



# Suspected Unapproved Parts

# 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**

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 145, and meets applicable design standards, and is in a condition for safe operation and has documents to show this.

**A.C. 21-29B Par 4**

# WHAT IS AN UNAPPROVED PART?

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

**Properly Designed**

**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.

**AC 21-29 Par 4**



# 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.

# 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
- Legal Action

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

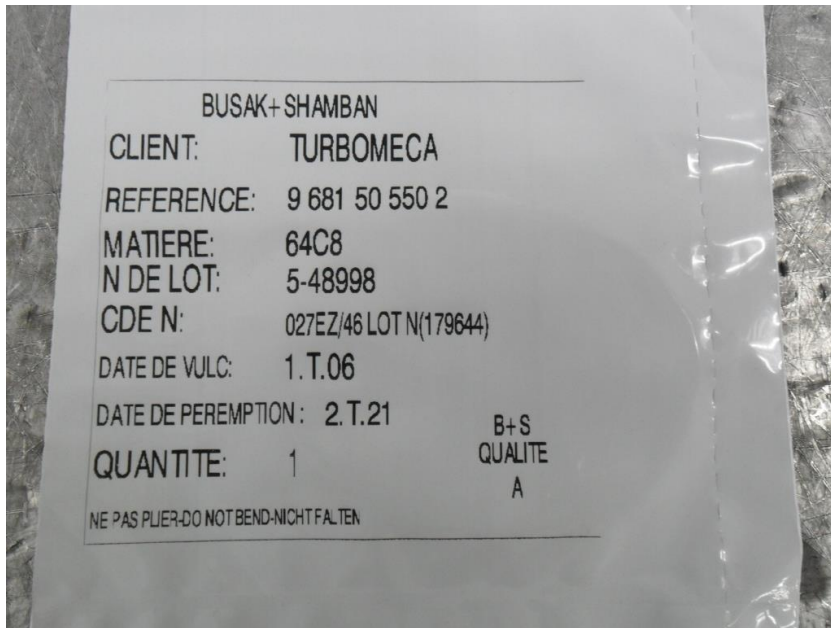
- There are people and facilities who are using you and your Certificates as a way to make a living by introducing Unapproved Parts into the aviation system.
- When YOU accept and install these parts YOU have taken on the responsibility for the Airworthiness of the Parts and Products involved.

# WHAT KIND OF PARTS ARE BEING FOUND?

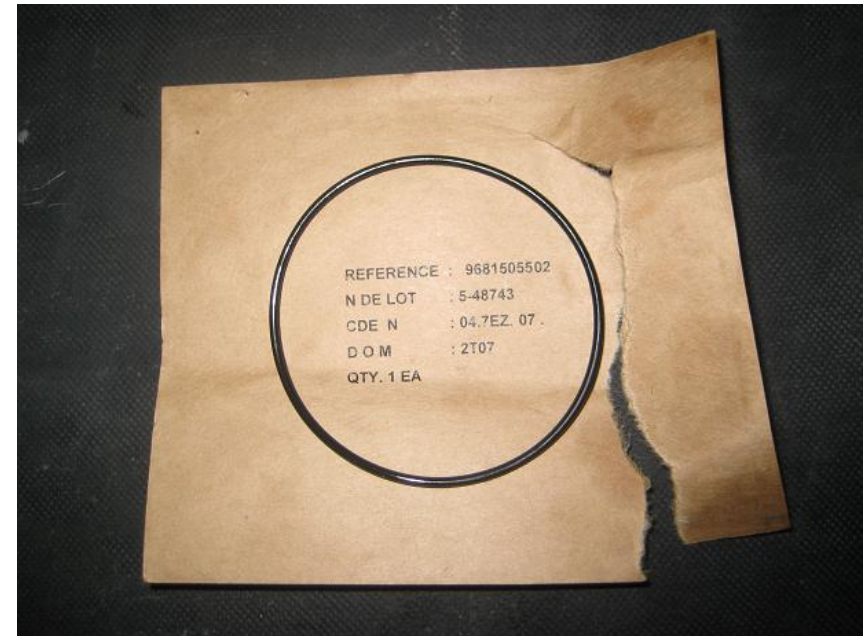
- Lets look at a small sample of Unapproved parts we are finding in the aviation system as we speak.
  
- Most of these parts were already into the system and installed or in the process of being installed when found.

# COUNTERFEIT O'RINGS – REAL CASE IN MALAYSIA

## APPROVED



## UNAPPROVED



# BEARING SPACERS





# TURBINE WHEELS

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



# TURBINE WHEELS

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

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

# What can we do ?

# 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, ETC.

# SO WHAT CAN YOU DO

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 Global aviation community.

# SO WHAT CAN YOU DO

→ KNOW YOUR SUPPLIERS

→ ESTABLISH SUPPLIER SURVEILANCE

→ **REPORT SUPS to the Civil aviation authorities**

→ 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
- SEGREGATE QUESTIONABLE PARTS & MATERIALS
- MUTILATE YOUR UNSALVAGEABLE PARTS & MATERIALS

# WHO CAN HELP RESOLVE THE PROBLEM

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



# SUP LAW: 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.
- (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.
- (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.
- (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.
- (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).

# FINAL 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.

# FINAL CONSIDERATIONS

SUSPECT,  
INVESTIGATE;  
AVIATION SAFETY  
DEPENDS ON  
YOU !!!

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

MAKE EVERYDAY A SAFE  
ONE



**THANK YOU**