

**MINE, MINE**

# THE "OH BUGGER" FACTOR

Or

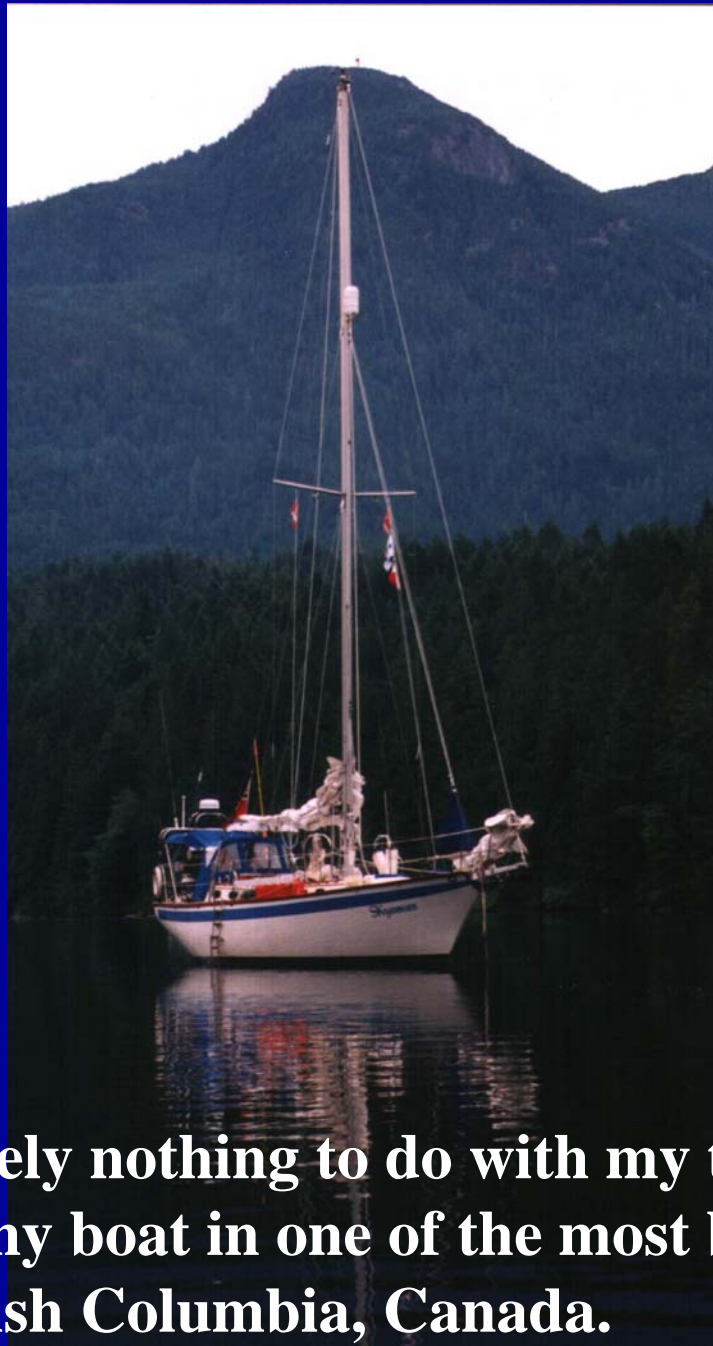
Close Encounters of the Worst Kind

*David Roy Axup*

*Chief Superintendent of Police [Ret]*

*BA [Pol Stud] Grad Dip H'way & Traf Eng. MITE. M.A.I.T.PM. M.SAE.A. M.ITAI*





**This has absolutely nothing to do with my talk but it's a great picture – my boat in one of the most beautiful parts of the world – British Columbia, Canada.**

## **IS THERE A MAINTENANCE PROBLEM?**

**HERE ARE THE RESULTS OF FOURTEEN YEARS OF DATA  
COLLECTION FROM DETAILED INVESTIGATIONS**

### **Pre-impact Condition of Vehicles**

|  |               |
|--|---------------|
| <b>HEAVY VEHICLE UNROADWORTHY</b>                | <b>16.56%</b> |
| <b>OTHER VEHICLE UNROADWORTHY</b>                | <b>6.13%</b>  |
| <b>UNABLE TO DETERMINE CONDITION –BOTH TYPES</b> | <b>7.98%</b>  |
| <b>ROADWORTHY</b>                                | <b>69.33%</b> |

**So how does this relate to cause?**

**What is a “cause” of an incident?**

**Cause is defined as any behaviour, condition, act, or negligence without which the incident would not have occurred.**

**So ask yourself this question.**

**“In the absence of this vehicle defect would the incident have happened”?**

**If the answer is “No it wouldn’t” then you have a cause.**

**It may of course be only one of several causes which cumulatively led to the occurrence.**



## INCIDENT CAUSE

| Cause  | %     |
|--|-------|
| Vehicle mechanical or equipment fault – sole cause         | 6.00  |
| Vehicle mechanical or equipment fault – contributing cause | 3.00  |
| Driver error – all vehicles – not including fatigue        | 71.00 |
| Fatigue  | 11.00 |
| Road fault – geometry, condition, road furniture           | 19.00 |
| Other – pedestrian fault, etc                              | 9.00  |

Yes it does add up to more than 100 but some incidents have combinations of “cause”.

