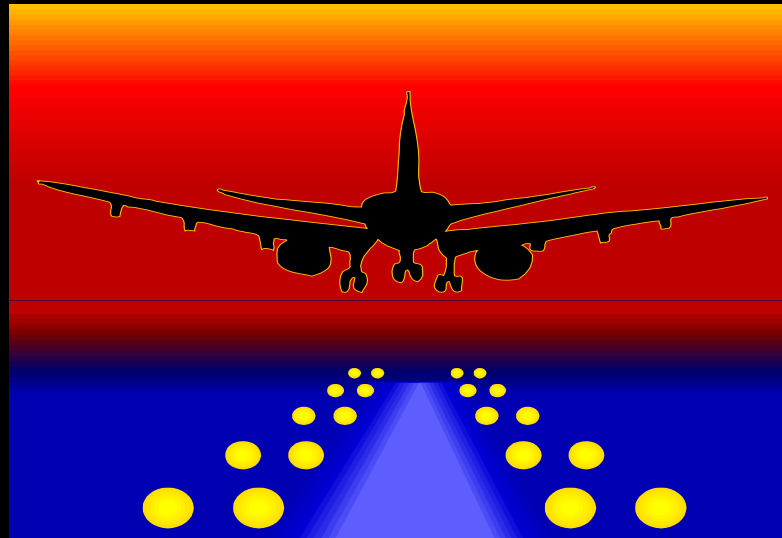


FOD Awareness

Basic Training in Foreign Object Damage Prevention



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Topic of Discussion

Let's talk about the basics of one of the biggest constant worries around aircraft (next to walking into a prop or turbine)



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FOD Is Two Things

1

Foreign Object Debris – anything from rocks to luggage racks that could possibly cause damage to aircraft, equipment or people.

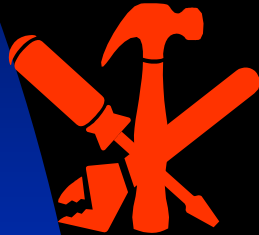
2

Foreign Object Damage – damage caused by the foreign object (that 99% of the time was missed or ignored by you or me).

