

Diesel Audit Summary



Underground Coal Mines
Hunter Region.

Purpose of the Diesel Audit

- Ensure the mines have a system to manage the Diesel equipment at their U/G mine.
- Target:
 - 103 inspections.
 - Flameproofing and Diesel Emissions.
 - Brake inspections and maintenance.
 - Defect Management to incorporate diesel equipment.

Highwall Mining (Beltana)



Diesel Audit Summary

- Underground Mines in the Hunter Region.
- Mines Inspected 17
- Total No of Diesel Equipment in the 17 mines 303
- Total Engines registered NSW U/G 962
- Man Transports 103
- LHD Equipment 103
- Others 97

Man Transports



Man Transports

LHD Equipment



LHD Equipment

- Eimco 130 40%
- Eimco 913 37%
- Eimco 913/6 9%
- Eimco 912 / 921 4%
- Eimco 915 1%
- Wagner's 9%

Other Diesel Types

- MPV 35%
- Eimco 936 10%
- Graders 10%
- Bob Cats 11%
- Diesel Locos 4%
- Shearer Carriers 1%
- Chock Carriers 1%
- Ramcars 4%
- Dozers 4%
- Powertrams 6%
- Pets 12%
- Concrete pump & Stone dusters 2%

AS 3584 -1991.

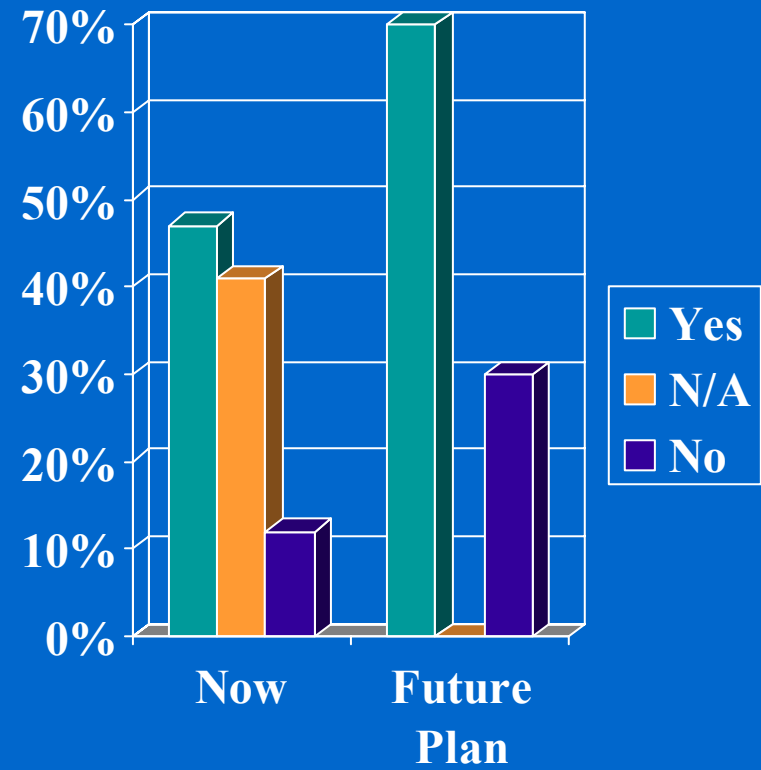
- DES approval to AS3584-1991.
- Reasons for non-compliance.
- Still to complete the upgrade program.
- Mine closure.
- Used outbye of the hazardous zone
- eg The Grader.



■ Non-compliance
■ Complies

Risk Assessment for Non-compliance AS3584-1991.