## **THE KNOCK ON THE BOARD ROOM DOOR**

**The things that flash through your mind –**

- **if I pretend they are not here perhaps they'll go away**
- **it's not really my fault after all I employ a maintenance manager**
- **thank GOD it's a sub-contractor I'm not responsible for his maintenance**
- **whaddaya mean it's a company truck?**
- **can I talk my way out of it**
- **bloody police should be out catching criminals not hounding honest business men**
- **I need a lawyer**
- **I think I may be in trouble.**

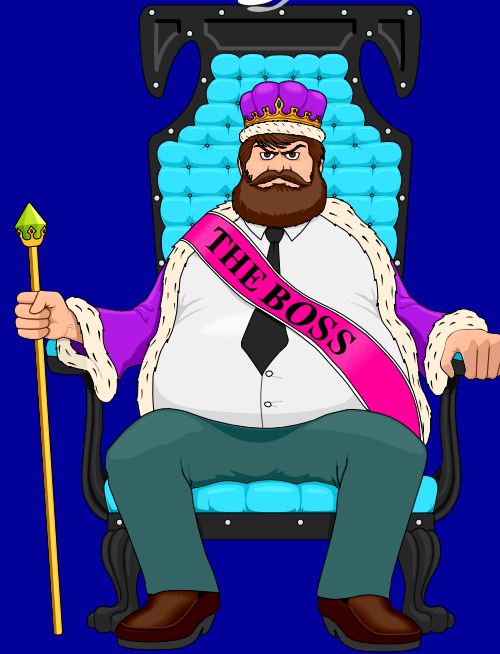
**The last of those eight is spot on – you may be in deep trouble**



“‘ullo, ‘ullo, ‘ullo, wot’s goin’ on ‘ere now’?”

# O F CHAIN

Responsibility



For those of a more “classical” inclination the COR can be likened to the 4<sup>th</sup> century BC “Sword of Damocles” which, in a time of prosperity, hung by a hair over his head

In this case the “hair” will be your attention to the maintenance of your fleet

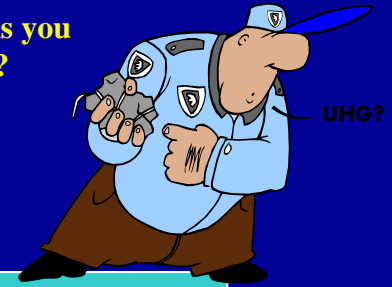




You can't teach an old mammoth new tricks – or can you?

**Damocles Transport  
Extremely Limited**

Are the conditions you impose palatable?



UHG?

**Company Fleet**

**Sub- contractors**

**Evaluation & maintenance**

Subject to your maintenance regime?

Owners regime approved by you?

**Internal**

**External**

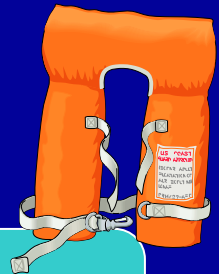
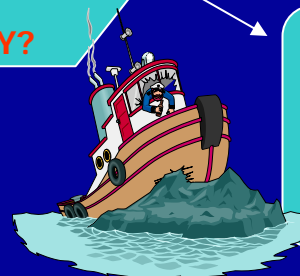
Left to work it out for themselves?

You are responsible for Quality control

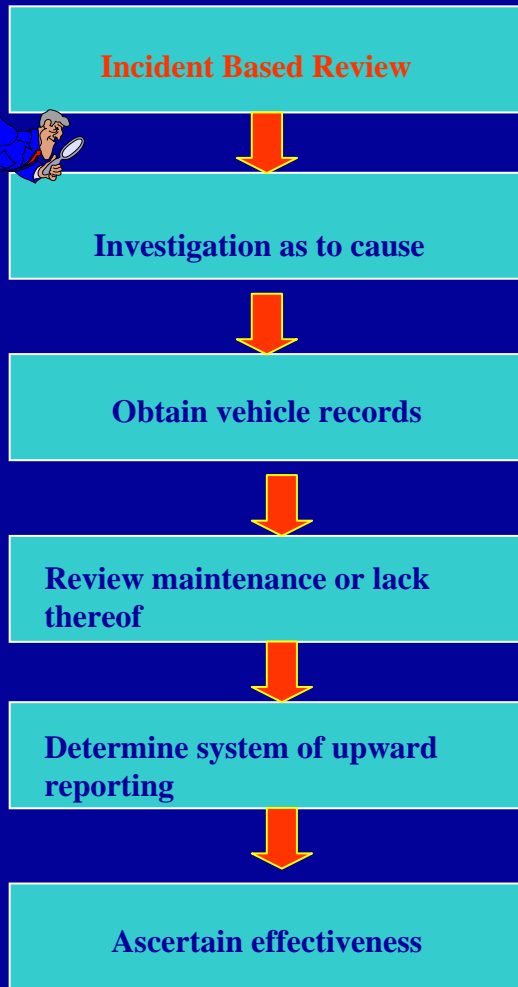
What is your system?  
Are your people qualified?