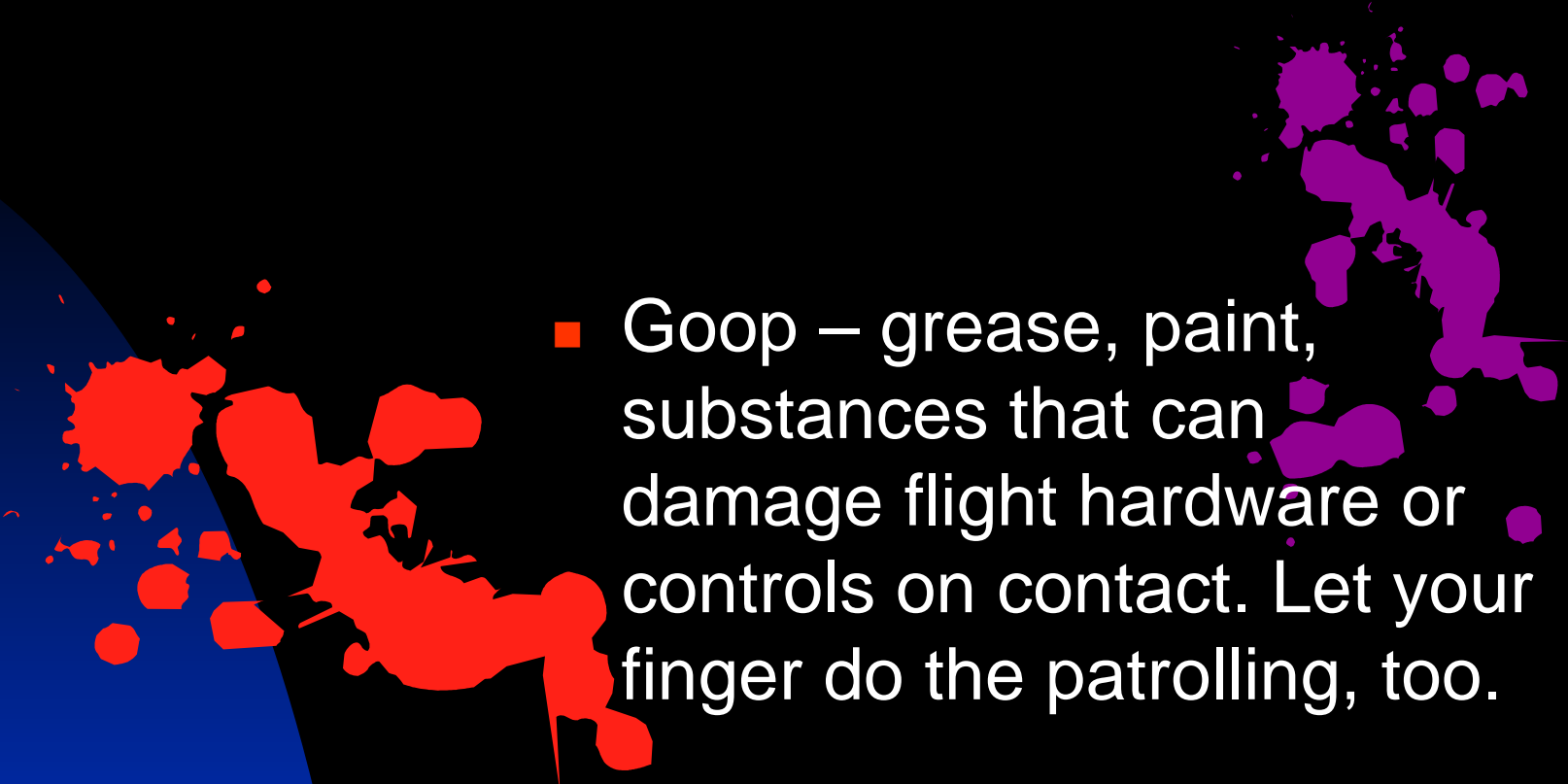
Potential FOD Threats Are Easy To Identify.

- **EVERYTHING** *not nailed down* can create big trouble. We're not exaggerating. The list is truly endless.





- Rags, Pens, Tools, Coins, Wire Scraps, Parts, Clipboards, Gloves, Caps, Nuts, Bolts, Cups, Eyeglasses, Tape, Staples, Paperclips...
- Cameras, Hair Pins, Keys, Glasses Cases, Paper, PDA's, Badges, Soda Cans and Water Bottles...

- 
- Goop – grease, paint, substances that can damage flight hardware or controls on contact. Let your finger do the patrolling, too.
 - Critters – birds, nests, cute little varmints that sneak into your area.



FOD PROGRAM PLAN OF ATTACK

What does the term
“FOD Prevention Program”
mean to you?



Real Life

So starting now, **get paranoid** and while your head is on a swivel (which should be always) pay attention to anything out of place and the little things.