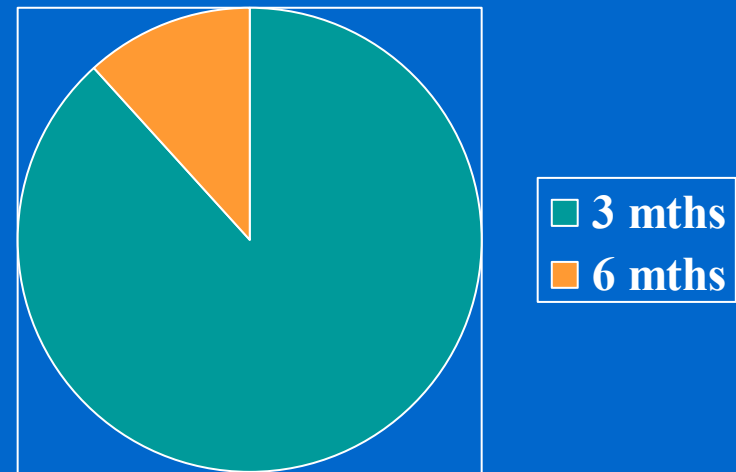
- R.A. conducted =47%
- R.A. N/A = 41%
- No R.A. done = 12%
- Mines that plan to comply = 70%
- Mines not comply = 30%
- Reason:- mine closure using grader & locos.



Raw Gas Test

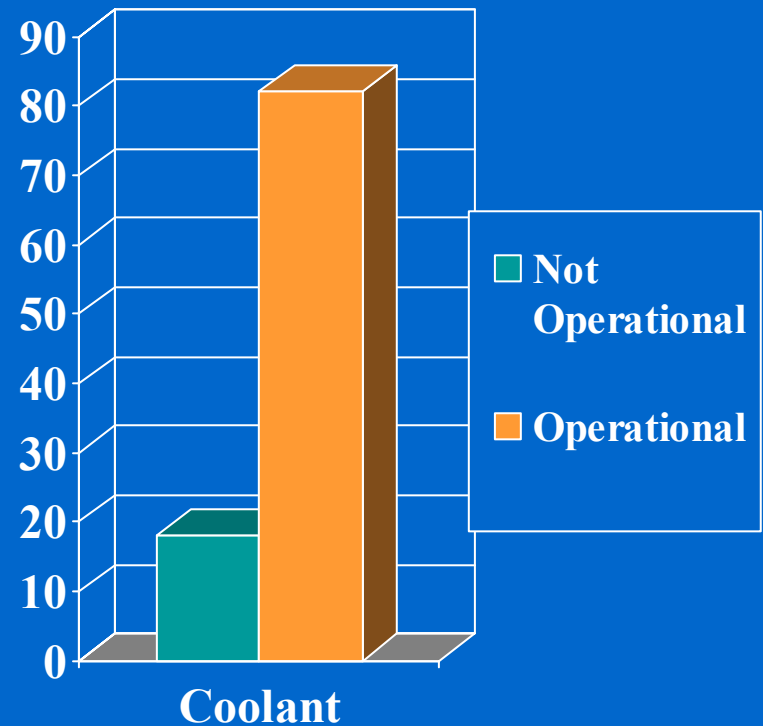
- Out of the 17 mines 3mth raw Lab gas test are preferred.
- Accuracy or the results compared to the 28 day gas test using a drager tube.
- Closer monitoring of the Diesel Equipment.

