



PETER HART

## Controlling the risks

business. Risk = Severity x Exposure x Vulnerability. Severity is the seriousness of the consequences if the hazard occurs. Exposure is based on the number of times that the hazard could occur in a week and Vulnerability is an assessment of the reliability of things that stop the hazard occurring. Each of these factors needs to be assessed against a scale of high to low. Failures that can occur without warning are particularly dangerous. The diagram shows a classification scheme for determining the risks of a particular hazard. When assessing whether the Vulnerability is Very Low, Low, Medium or High, think about what stops the hazard occurring. How many levels of safety exist and how could they fail? I have a spreadsheet that I use to assess hazards and risks in mechanical workshops. I have identified about 100 hazards that can occur in a workshop. The workshop manager can use the spreadsheet

Risk is probably the driest subject you could read about in a truck magazine. Why do it? Because controlling risk is good for your business and even for your life. Risk controlled is problem avoided. Hopefully, this article will help some businesses to develop their Risk Management Strategy. Here are some basic ideas about risk management: A hazard is an adverse outcome. The risk of a hazard is an assessment of how likely it is that the hazard will occur in your

to make a qualitative assessment of risk. An example applicable to hazards associated with welding that is taken from the spreadsheet, is shown in the table. The Risk level is calculated by the spreadsheet once the assessments of *Severity*, *Exposure* and *Vulnerability* are made.

A big advantage of the spreadsheet calculator is that it gives a guide for the workshop manager about the hazards that can occur but allows new hazards to be inserted. Notes about the assessments can be put in and the document can then be stored as a record that the assessment was done. Getting the staff to make their own risks assessments is a great way of engaging them.

The spreadsheet risk calculator can be customised for any work environment. If you have staff working at home, the employer may still be responsible for 'providing a safe workplace'. Why not give each staff member an appropriate risk calculator for the home office?

OH&S rules require that workplaces be safe. That means that hazards must be identified, risks must be assessed and unacceptable risks must be controlled. Here are the rules:

- If risk is EXTREME then stop the activity now.
- If the risk is HIGH then finish the activity with care and then make improvements immediately.
- If the risk is MODERATE then continue the activity but work actively (with a plan) to reduce the risk.
- If the risk is LOW then it is acceptable but good practice is to continuously improve and to target lower risk.
- If the risk is NEGLIBIBLE then great! Work to keep it there.

The Australian Trucking Association (ATA) and the Australian Logistics Council (ALC) have jointly developed a Master Code of Practice for managing Chain of Responsibility risks that exist

	Hazard	Severity	Exposure	Vulnerability	Risk Level
Welding Flash, Sparks and Disturbances	Welding flash is visible to others	Minor	Low	Low	LOW
	Welders don't use face masks. Eye damage	Serious	High	Moderate	HIGH
General hazards from welders	Welding sputter onto parts or tools	Minor	High	Low	LOW
	Hot metal parts left unprotected could be touched	Moderate	High	Moderate	MEDIUM
	Frayed welding cables can be touched	Minor	High	Low	LOW
	Welding disturbs electrical equipment in the workshop	Moderate	High	Low	MEDIUM
	Welding cables are trip hazards	Minor	High	Low	LOW
	Fumes from welding not vented and breathed in by Welders	Serious	High	High	VERY HIGH

Part of a spreadsheet risk calculator that is programmed to calculate risk based upon qualitative estimates of *Severity*, *Exposure* and *Vulnerability* for a range of about 100 workshop hazards.

in the road freight industry. This Code, which can be found on the NHVR website, provides an excellent guide to the actions that participants should take and should avoid taking! Chain of Responsibility risk arises from the National Heavy Vehicle Law. It applies to drivers, operators, schedulers, consignors and consignees, packers, loaders, and loading supervisors. All these positions have a Duty of Care to the community and to each other to make our industry safer and to not put unsafe obligations on themselves or others. Companies engaged in these activities must have business practices in place that ensure that their actions do not cause unsafe requirements to exist or to put them onto other parties in the chain. They all have a shared responsibility. Mechanics and workshop managers are not subject to Chain of Responsibility legislation. There is a duty of care obligation in common law to the community and to their clients. So how can workshops manage the risk? The business practices of workshops should provide a check that the repairs and service was done correctly. The first step is to carefully assess the work that needs to be done. The next step is to use quality parts and install them according to manufacturer's instructions. Finally, a quality assurance stage is needed for every job. This is a final check by an experienced person who can validate