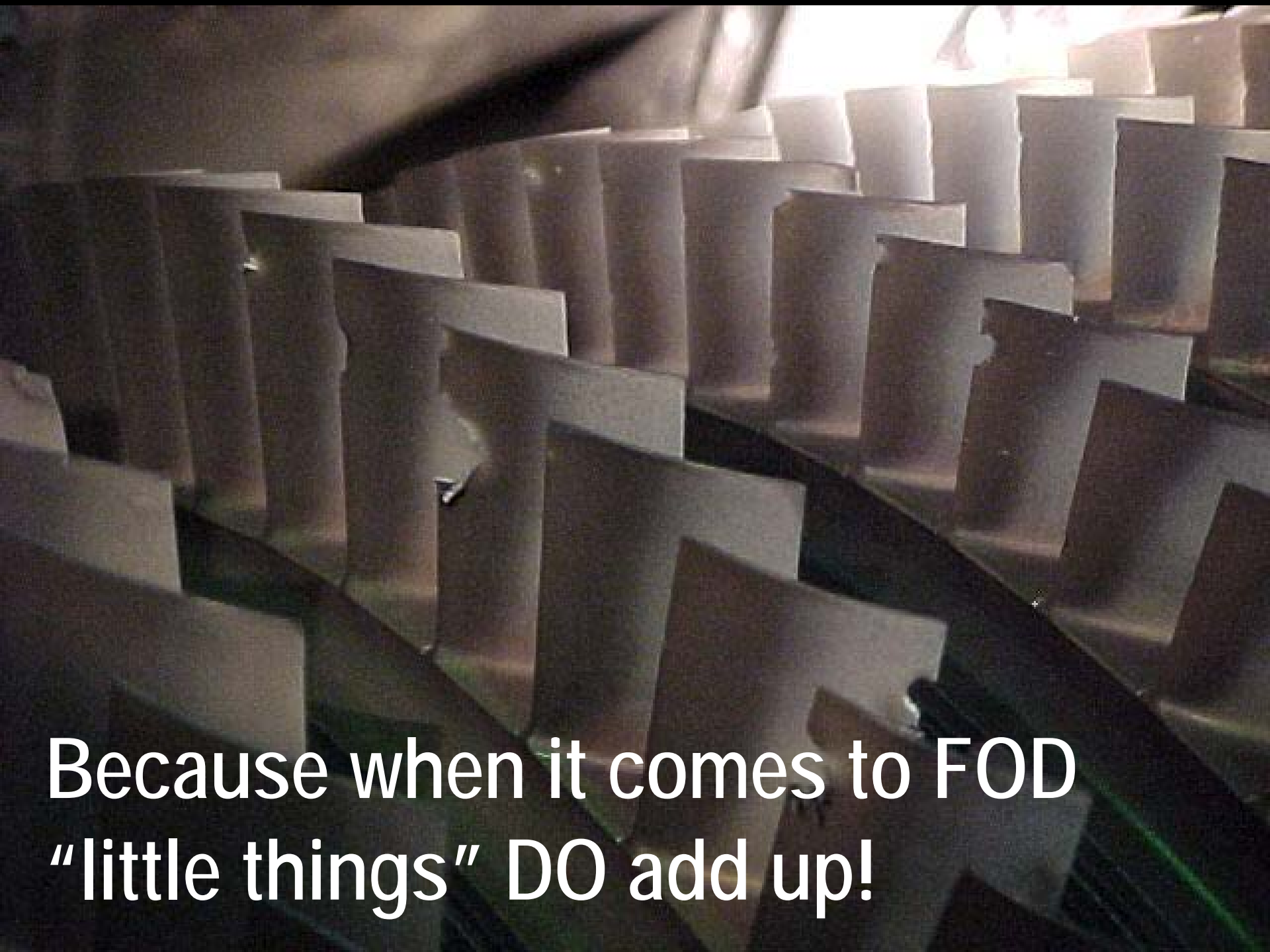


As we said, **everything**.

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A little bit of FOD is NOT OK





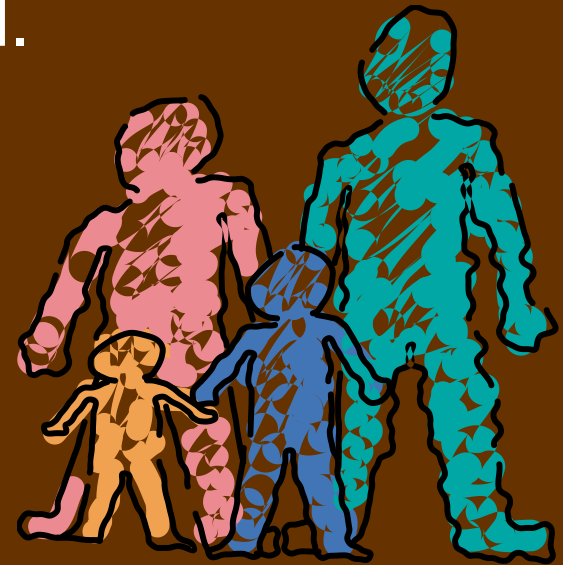
Because when it comes to FOD
“little things” DO add up!