Raw Gas Tests
Frequency



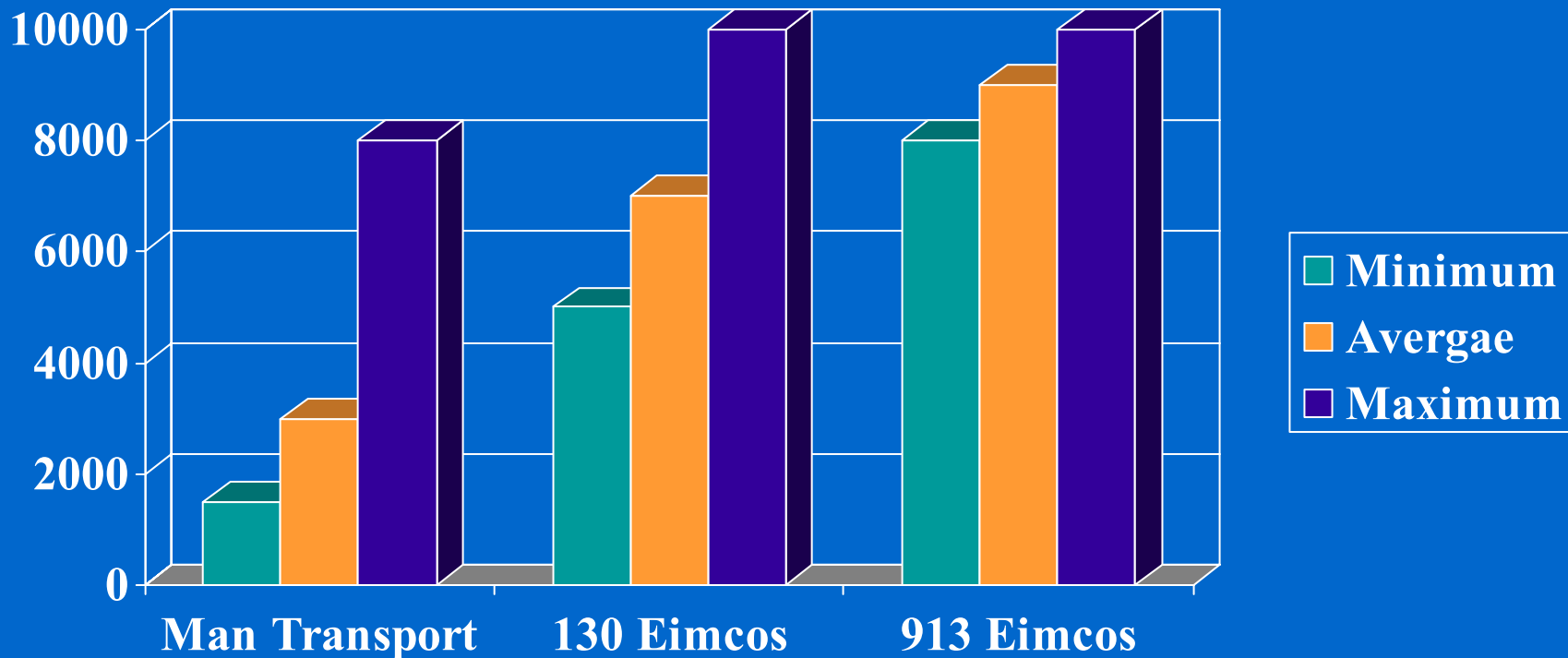
Physical Inspections

- Tested a small sample (8%) of the Diesel Equipment at the mines.
- Coolant Loss shutdown
- Scrubber Low water.
- Door Interlocks.
- Scrubber & door working when tested.



Diesel Vehicle Brake Life

Information supplied by the mines who have records
and estimates from others, est 70% accuracy.



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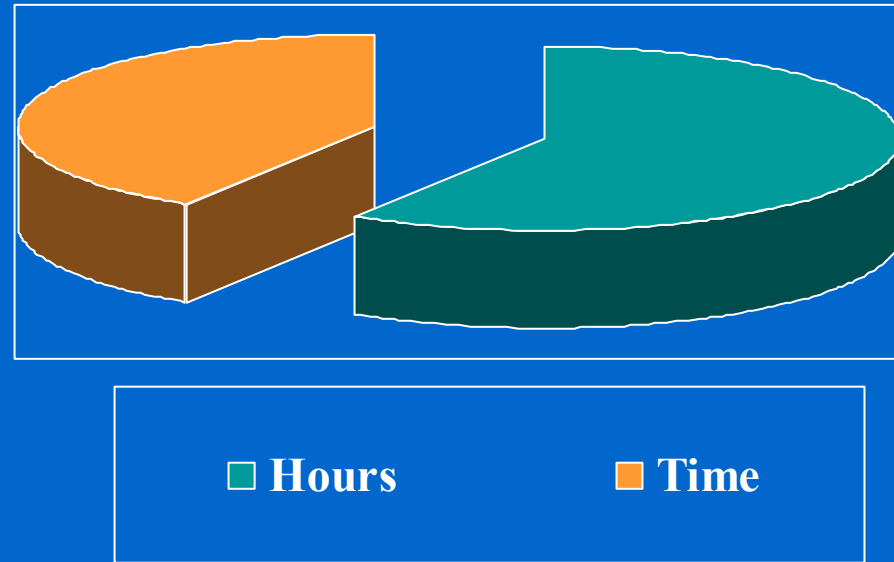
Code D Flameproof Inspections

- Reasons for the collieries to choose the frequency of their Code “D” Inspections.
- MDG 32.
- Manufacturers recommendations
- Draft AS3584
- Risk Assessment based.