What confidence do you have in quality control?  
**IS THERE ANY?**

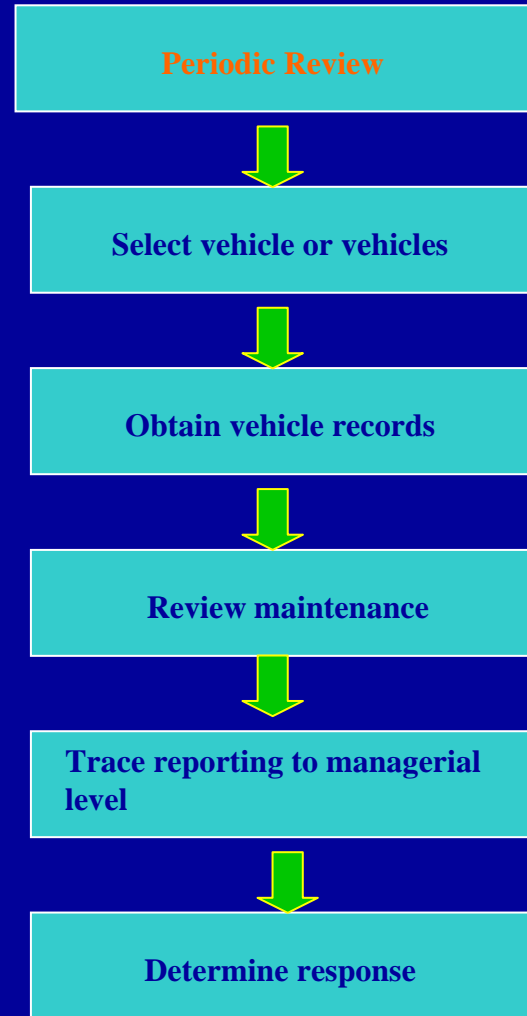
**Have I done enough to ensure that my operation is as safe as it can be?**