that the nuts were torqued, or the pin is correctly aligned, or the rags were removed, and the job cleaned. Workshops often identify developing problems that the operator is not ready to correct. Sometimes, it is worse; the vehicle is unsafe. It is essential that every workshop has a procedure for dealing with these situations. The job card and invoice paperwork should report observations of other problems outside the scope of the engagement and recommend further action. The risk that the defect might cause a hazard could be assessed using the above risk-assessment procedure and the risk level described. If the steering bushes and kingpins are worn, the risk might be assessed to be HIGH. The workshop must inform the driver and operator of that assessment, and document it. This is the workshops' duty of care. To do otherwise would put all parties at risk of legal sanction. There are some clear lines that a workshop should not cross. Section 26E of the Heavy Vehicle National Law applies to any person who causes the speed limiting of a heavy vehicle to be disabled or manipulated. Tampering with the emission controls or potentially the exhaust pipes on a heavy vehicle could make it unroadworthy and is unacceptable. If such requests are made, the operator should be told it is illegal to do that.

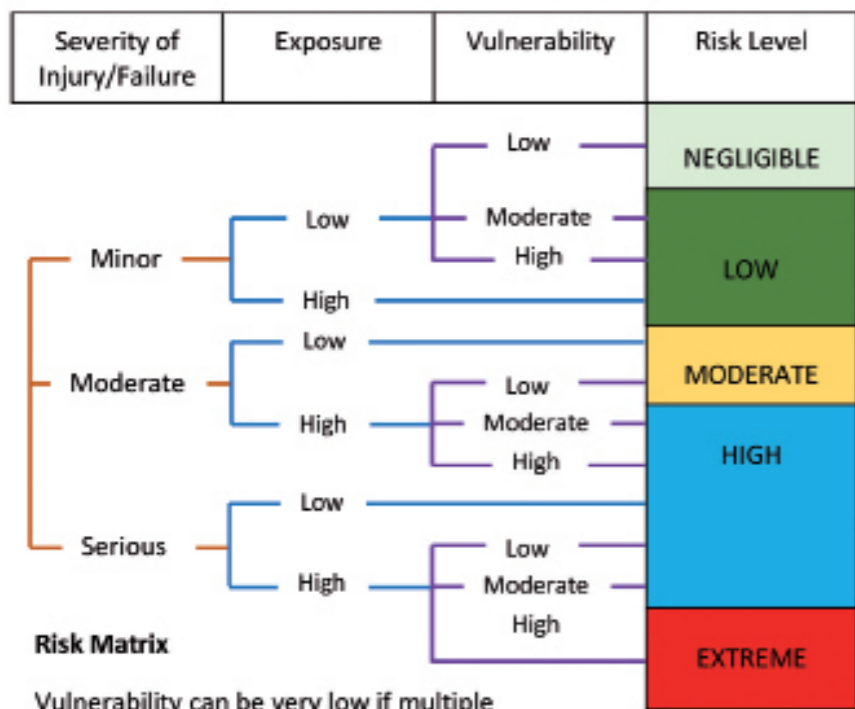
Section 3.2 of the Master Code gives guidance about how transport businesses

(including workshops) can develop a risk management process. I am a believer in a collegiate approach. The workers, who do the physical work, must be involved in hazard identification and risk control. They are the eyes and ears in the risk management task, and they should 'own' the process. Regularly identifying hazards (which can be new) and controlling the risks will help any business to thrive by avoiding problems. Regular reviews of the hazards and risks in your organisation will keep the risk controls effective. It's a no brainer!

Dr. Peter Hart, ARTSA



Does the mechanic know how many rags and tools were used on the job? A rag left inside this engine blocked the oil galleries and caused crank and cam bearing failure.



**Risk Matrix**  
Vulnerability can be very low if multiple independent protections exist.