TOOLBOX TALK

CONTROLLING ENERGY SOURCES ON BULK TANKERS

This document can be used either as a Toolbox Talk or Safety Conversation prompt to meet the needs of your business.

As a part of the operational risk assessment, all sources of energy need to be considered. This is particularly relevant to large onsite vehicles and equipment. Vehicles must be isolated first if; it is left unattended, it has workers within its exclusion, or it is being worked upon for maintenance. Vehicles and equipment that is not correctly isolated can move or release energy unexpectedly.

toolbox talk

LOCK-OUT TAG-OUT TRY-OUT

Electrical

Thermal

Kinetic

Pneumatic

Blind spot
Take care
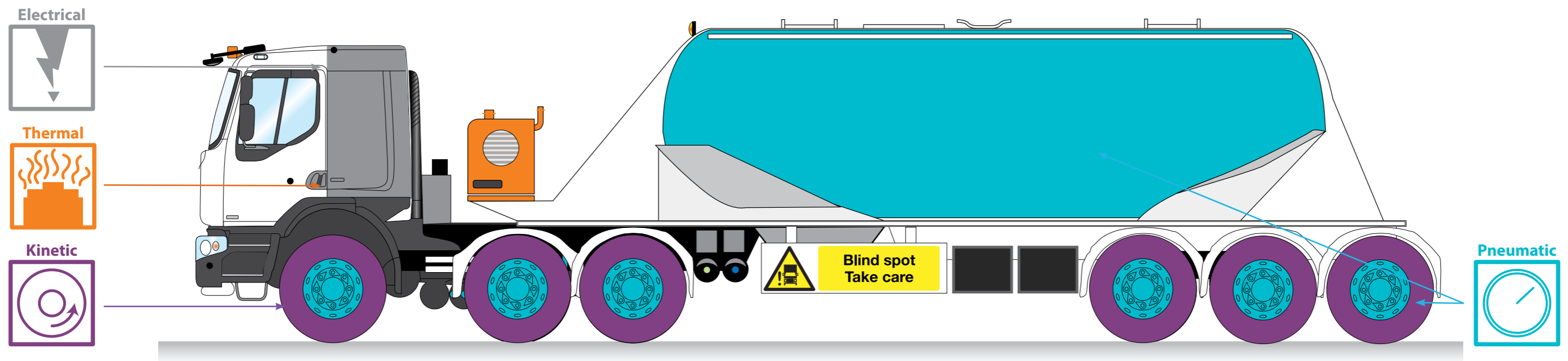
Quick Quiz
What could happen if these energy sources are not properly isolated?

Quick Quiz
What can we all do on site to improve our safety when working with or around these vehicles?

Quick Quiz
Which hazards are the most relevant when performing your daily tasks?

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Supervisors Notes

Take your team through this image, identifying the key areas that could be potentially energized.

As a part of the operational risk assessment, all energy sources need to be considered.

Identifying energy sources will be a key part of the risk assessment, which will determine the isolation procedures required for any machinery. In order to isolate the equipment, time must be taken to identify the hazards present and the level of risk they pose. Energy comes in a variety of forms, all of which need to be isolated to prevent an incident from occurring. Once energy is released uncontrollably, it can easily escalate leading to a major accident.

- **Moving Parts** e.g. Entrapment / Being struck
- **Hydraulic / Pneumatic Pressure** e.g. Pressure release / Hydraulic injection
- **Electricity** e.g. Electrocution / Inadvertent start up
- **Flammable or Toxic Properties** e.g. Presence or build-up of toxic/flammable/explosive substances
- **Stored Energy** e.g. Springs under tension / Gravity (Falling objects) / Accumulators
- **Engulfment** e.g. Engulfed by materials / Drowning
- **Hazardous Environment** e.g. Depleted Oxygen / Bitumen

Control Measures

A **wheel chock** is a wedge of sturdy, durable material that is used to prevent the accidental movement (kinetic energy) of a vehicle

Zero Energy State is the point at which machinery or equipment has no energy flowing to or from it. Different energy types reach a Zero Energy State in different ways e.g. the engine will still be hot (thermal energy) even after you take out the vehicle key.

All vehicles must be in a **neutral gear** with the handbrake applied when not in use. Do not rely on removal of the key to control all kinetic energy.

Remove all keys to ensure a vehicle cannot be started without the isolators knowledge. Follow the steps of LOTOTO for full isolation. If a removable isolation brake key is available, ensure this is removed as a part of the isolation process.

When maintaining or repairing vehicles with **air suspension**, ensure all of the air is removed from these systems before undertaking any work.

Quick Quiz
What could happen if these energy sources are not properly isolated?

Easy opportunity for high level of incidents including life changing injuries or fatality.

If possible, draw upon previous incidents that have occurred within your business, area or which have been shared via the MPA Safequarry website

Quick Quiz
Which hazards are the most relevant when performing your daily tasks?

Discuss with the team areas that are most likely to affect them but allow different groups to share with one another so that the whole team can support each other's safety.

Quick Quiz
What can we all do on site to improve our safety when working with or around these vehicles?

- Risk Assessment following ERICPD
- Permit to work – ensuring everyone is competent and fully trained
- LOTOTO Registers and records
- Appropriate use of the LOTOTO process
- Near Miss records and thorough incident reports to prevent future incidents
- Use appropriate devices such as wheel chocks, lockout devices, guarding etc to prevent energy from being converted or to keep people out of danger zones if an incident does occur