# INTERNAL REVIEW SYSTEMS



**REACTIVE**  
**& Risky**



**PROACTIVE**  
**& Safer**

**Having done all this you then have a choice to;**

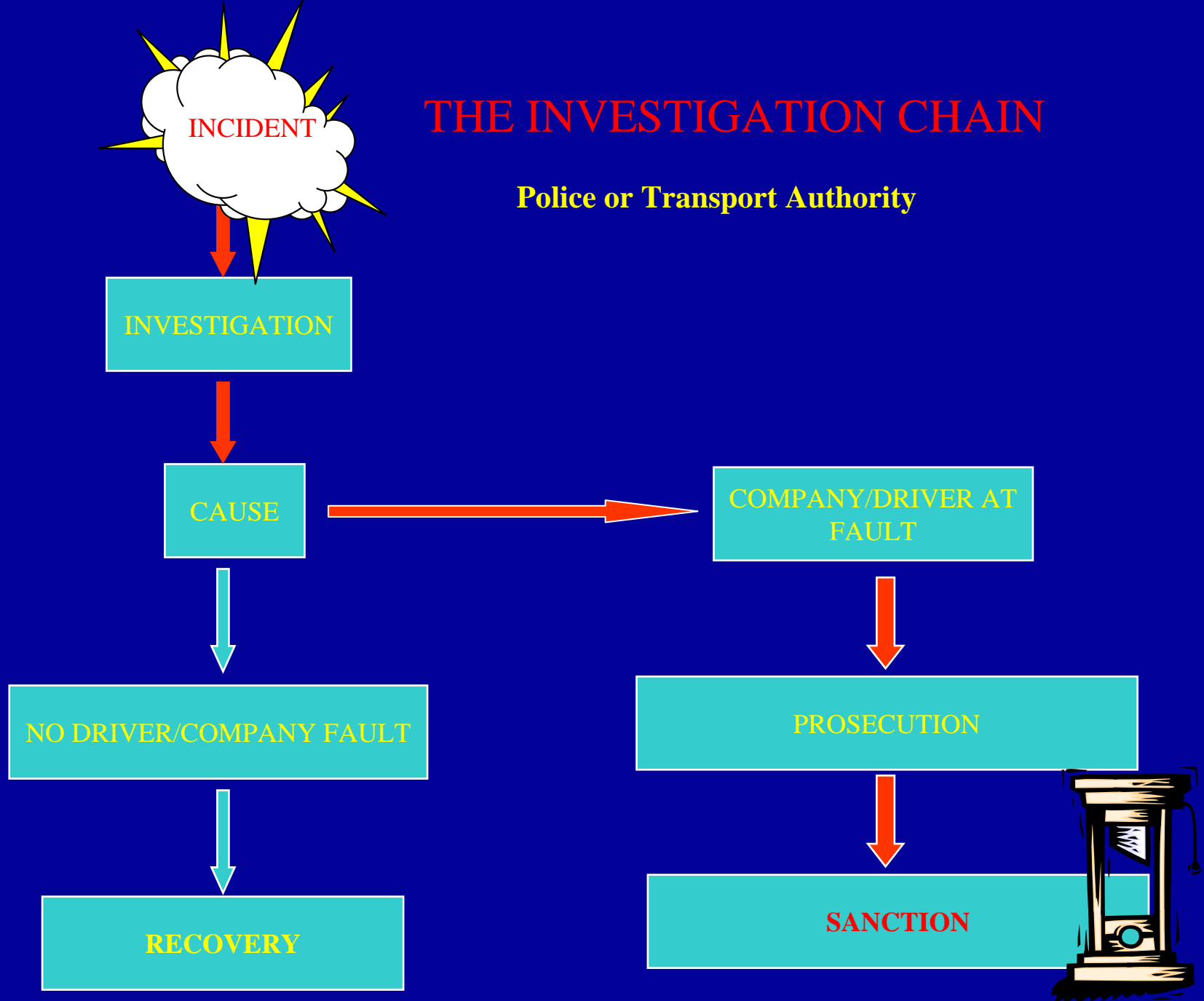
- **ignore the result and hope that if the answer is not favourable that no one finds out**
- **have the investigator look further in to your system to recommend improvements or remedial treatment, or**
- **engage someone else to look at the system for the same purpose.**
- *buy a one way ticket to South America*



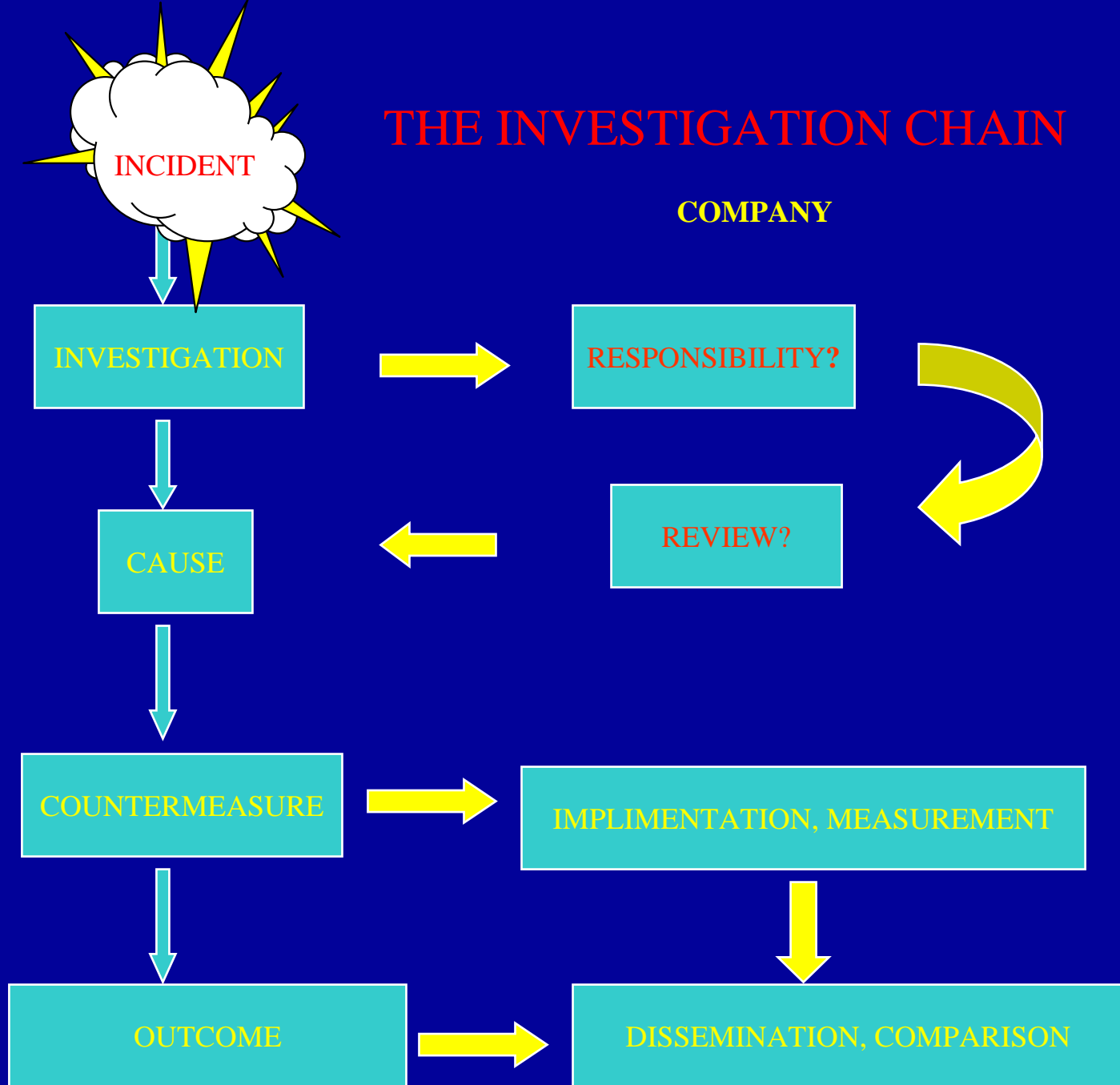
**This is not the sort of thing you want to happen – but it does – and we'll come back to it a little later.**