What? Me Worry?



- No professional aviation operation wants people around who don't get this message about FOD. FOD Kills, maims, produces orphans and puts folks out of work. Aerospace loses \$4,000,000,000 (*low-ball estimate*) every year.
Four BILLION!

- This cost translates into your pay raise or insurance benefits for families, closed shops and enough grief to go around.



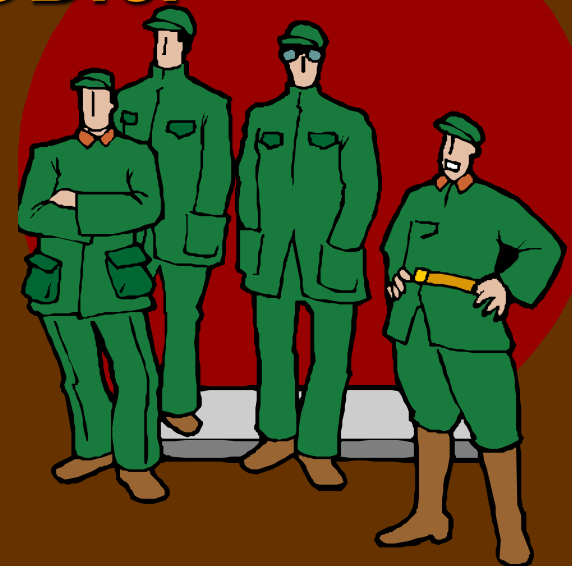
FOD Ripples Through an Entire Operation:

- Incident causes delay at gate.
- Incident costs company money.
- Passengers wait and fume.
- Flight schedules are scrambled down the line.
- Individuals and corporations take their business elsewhere.

There goes that bonus.



For military ops, there's a
different ripple effect,
and it can be
catastroFODic.



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All work around aircraft is dangerous. For the military, work sites may be mobile. Pressure for speedy action, quick turnarounds and security against a wide range of threats complicates things. So does live ammunition and other explosives. Training exercises are conducted at a frantic pace, demanding tremendous physical and emotional exertion. **Accidents can happen despite our efforts to prevent them.**

