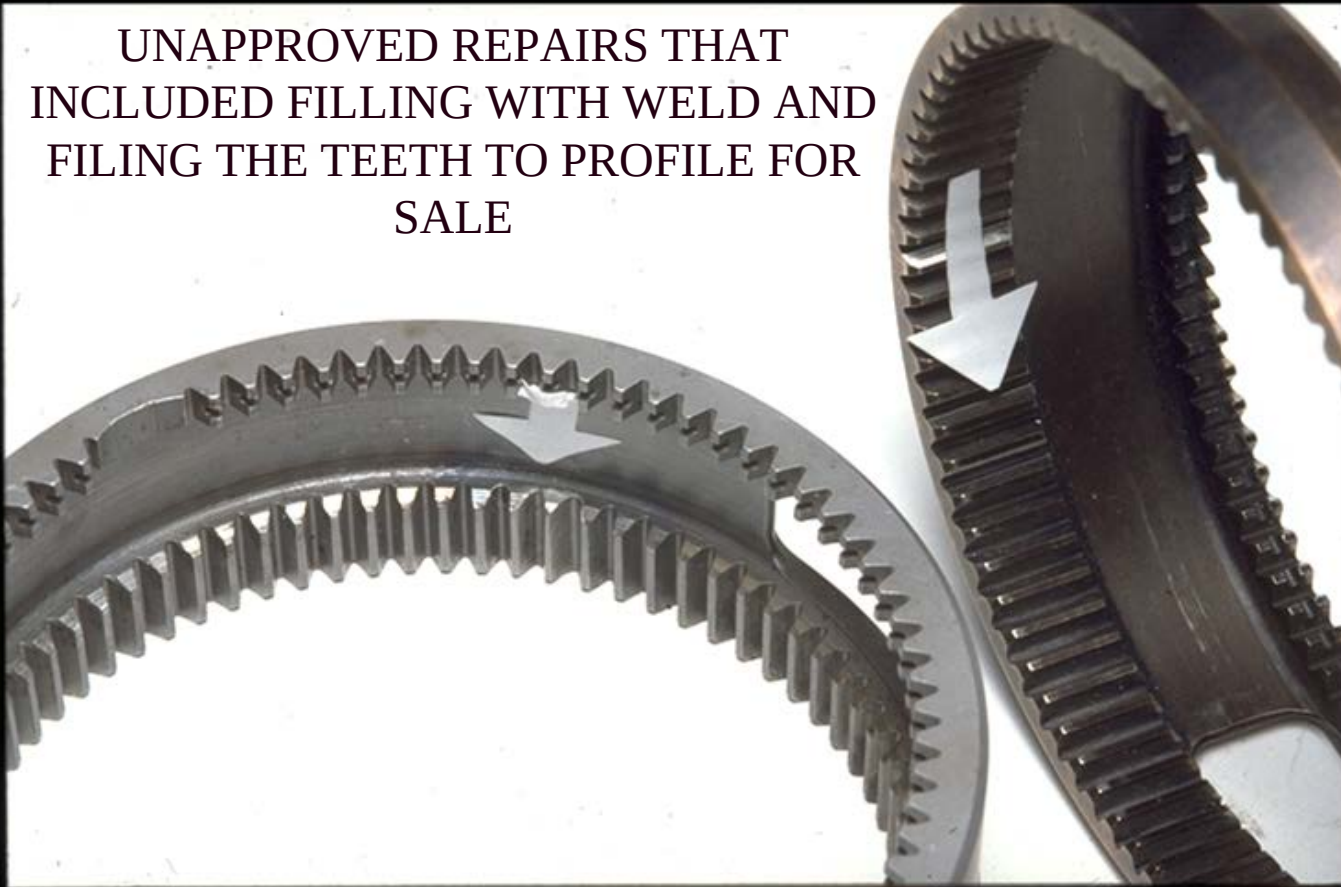
LOGO
PRINTED
WRONG
ON BOX

Bearing spacers

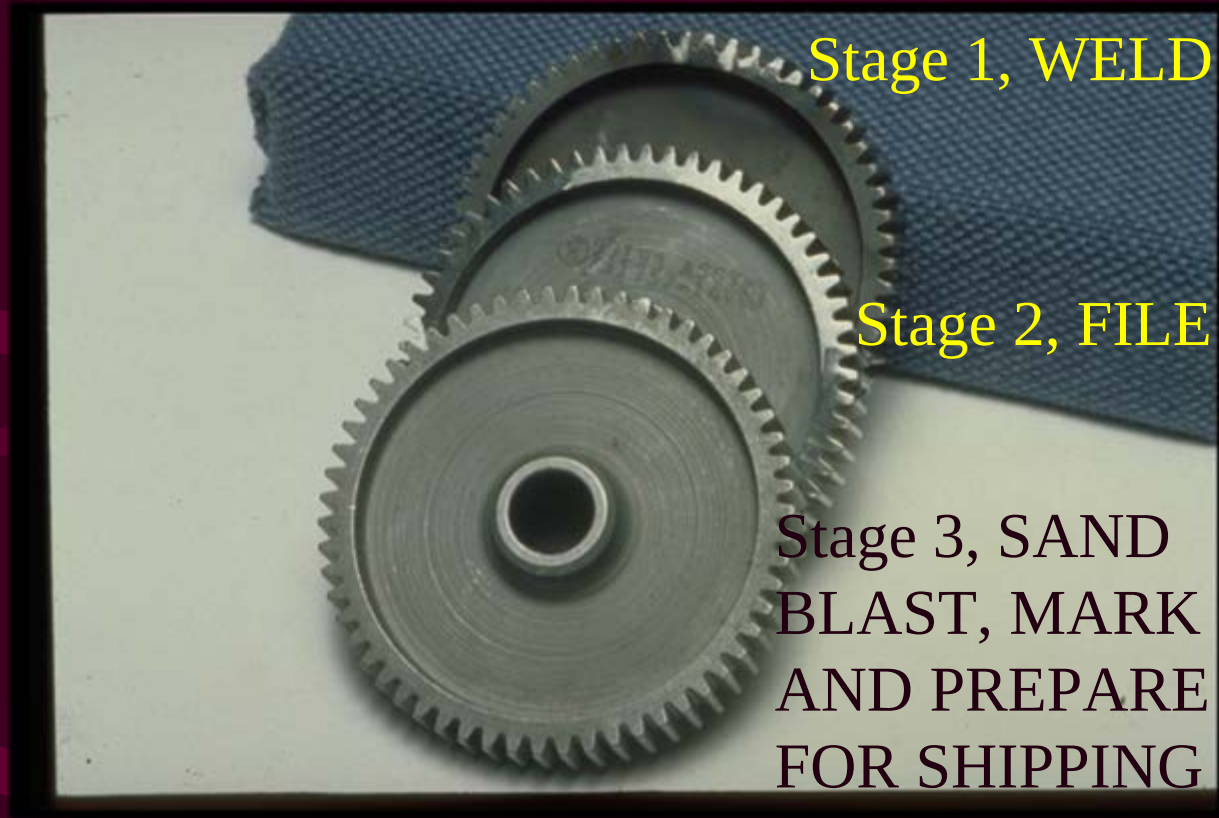


Gears made to look new again