# THE INVESTIGATION CHAIN

Police or Transport Authority



# THE INVESTIGATION CHAIN



## CASE STUDY #1

**A prime-mover in [apparently] good condition travelled just over 80 km after major work when it and its trailer capsized in a shallow right hand curve.**





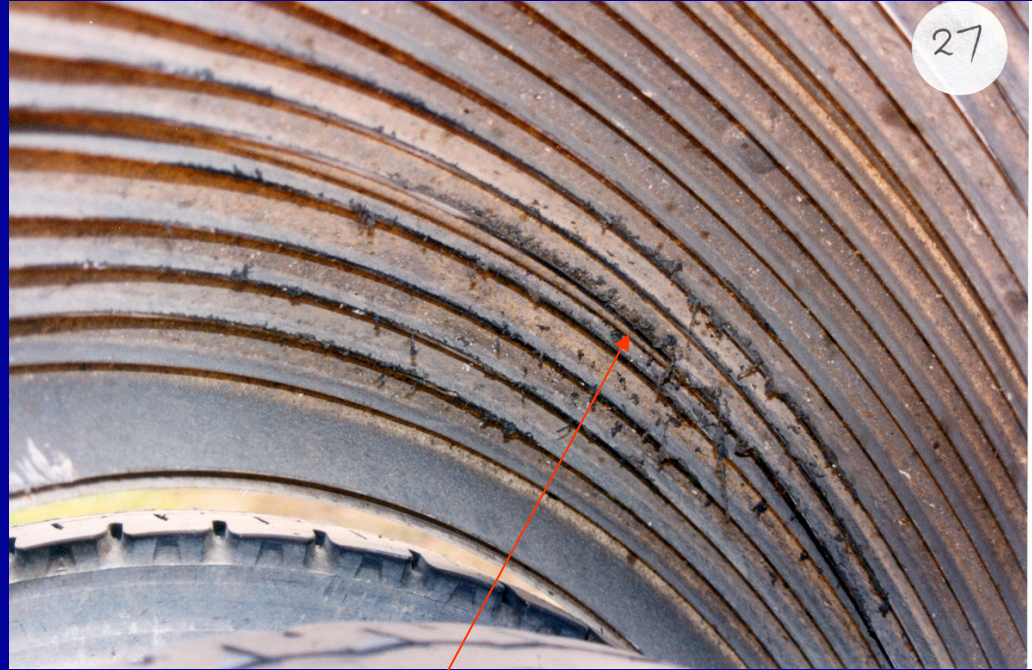
**Capsize point**

**Skid marks from following truck**





**Grooving of the tyre**



**Tyre compound underneath the mudguard**

**The source of the sparks reported by a following driver**



**The deflated air bag suspension**



### **THE CULPRIT**

A million dollar plus cost for not following quality control procedures.