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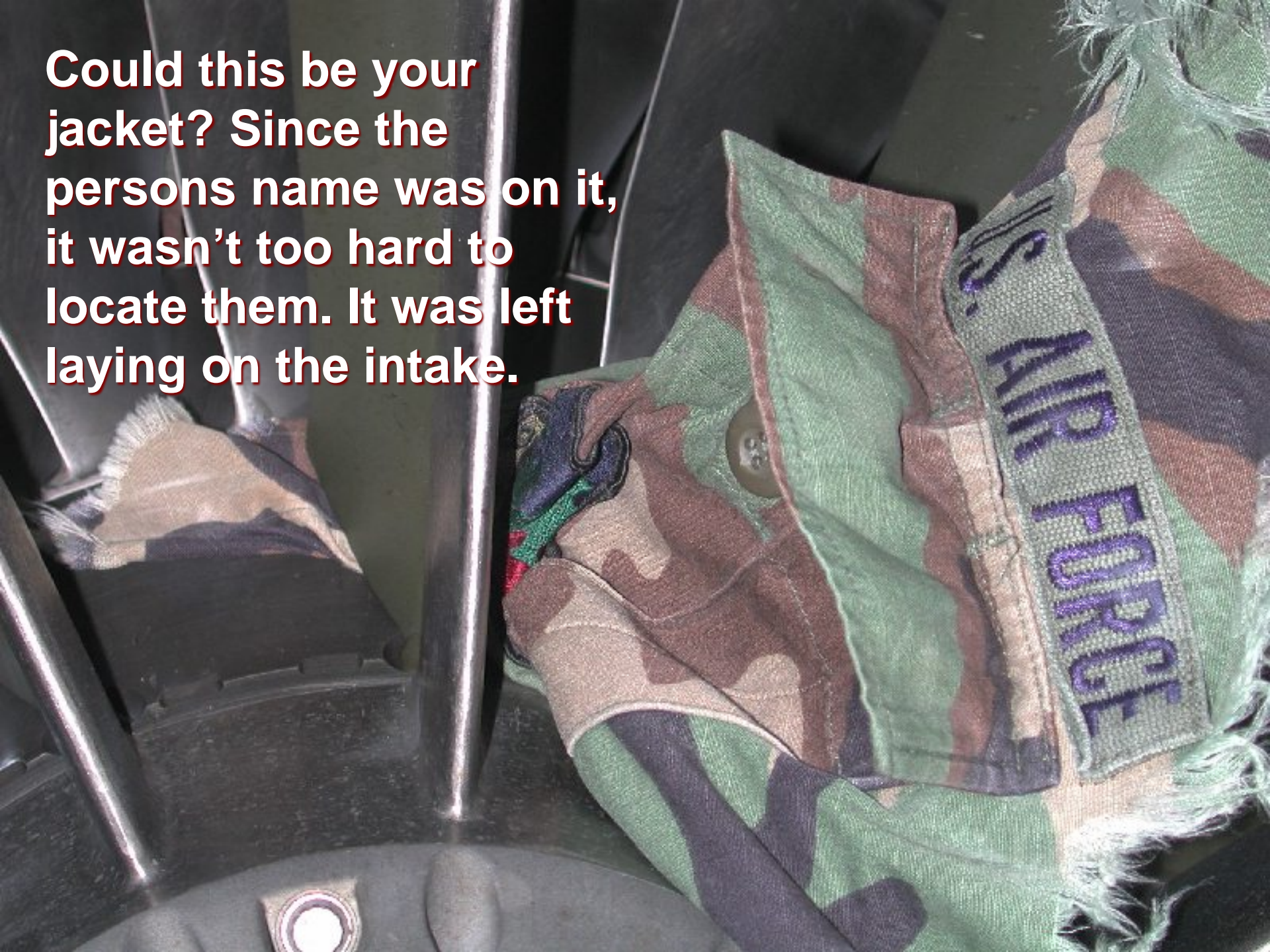
Civil aviation or military – each individual has a specific job.

Everyone's job includes FOD Prevention.



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Could this be your jacket? Since the persons name was on it, it wasn't too hard to locate them. It was left laying on the intake.



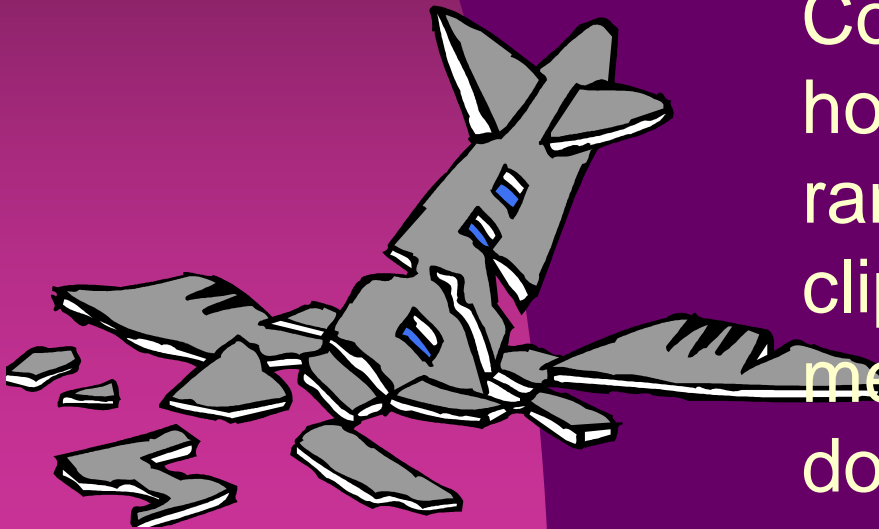
When there are a dozen tasks being performed all around you, it's up to you. Nobody is watching or walking behind to pick up what you miss. Lack of attention and diligence can kill someone – but awareness saves lives.