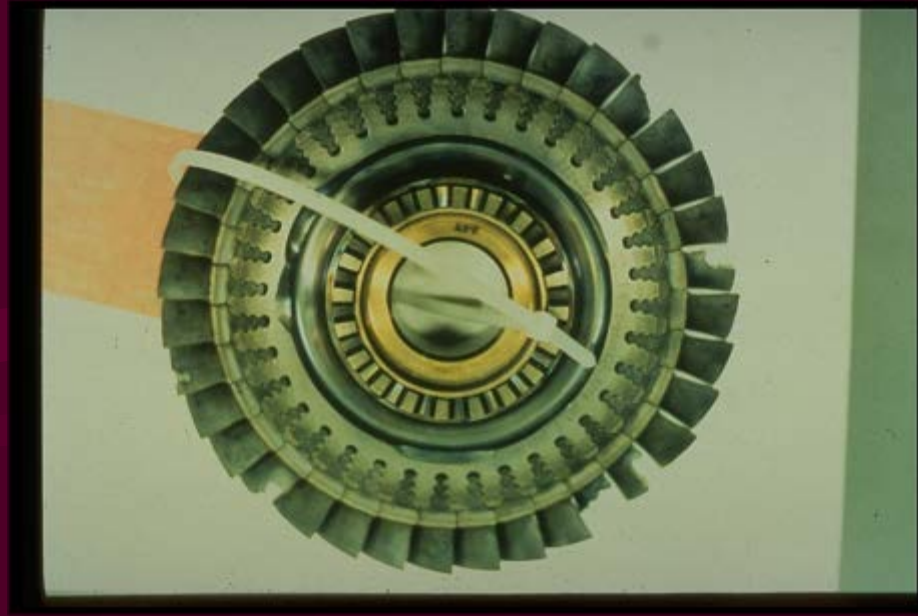
UNAPPROVED REPAIRS THAT
INCLUDED FILLING WITH WELD AND
FILING THE TEETH TO PROFILE FOR
SALE



