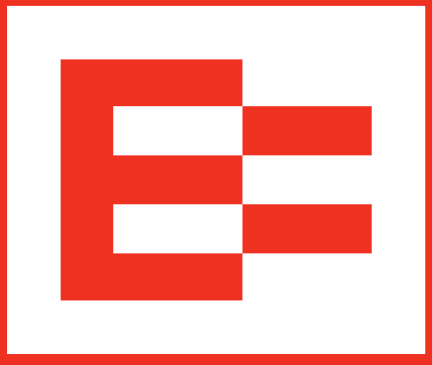
RED PAPER

Are high vehicle maintenance costs a sign you're legally exposed?



Are high vehicle maintenance costs a sign you're legally exposed?

When cost savings across a vehicle fleet are made a priority, switching from preventative to reactive maintenance may seem like an effective solution.

Repairing breakdowns may appear to reduce a company's maintenance requirements. This paper examines the implications of this philosophy and asks if introducing a proactive inspection regime using the latest technology is a more suitable and sustainable solution — targeting maintenance where it is required most and utilising the value available from the drivers themselves. Such an approach will not only reduce maintenance costs in the long run; your vehicles will also run more efficiently and safely. This will cut operating costs and help to reduce the chance of vehicle accidents, negative publicity and the impact that may have on the value of your business.

Protecting shareholder value

The Health and Safety at Work Act 2015 requires that work equipment, including vehicles, should not present a risk to health and safety (H&S). Regular inspections and maintenance for vehicles are vital in achieving this. Should a serious accident occur, WorkSafe and/or the police will investigate whether vehicle defects may have caused it. A key part of their investigation will be to review preventative checks, controls and processes along with confirming compliance to them.

As well as the legal exposure a serious accident may cause, WorkSafe prosecutions compromise shareholder value through negative publicity, legal costs, fines and a loss of customer and investor confidence. Personal impacts and liabilities will be felt the most by small and medium-sized enterprises (SME) where decision makers are closer to the operation. A director or senior manager of a PCBU (person conducting a business or undertaking) can be fined $300,000 if they failed to prevent exposing a person to risk from defective equipment; other employees can expect a fine half that size.

The good news is that the law supports management by also placing legal responsibilities on drivers to help management deliver on their accountabilities. Drivers must take reasonable care of their own H&S, not adversely affect the H&S of others and must, as far as they are reasonably able, comply with management instructions to keep everyone safe.

The New Zealand Road Code supports this by placing very clear responsibilities on drivers, requiring them not to operate a vehicle in a condition or manner that could cause injury to anyone or to drive an unsafe vehicle.

But the cost benefit versus risk equation should not only focus on directors and management's legal liabilities. The financial savings that preventative inspections promise need to be compelling to justify the time and cost of implementing such a process.

Maximising efficiencies in vehicle maintenance

The proverb "a stitch in time saves nine" tells us it is wiser to address an issue early than to delay and expend far more time and money later. The cost saved by identifying and remedying a fault early on can be substantial.

Fleet Financials estimates that maintenance, repair and tyre costs amount to 25% of the variable vehicle costs for intermediate light vehicles. Cost can be minimised by eliminating, identifying and tackling issues early. And it's not just about vehicle repairs.

Tyresafe calculates that correctly inflated tyres can save 2.5% on fuel bills compared with tyres underinflated by 10 psi. Research by tyre manufacturer Michelin shows that under-inflation can cost an additional $4,400 per tyre over the course of a tyre's life.

The significant costs to your business of poor maintenance are not just limited to consumables. Picking up a fault in your vehicle's engine early can save you the cost of replacing the engine.

Although cost savings through preventative maintenance deliver a key benefit, can regular vehicle inspections also improve vehicle and driver safety?

Vehicle defects and their impact on safety

The US National Highway Traffic Safety Administration (NHTSA) determined that vehicles driven on tyres 25% under-inflated are three times more likely to be involved in a tyre-related crash compared with those with properly inflated tyres. This is because such under-inflation compromises a vehicle's ability to stop.