Code “D” Inspections

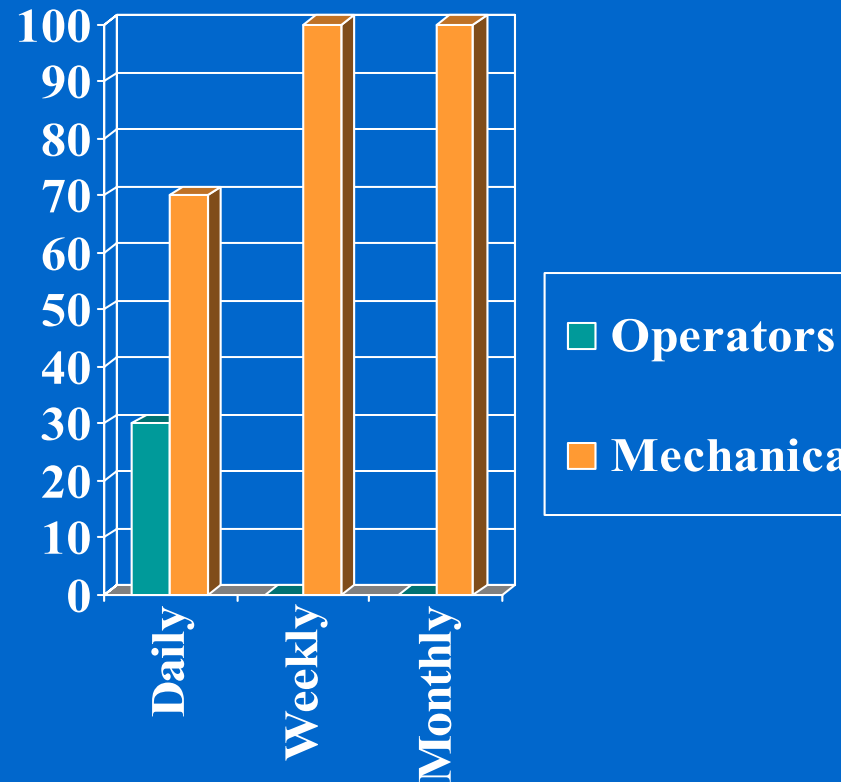
- The Code D flameproof inspections frequency from
- 1000 hrs to 2000 hrs
- 12 months(1800-2000)
- 24 months(4000-5000)
- converted to hrs using utilisation figures supplied by the mine.

Time or Usage based.



Daily Vehicle Inspection

- From the 17 mines.
- 5 mines the fitters carry out the daily 103
- 12 mines the operators carry out the daily inspection.
- All mines have the mechanical tradesmen carry out weekly / monthly servicing.