Unapproved repairs



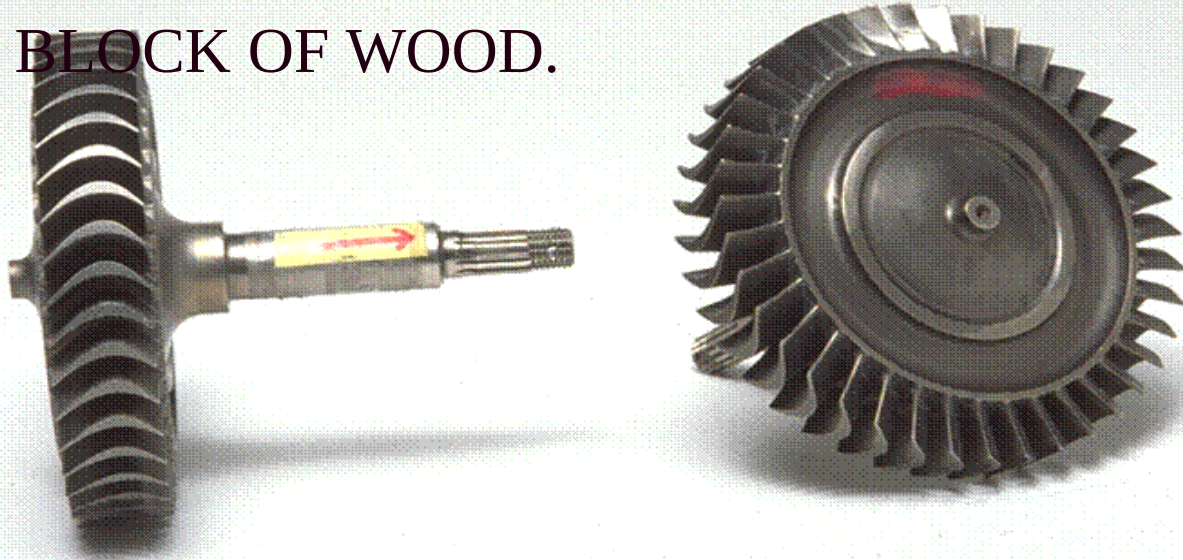
Life limited parts past limits



**ACQUIRE THE LIFE HISTORY ON REQUIRED
PARTS. BE CAREFUL OF CONTINUED TIMED PARTS
WITH NO HISTORY OF LIFE REMAINING**

Turbine wheels

SOLD AS NEW WITH TWISTED SPLINE AND
INSTRUCTIONS TO SEAT WITH HAMMER
AND BLOCK OF WOOD.



Unapproved Bearings

**AUTOMOTIVE BEARINGS USED IN PLACE OF
AVIATION QUALITY**



**GREASE SEAL MAY BE AN INDICATOR IN THE
DIFFERENCE**

Making old parts look like new

EXPIRED LIFE ITEM WITH COUNTERFEIT
DATA PLATE AND HISTORY CARD.