**Levelling valve rod – note that while all around it is broken or distorted this light metal component retained its straight configuration – IT WAS NOT CONNECTED**

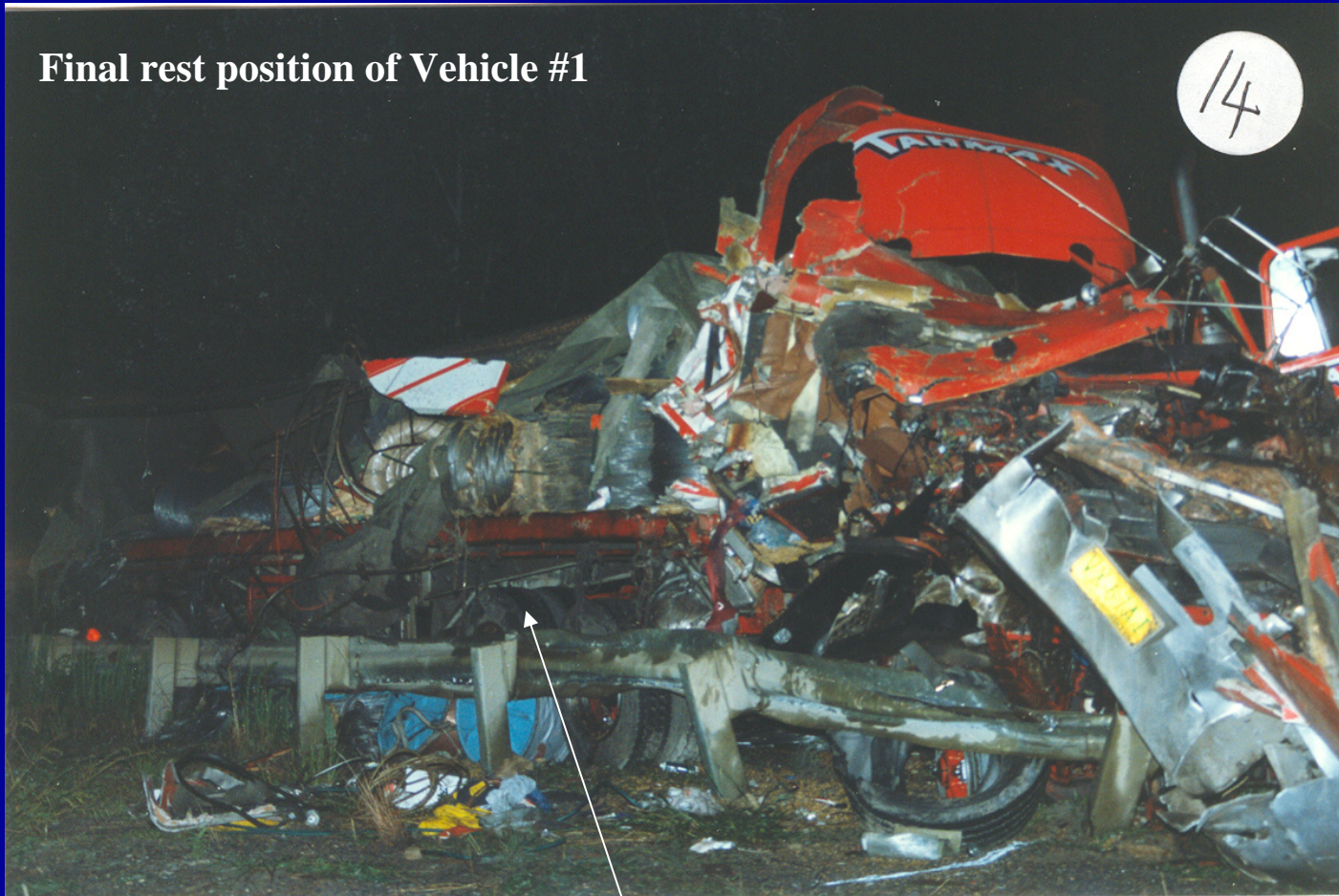
## The findings of Her Honour Susan J Gibb DCJ

- The vehicle was left with the dealer for modification
- The modification involved the disassembly of the rear axle assembly and its disconnection from the chassis rails
- the modification involved the drilling of new holes in the chassis rails
- the modification required the disconnection of the ride height arm adjuster and its storage separate from the vehicle and other components
- no one could account for the ride height arm for the period when it was separated from the vehicle and other components, other than to surmise that it was left on a bench
- the behaviour of the vehicle immediately prior to the accident was not inconsistent with the collapse of the suspension of the rear axle of the prime mover
- **THERE WAS INADEQUATE OR NO QUALITY CONTROL IN THE PROCESS OF RELEASING THE VEHICLE EVEN THOUGH PROVISION WAS MADE FOR SUCH QUALITY CONTROL**

**THE COURT AWARDED A TOTAL OF \$AUD1,075,960.46**

## CASE STUDY #2

Final rest position of Vehicle #1



BALD TYRE

VEHICLE #1

The start of an horrendous saga



**The scene of the incident. Looking back through the curve. The fire truck on the left is in the approximate position of the truck [Vehicle #2] in the next slide.**



## VEHICLE #2

The first vehicle has passed down the side of this vehicle with the overlap just reaching the off side of the cab structure.