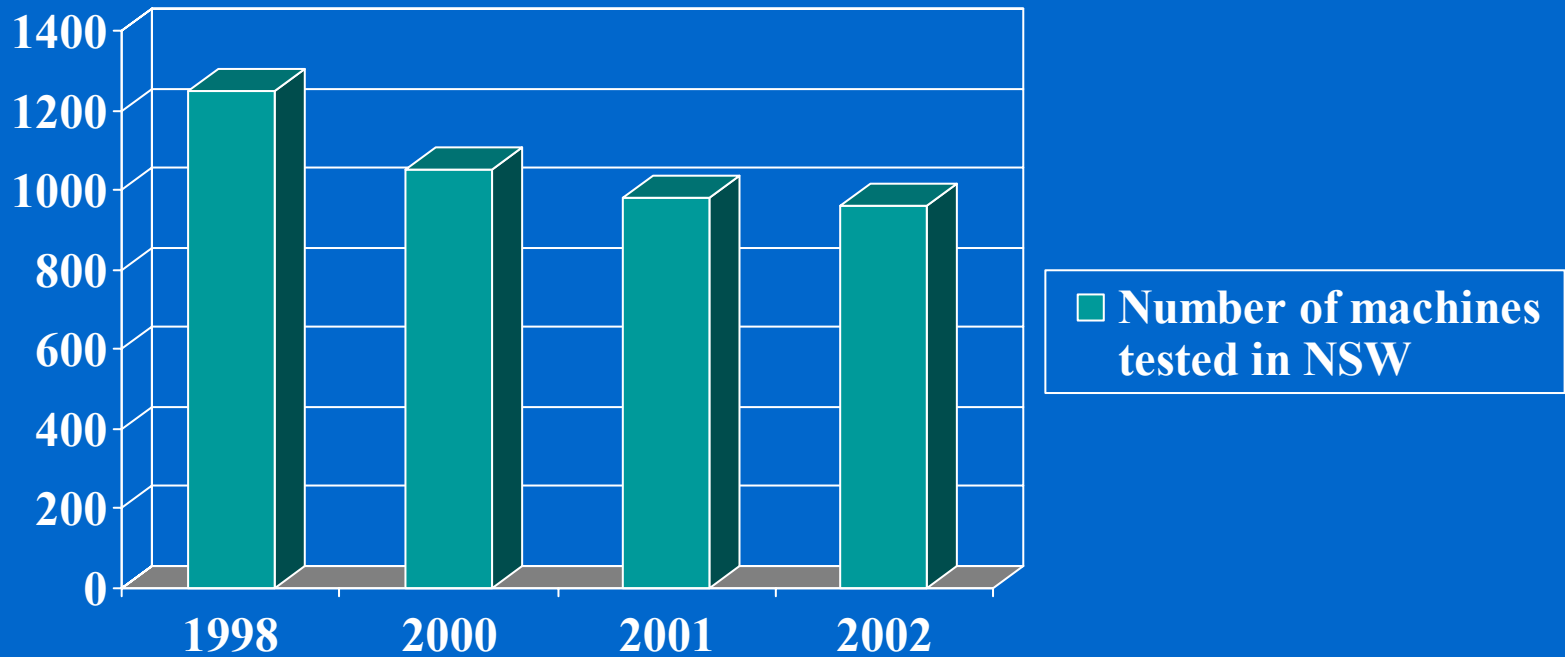


Brake Monitoring.

- Drive through test. (Daily)
- Brakes hold on a grade. (Daily)
- Dynamic test the foot brake. (Daily)
- Brake Measurements Monthly
- Brake Meter test (weekly to 3 monthly).
- Oil Sampling.
- Strip & Inspect 12 monthly.
- Brake change out at 2000 hrs.
- Brake adjustments vary depending on vehicle type and frequency.

Number of Diesel Vehicles tested in NSW

Information supplied by Lidcombe and ACIRL.



Code “D” Inspections.

- The majority of mines have the OEM carrying out the Code D Flameproof inspections on the flameproof diesel engine system.(pressure test manifolds & physical inspect and check the joint condition).
- Mines with sufficient documentation 77%
- insufficient documentation 17%
- No documentation 6%

Defect Management Plan

- Some Defect System in place at all mines.
- 90% mines have a Defect Management Plan
- 10% mines with no Defect Management Plan documented but carry out a system eg out of service tags and repairs to the defect.

Tyre & Rim Management.

- All split rims facing inwards (away from the person) if design allows.
- Deflate all tyres before removal.
- No inflating tyres on site.
- All rims/tyres dispatched to the repairer.
- Rims cleaned, visual inspected (corrosion) and NDT crack tested, and painted before returning with a written report.
- All rims are numbered for tracking purposes

Recommendations to Mines

- Document the mines procedures, document what they physically operate.
- Review and control their documents such as Approvals and Code D and maintenance inspections.
- Document the Defect Management System.
- Document the mines standards for equipment.

Suggestions to the DMR

- The Audits are helpful, more required.
- The mines need feedback, and industry standard.
- DMR should have fire suppression standard
- Cover plans well, good review.
- The physical inspection should cover more vehicles than inspected.
- This audit has prompted a review of the mines system.

Man Transporter.



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LHD showing the drivers canopy.



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Eimco with Exhaust Filter.