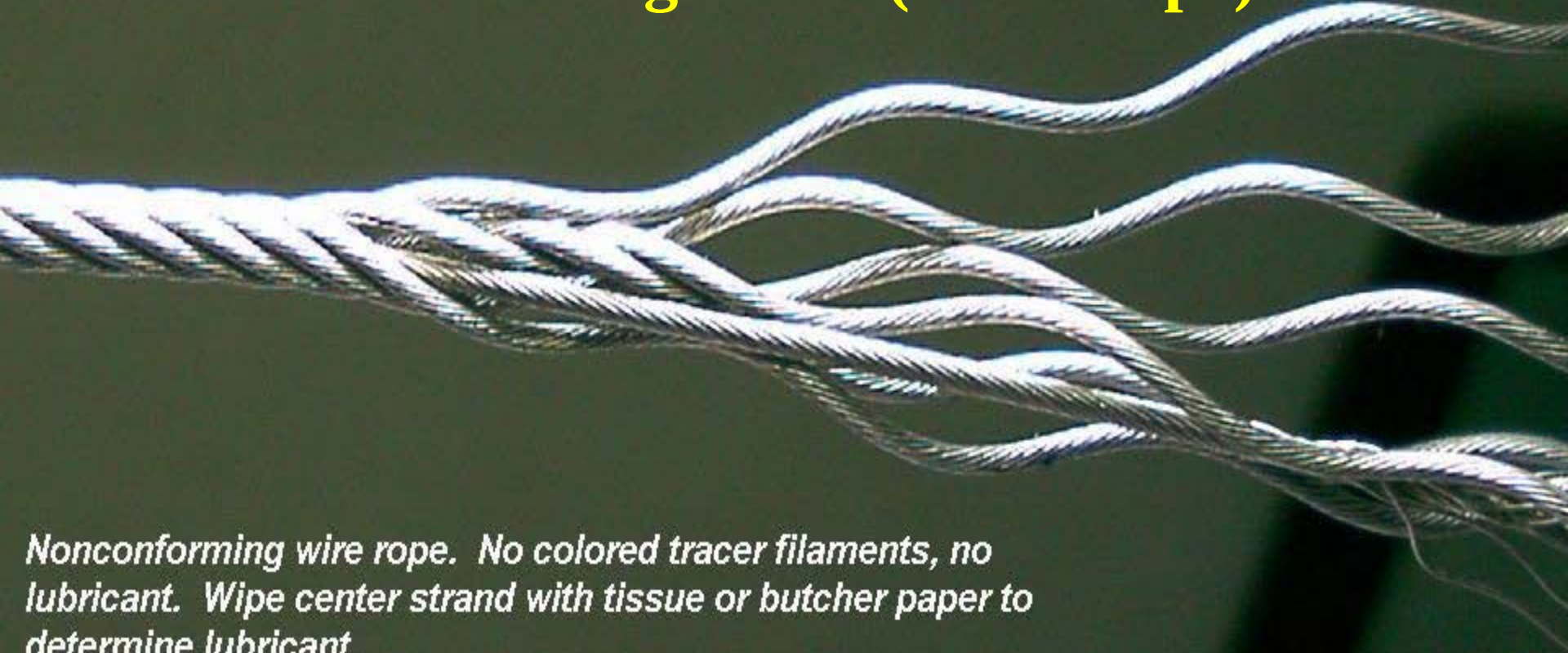
Standard hardware

EVEN STANDARD PARTS LIKE THESE ARE
COUNTERFEITED



INSPECT BY USING THE STANDARD
TO ENSURE CONFORMITY TO THE
PUBLISHED STANDARD

Non Conforming Cable (Wire Rope)



Nonconforming wire rope. No colored tracer filaments, no lubricant. Wipe center strand with tissue or butcher paper to determine lubricant.

Special hardware

APPROVED



UNAPPROVED

FOUND BY MARKING DIFFERENCE. Look at the machine finish on the shoulder. This was undetected at the time of receiving inspection

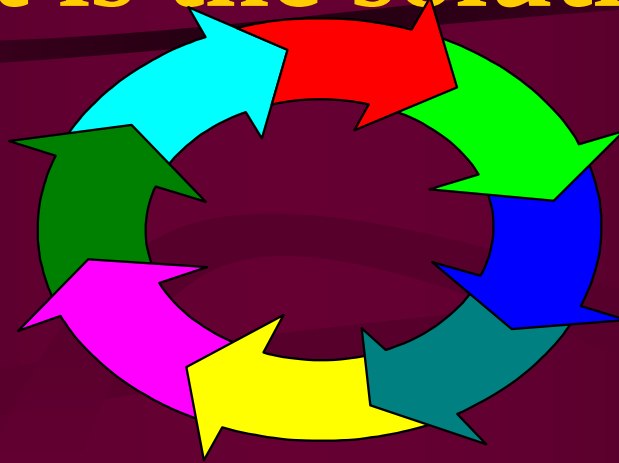
Where do they come from?