Under-inflation impacts safe stopping distances, reducing the window of opportunity to avoid a collision. It also elevates the risk of aquaplaning when driving on wet roads and degrades tyre endurance, causing excessive wear and tear, which increases the probability of a tyre blowout. And it compromises a vehicle's road holding, which reduces the ability to take bends safely.

A Consumer Report study found that 5% of all vehicles studied experienced tyre problems immediately before a crash. Tyre defects, when combined with other factors such as bad road surfaces or weather, excessive speed or an inexperienced driver, can increase the likelihood of loss of control. But it is not just about tyre pressures.

As well as keeping tyres properly inflated, it is important to monitor tyre tread depth. The study showed that tyre-related crashes were more likely with worn tyres. Crash data indicates crashes with a vehicle with tread depth below 1.6mm constitute 26% of all vehicle accidents while vehicles with full tread depth were more than 10 times less likely, at only 2.4%. But what of other issues?

Not surprisingly, in a two-year study, road traffic accident analysis by the US Department of Transportation identified that most crashes caused by poor maintenance related to tyres and wheels, followed closely by braking issues.

Other key areas where defects could compromise the H&S of your vehicles operation include:

1. **Faulty lights** - causing problems both with vision and with being seen. It also compromises a driver's ability to inform other drivers of their intentions e.g. indicators or brake lights.
2. **Faulty wipers or screen-wash** – causing problems with visibility through the windscreen.
3. **Faulty or worn brakes** – causing problems with reduced braking capacity, and if not attended to, a catastrophic failure and a possible runaway vehicle.
4. **Cracked glass** – causing a loss of vision. As well as the loss of a wing mirror, a crack on the windscreen in the driver's line of sight can impede vision. When driving at 100km/hr your vehicle will cover nearly 28m every second. This lack of vision can be the difference between staying safe and a fatal crash.
5. **Horns** – losing your horn compromises your ability to warn or communicate to other road users in critical moments.

So how should you address these potential issues, which can compromise the safety and effectiveness of vehicles and equipment?

Technology delivers simplicity

WOFs and COFs provide no ongoing assurance as to the road worthiness of a vehicle; they merely certify that a vehicle met a minimum safety standard on the day of inspection.

The key to success is to leverage your drivers. They are your eyes and ears and the custodians of your fleet. But you need to convince them that they directly benefit by having a well-maintained vehicle and it is worth their time inspecting vehicles on your behalf.

By leveraging value from your drivers, you involve the people who know the vehicle the best, who use and rely on it daily and who have a legal responsibility to ensure it is safe to use.

The pace of today's world is constantly accelerating. Technological advances are driving change and demanding ever faster responses. A Canadian study by Microsoft involving 2000 participants reported our attention span as having significantly shortened; from 12 seconds in 2000 to 8 seconds in 2008 – due, it is believed, to the digital revolution.

This staggering reduction in how our brains function can be detrimental to any attempt to embed vehicle inspections via the traditional method of pad and paper checklist. A drawn-out process goes against the dynamism of today's world and will likely lead to it being skipped all together. The driver may run the risk of a crash and you the consequences. So, what is the solution?

The key is as simple as it is beautiful. Use technology itself to solve the problem caused by technology. Telematics providers like EROAD have embraced technology to create mobile apps that allow drivers to conduct vehicle inspections in a simple, straightforward and logical process. EROAD's vehicle inspection product, EROAD Inspect, embraces the principles of user friendly and effective. It also aligns with EROAD core values: leading with safety, acting with integrity and celebrating innovation.

EROAD Inspect offers configurable templates, enabling the customer to create the most appropriate and effective vehicle check for each vehicle type

As the customer, you can decide how brief, simple or complex you want your inspections to be and can mould them to fit the culture of your business and drivers. This makes it far more likely that you will achieve your key deliverables, protecting both liabilities and cost. You can choose the most suitable frequency and opt for either pre-or post-journey checks as preferred.