**VEHICLE #3**





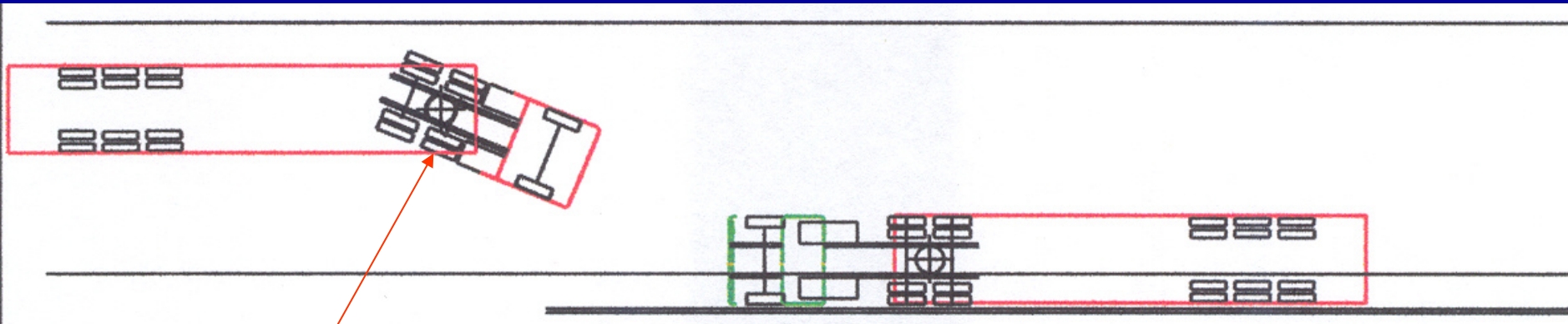
### VEHICLES #4 & 5

Vehicle 6 is hiding back there in the darkness. #4 got it on the way through into the middle of the scene.

**This is what an inexperienced police officer alleged occurred**

**One bald drive tyre causes a jack knife on wet road**

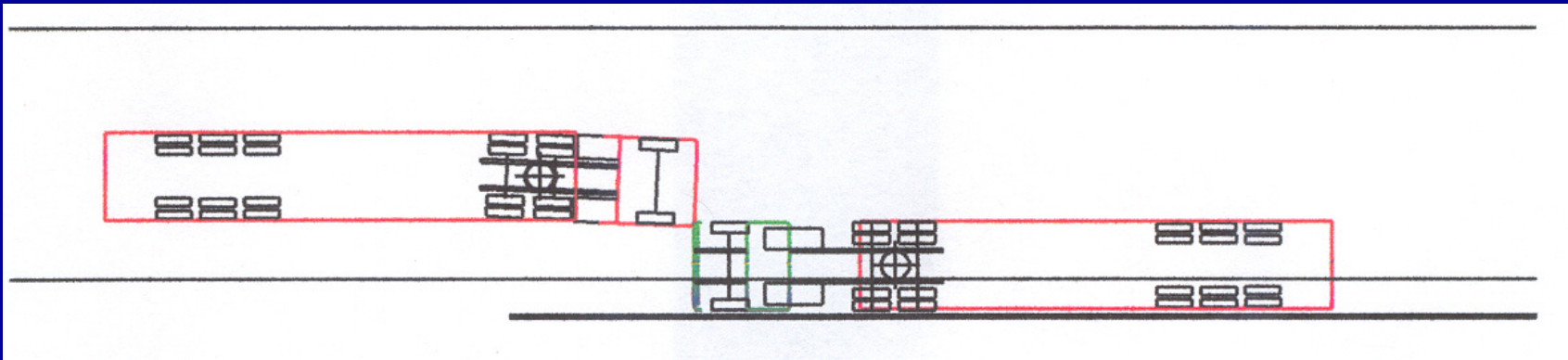
**Prime mover is said to lose traction and start to rotate**



The offending tyre

[Note; It was not consistent with the account given by the driver of the truck hard up against the guard rail who at this stage was in the passenger seat of his cab.]

## This is what actually happened



Driver of vehicle #1 cuts the corner onto the bridge and collides with the off side front of vehicle #2 which by this time has pulled hard up against the guard rail with sufficient time for the driver to get out of his seat and into the passenger seat.

## So what did we discover from the investigation?

The one bald tyre was on the off side of the vehicle and could not have instituted a clockwise rotation of the prime-mover.

The damage on the truck and the first truck hit could not have occurred with a jack knife situation

The driver had been instructed to replace the tyre and had decided to wait until he came back from the trip he was on at the time of the incident [is this a breakdown in quality control? What is the extent of company responsibility in this case?]

Maintenance records were reasonable but left a number of gaps in information that proved awkward in explaining even though there was no effort to hide information or take short cuts [no clear cut system]

The rest of the company fleet was in good condition [regular checking]

CONCLUSION – So why do things go wrong?