- AVR-20 maintains a data base where we store this information. We can retrieve any or all the information to determine where the parts are being found and who is placing them into the Global Aviation system.
- Lets look at some of the information.

What are the Trends

DESCRIPTION	1995	1996	1997	1998	1999	2000	
Unknown Type	0	1	3	0	10	23	37
Air Carrier	0	2	6	20	11	9	48
Non-cert Producer	22	6	26	24	17	15	110
Non-cert Maint	1	1	6	16	5	11	40
Distributor	84	96	70	67	57	43	417
Mechanic	53	53	18	2	5	4	135
Foreign/non US Company	4	1	5	13	4	8	35
Operator	7	7	16	13	5	1	49
Prod. Approval Holder	23	11	35	43	39	32	183
Repair Station	59	107	109	89	121	84	569
Supplier	42	21	18	26	15	11	133
Other	26	15	29	22	7	5	104
TOTAL	321	321	341	335	296	246	1869

What is the solution?



**THE SOLUTION TO THE PROBLEM OF
SUSPECTED UNAPPROVED PARTS IS:**

**FOR EVERYONE TO WORK TOGETHER TO DETECT AND REMOVE THEM
FROM THE GLOBAL AVIATION SYSTEM**

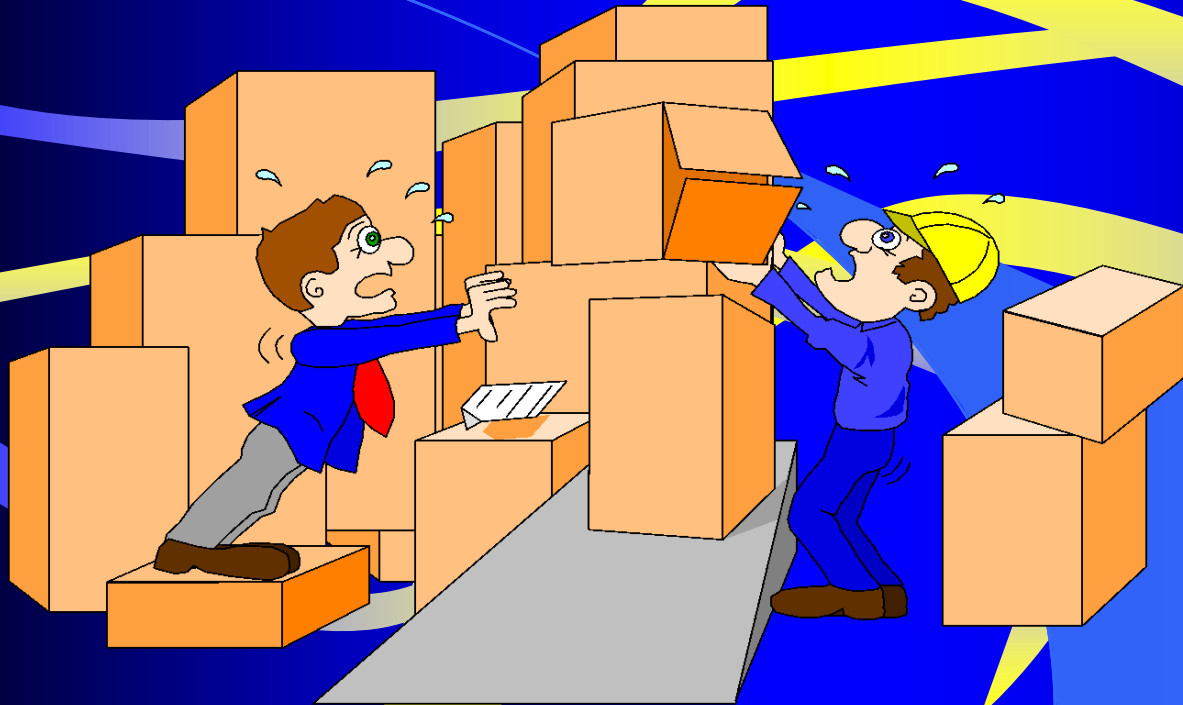
**MECHANICS, AUTHORIZED INSPECTORS, INDUSTRY, SUPPLIERS,
DISTRIBUTORS, ASA, AFS, AIR, CAS, OIG, FBI, CUSTOMS, CAA'S, COAST
GUARD, ETC.**

Set A Defense Against SUPs

We must all work together:

To promote the highest level of aviation safety by eliminating the potential safety risk posed by the entry of “unapproved parts” in the U.S. & Global aviation community.