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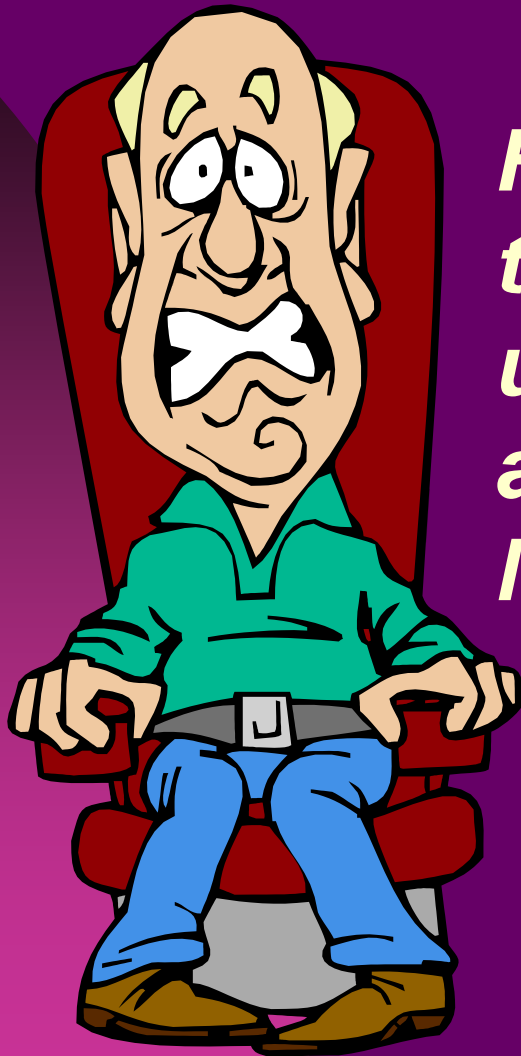
What Is a FOD Incident?

- Incidents come in many forms: a nick on a engine fan blade, a cracked windscreen, a jet fighter going into the sea or the Concorde crashing into a hotel full of people. Causes range from lost tools to clipboards to glasses to the metal strip that brought down the Concorde.





- We usually think “small debris”, but periodically a grown person ends up inside a turbine, or a huge food cart gets jammed into the intake of an airliner. Other incidents may be caused by spilled or splashed corrosive liquids, wildlife, birds or parts dropping off the plane in front of you on the taxiway.



***FOD is always
troublesome,
usually expensive
and too often
life threatening.***

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How Do I Prevent FOD?



- *Remember to use your eyes, ears and mind. If you're entering or already working in this field you have proved you're intelligent, inquisitive and willing to learn. The key to your success and enjoyment of this profession, is YOUR commitment and discipline in learning essential procedures, replacing bad habits with better ones and challenging yourself every day.*

How Do I Prevent FOD?



- Everything is common sense, attitude, alertness and the satisfaction of doing the job well – every time. Remember these points and you *will* find lasting pride and enjoyment in this profession.

How Do I Prevent FOD?