A vehicle check that fits with your employees' attention spans and which you have confidence in being carried out is infinitely more effective than a paper-based system that delivers little or no real value to support H&S compliance. And this mindset does not just work one way.

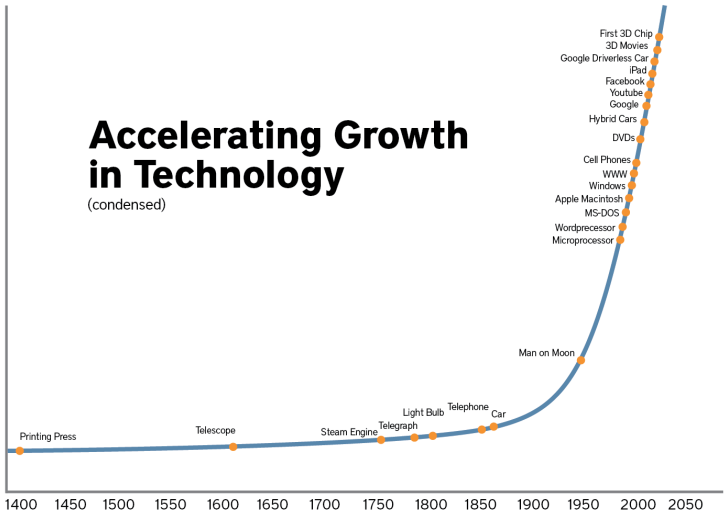
The immediacy of a response

As technology evolves people expect fast responses. Worldwide, it is estimated that more than 2.5 million emails are sent every second. That's a mind boggling 74 trillion a year.

A paper-based system using vehicle inspection forms that are not submitted at the end of the day or even the week flies in the face of this expectation for immediacy. If a driver sees a vehicle defect that needs addressing, taking a photo and sending it immediately to management enables them to visualise it. That must be the way forward. Allowing management to respond in minutes with advice aligns with this approach.

When a driver reports a concern or fault using your technology, they require a quick and appropriate response to ensure success.

Because EROAD Inspect is a mobile application, information is instantly sent to management for their review and action. Reacting immediately to an issue raised by a driver helps underscore their belief in the inherent value of the vehicle check and encourages ongoing compliance.



CONCLUSION

Charles Darwin summed it up best in his work on the theory of evolution when he said, "It is not the strongest or the most intelligent who will survive but those who can best manage change."

Embracing new technology for vehicle inspections will help deliver cost efficiencies, improve assurance levels, minimise liabilities and reduce vehicle downtime. Additionally, it makes decision making easier for staff whose responsibility it is to review defects and make decisions around actioning them.

Implementing effective, user-friendly, sustainable inspection systems that truly connect with the mindset of today's society goes a long way to protecting your shareholder value and minimising your personal liabilities. As a leader in health and safety, EROAD will partner with you on the journey to compliance, providing best-in-class technology that makes it simple and ensures your success.

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Chris Evans is Health and Safety Stakeholder Manager at EROAD. He has 21 years' senior management experience leading company strategy in health, safety and the environment (HSE) and risk management in the UK and international markets.

ABOUT EROAD

EROAD modernises road charging and compliance for road transport by replacing paper-based systems with easy-to-use electronic systems. The company is headquartered in Auckland, New Zealand, and listed on the New Zealand Exchange (NZX). Its US business is based in Portland, Oregon, serving customers with vehicles operating in every US mainland state, growing outward in concentration from the Northwest. In 2009 EROAD introduced the world's first nationwide electronic road user charging (ERUC) system in New Zealand and, in 2017, more than 50% of heavy transport RUC is expected to be collected electronically, representing a rapid transition to e-commerce on a voluntary, industry-led basis, due to the cost-savings and benefits to customers. EROAD is also a leading provider of health and safety compliance services, including vehicle management and driver behaviour and performance measures.