DETECTION & REMOVAL IS A TEAM ACTIVITY



SO WHAT CAN YOU DO

- **KNOW YOUR SUPPLIERS**
- **ESTABLISH SUPPLIER SURVEILLANCE**
- **ENSURE YOUR SUPPLIERS: ARE RATED, HAVE PROCEDURES, QUALIFIED PEOPLE AND A QUALITY SYSTEM**
- **TRACK ACCEPTANCE DATA FOR REJECTS**
- **ENHANCE TRAINING FOR RECEIVING & SUP AWARENESS**

SO WHAT CAN YOU DO

- **ENHANCE ORDERING & RECEIVING INSPECTIONS AS A TEAM**
- **INSPECT PARTS & DOCUMENTS FOR AIRWORTHINESS**
- **REQUEST COPIES OF WORK ORDERS FOR YOUR RECORDS**
- **SEGRATE QUESTIONABLE PARTS & MATERIALS**

SO WHAT CAN YOU DO

- **MUTILATE YOUR UNSALVAGEABLE PARTS & MATERIALS**
- **REPORT SUPS TO THE FAA**

Who can help resolve the problem

- Everyone working together can resolve the problem of UNSAFE parts in the aviation system.
- What has the FAA done at this point?
- We also have some help in the form of Law Enforcement Authorities and a NEW TOOL to help all of us fight back.

JOINT EFFORT

- **The FAA has made significant in-roads in addressing the unapproved parts issue with your help. This effort, however, has not been unilateral. Law enforcement agencies, as well as the aviation industry, have also been aggressively addressing unapproved parts sometimes resulting in frustration.**

LAW ENFORCEMENT

- **Since 1993, federal law enforcement agencies have secured approximately 500 criminal indictments for the manufacture, distribution, or installation of unapproved parts. Most ended with short sentences and or fines.**
- **So we have a NEW TOOL to assist us.**

The New SUP Law



H.R. 1000

**Wendell H. Ford Aviation Investment and
Reform Act for the 21st Century**

SUP Law: Offenses

Sec. 38. Fraud involving aircraft or space vehicle parts in interstate or foreign commerce

(a) OFFENSES-

- (1)(A) falsifies or conceals a material fact concerning any aircraft or space vehicle part;**
- (B) makes any materially fraudulent representation concerning any aircraft or space vehicle part; or**
- (C) makes or uses any materially false writing, entry, certification, document, record, data plate, label, or electronic communication concerning any aircraft or space vehicle part;**

SUP Law: Offenses

(2) exports from or imports or introduces into the United States, sells, trades, installs on or in any aircraft or space vehicle any aircraft or space vehicle part using or by means of a fraudulent representation, document, record, certification, depiction, data plate, label, or electronic communication; or

SUP Law: Offenses

(3) attempts or conspires to commit an offense described in paragraph (1) or (2), shall be punished as provided in subsection (b)

SUP Law: Penalties

(b) PENALTIES-

(1) AVIATION QUALITY- If the offense relates to the aviation quality of a part and the part is installed in an aircraft or space vehicle, a fine of not more than \$500,000, imprisonment for not more than 15 years, or both.

SUP Law: Penalties

(2) FAILURE TO OPERATE AS REPRESENTED

- If, by reason of the failure of the part to operate as represented, the part to which the offense is related is the proximate cause of a malfunction or failure that results in serious bodily injury (as defined in section 1365), a fine of not more than \$1,000,000, imprisonment for not more than 20 years, or both.

SUP Law: Penalties

(3) FAILURE RESULTING IN DEATH- If, by reason of the failure of the part to operate as represented, the part to which the offense is related is the proximate cause of a malfunction or failure that results in the death of any person, a fine of not more than \$1,000,000, imprisonment for any term of years or life, or both.