**INSUFFICIENT ATTENTION TO DETAIL!!!!!!!!!!!!!!!!!!!!!!**

There is sufficient hard evidence to support a contention that poor maintenance practices do lead to collisions

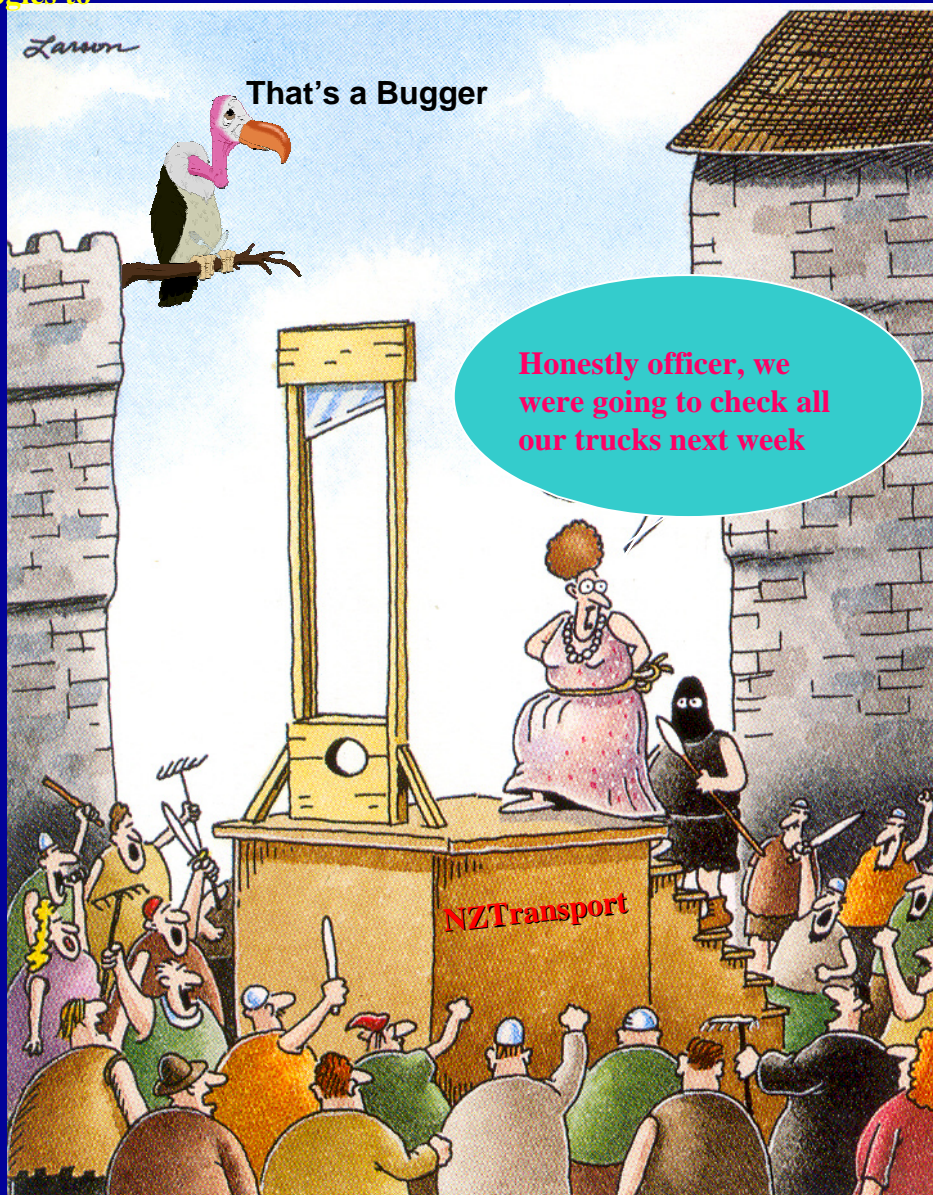
Mechanical failure is a “cause” in around 9% of heavy vehicle collisions and the sole cause in around 6%

Even if your vehicle has a non-contributory fault its presence can lead to a chain of events that can, in some circumstances, be costly and traumatic

Many [and perhaps the majority] of these problems can be avoided by proper maintenance regimes.

You don't have to be Marie Antoinette to work out that if you don't have a good maintenance regime then it could be your head on the chopping block.

So what do I think is the greatest problem?



Marie-Antoinette's last ditch effort to save her head



**THANK YOU FOR YOUR ATTENTION**



**I'm here for the duration of the conference and happy to answer any questions.**

**Contact details;**

**Phone**

**+61 3 9557 5807 [work]**

**0417 568 518 [mobile]**

**Email**

**[daxup@bigpond.net.au](mailto:daxup@bigpond.net.au)**

**Marine Radio**

**VHF & HF**

**VKV 6229**

**SKyansen**