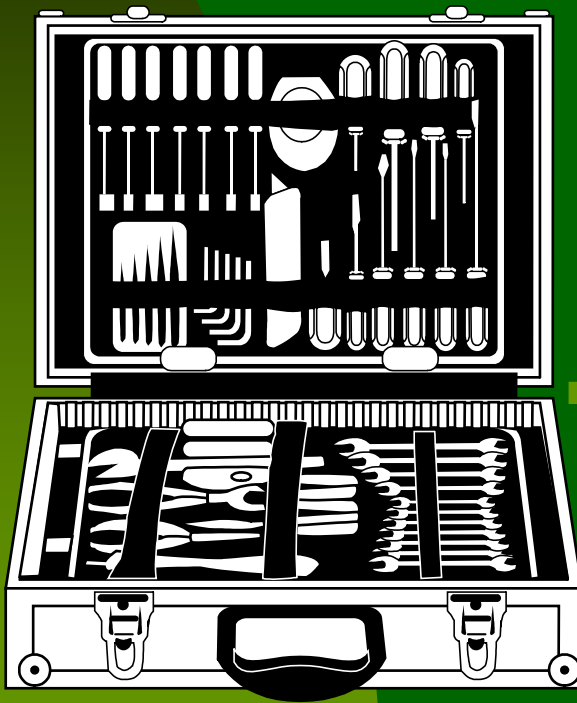


- **Keep your house in order.**
 - ◆ “Almost every FOD incident can be traced back to bad housekeeping.”
- **Keep your house and equipment in good repair.**
 - ◆ Shavings from a loose fitting may interfere with a seal or connection, causing a plane to crash weeks, months or even years later.

How Do I Prevent FOD?

- **Watch your “stuff” materials, packaging, etc.**

- ◆ All packing material, binding tapes and wires, string, pieces of cardboard, wood or plastic qualify as potential threats to your day.



- **Pretend the Tool Lady/Man is coming to visit.**

- ◆ Notification that “company” is coming motivates all of us to tidy up and put things away.

How Do I Prevent FOD?



- **Parting is the key to avoiding “sweet sorrow”.**
 - ◆ Parts Control, like Tool Control, is critical.
- **Track it and tie it down!**
 - ◆ Operate as if someone is about to hit the starter – keep tools, materials, clipboards and other items secure in their assigned places.

How Do I Prevent FOD?

■ Pretend:

- ◆ Your favorite grandmother is coming to visit your work.
- ◆ *Your* kids are on every plane that visits your area.
- ◆ Lives and jobs depend on your diligence – because they DO!

■ Write it down and talk it up.

- ◆ Observe -- Analyze – Communicate.
This easy practice can protect your operation and customers, and may lead to promotions and rewards for you.



Feel the Team Concept



Oh yeah, the *teamwork* speech! Whether you're in military or civilian aerospace operations, the need for cooperation and communication is a fact of life. Pilots depend on their crews to help keep their airplane in the sky. Simple – they trust. So do their passengers, wingmen and families back home.



- Expect that your work will be observed, critiqued and verified every day. Team members support each other that way. Supervisors and colleagues are your team, and everyone will be watching everyone else to help keep the work flowing safely and efficiently. It's in your interest to embrace this philosophy, but never depend on your teammates to cover your carelessness or tolerate sloppiness



- Remember the expression, **Observe – Analyze – Communicate?**
- When everyone feels and supports the Team Concept good things happen and work is significantly easier.

Summary

- FOD hurts, costs and is 99% preventable.
- Your attitude is the key factor.
- Develop and trust instincts that tell you something is “out of place” in your area; investigate, correct and report when you find a problem.

Summary

- Tested procedures for tool and part control, storage and disposal, inspection and communication must be learned and habitually followed to avoid FOD incidents and prevent recurrences.

Summary

- Open, productive communication up and down the supervisory chain will increase safety and efficiency.
- Practice of CLEAN AS YOU GO habits is the primary tool for your personal FOD Prevention program.

FOD 101

Enjoy your aerospace adventure. You're part of the most exciting, demanding profession on (and off) earth!



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