SUP Law: Penalties (cont'd)

(4) OTHER CIRCUMSTANCES- In the case of an offense under subsection (a) not described in paragraph (1), (2), or (3) of this subsection, a fine under this title, imprisonment for not more than 10 years, or both.

SUP Law: Penalties

- **(5) ORGANIZATIONS-** If the offense is committed by an organization, a fine of not more than--
 - » **(A) \$10,000,000** in the case of an offense described in paragraph (1) or (4); and
 - » **(B) \$20,000,000** in the case of an offense described in paragraph (2) or (3).

SUP Law: Civil Remedies

(c) CIVIL REMEDIES-

(1) IN GENERAL- The district courts of the United States shall have jurisdiction to prevent and restrain violations of this section by issuing appropriate orders, including--

SUP Law: Civil Remedies

(A) ordering a person (convicted of an offense under this section) to divest any interest, direct or indirect, in any enterprise used to commit or facilitate the commission of the offense, or to destroy, or to mutilate and sell as scrap, aircraft material or part inventories or stocks;

SUP Law: Civil Remedies

(B) imposing reasonable restrictions on the future activities or investments of any such person, including prohibiting engagement in the same type of endeavor as used to commit the offense; and

SUP Law: Civil Remedies

(C) ordering the dissolution or reorganization of any enterprise knowingly used to commit or facilitate the commission of an offense under this section making due provisions for the rights and interests of innocent persons.

SUP Law: Criminal Forfeiture

(d) CRIMINAL FORFEITURE-

(1) IN GENERAL- The court, in imposing sentence on any person convicted of an offense under this section, shall order, in addition to any other sentence and irrespective of any provision of State law, that the person forfeit to the United States--

SUP Law: Criminal Forfeiture

(A) any property constituting, or derived from, any proceeds that the person obtained, directly or indirectly, as a result of the offense; and

SUP Law: Criminal Forfeiture

(B) any property used, or intended to be used in any manner, to commit or facilitate the commission of the offense, if the court in its discretion so determines, taking into consideration the nature, scope, and proportionality of the use of the property on the offense.

RELATED PUBLICATIONS

- **A.C. 21-29B, Detecting and Reporting Suspected Unapproved Parts.**
- **FAA Order 8120.10A, Suspected Unapproved Parts Program.**

RELATED PUBLICATIONS

- **A.C. 00-56, Voluntary Industry Distributor Accreditation Program.**
- **A.C. 20-62, Eligibility, Quality and Identification of Approved Aeronautical Replacement Parts.**
- **A.C. 20-142, Eligibility and Evaluation of U.S. Military Surplus Flight Safety Critical Aircraft Parts, Engines, and Propellers.**
- **A.C. 21-20, Supplier Surveillance Procedures.**
- **A.C. 21-38, Disposition of Unsalvageable Aircraft Parts and Materials.**

RELATED PUBLICATIONS

- **FAA Order 8120.2, Production Approval and Surveillance Procedures.**
- **FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Products.**
- **FAA Order 8110.42, Parts Manufacturer Approvals Procedures.**

THINGS TO REMEMBER

- If you remember nothing else from today Please Remember this

PUBLIC CONSIDERATIONS:

- **WE ARE PROFESSIONALS THAT SHOULD BE WORKING TO PROVIDE A SAFE MODE OF TRANSPORTATION BASED ON OUR TRAINING AND EXPERIENCE. THIS IS PROJECTED TO THEM THROUGH OUR DECISIONS AND ACTIONS.**
- **THEY TRUST US WITH THEIR LIVES AND, THE LIVES OF THEIR LOVED ONES EVERYDAY BY CHOOSING TO FLY.**
- **STAND UP TO THAT TRUST, THIS IS YOUR INDUSTRY, HELP TO KEEP IT SAFE.**



**THE WORK YOU DO,
AND THE DECISIONS
YOU MAKE
EVERYDAY, IMPACTS
THOUSANDS OF LIVES**

**MAKE EVERYDAY
A SAFE ONE**

TASK FORCE HOTLINES

- **Email 9-AWA-AVR20-SUPS@FAA.GOV**
 - **AVS Safety Hotline 1-800-555-1111**

THE END

Thank you for your attention.

Please click

HERE

to go to exam.