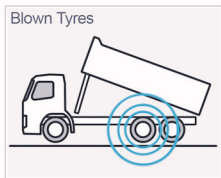
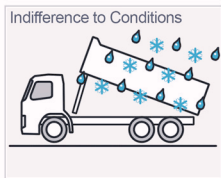
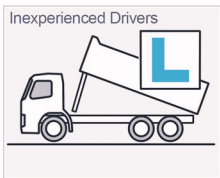
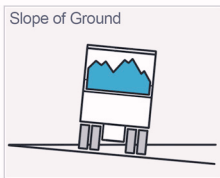


TIPPER STABILITY CONTROL SYSTEM

The Mathers patented Tipper Stability Control System (TSC) has been specifically designed to substantially eliminate the ever present risk to drivers overturning the truck during body tipping or dumping on rear dump trucks. Plus increase productivity with automatic dumping control tailored to the load and ground conditions.

Overturning a tip/dump truck can be caused by a multitude of factors including;



TSC Functionality - Designed to improve safety standards as outlined in AS 1878.8 Workplace Codes of Practice

Load Rating

1. KEY INDICATOR TO MONITOR STABILITY

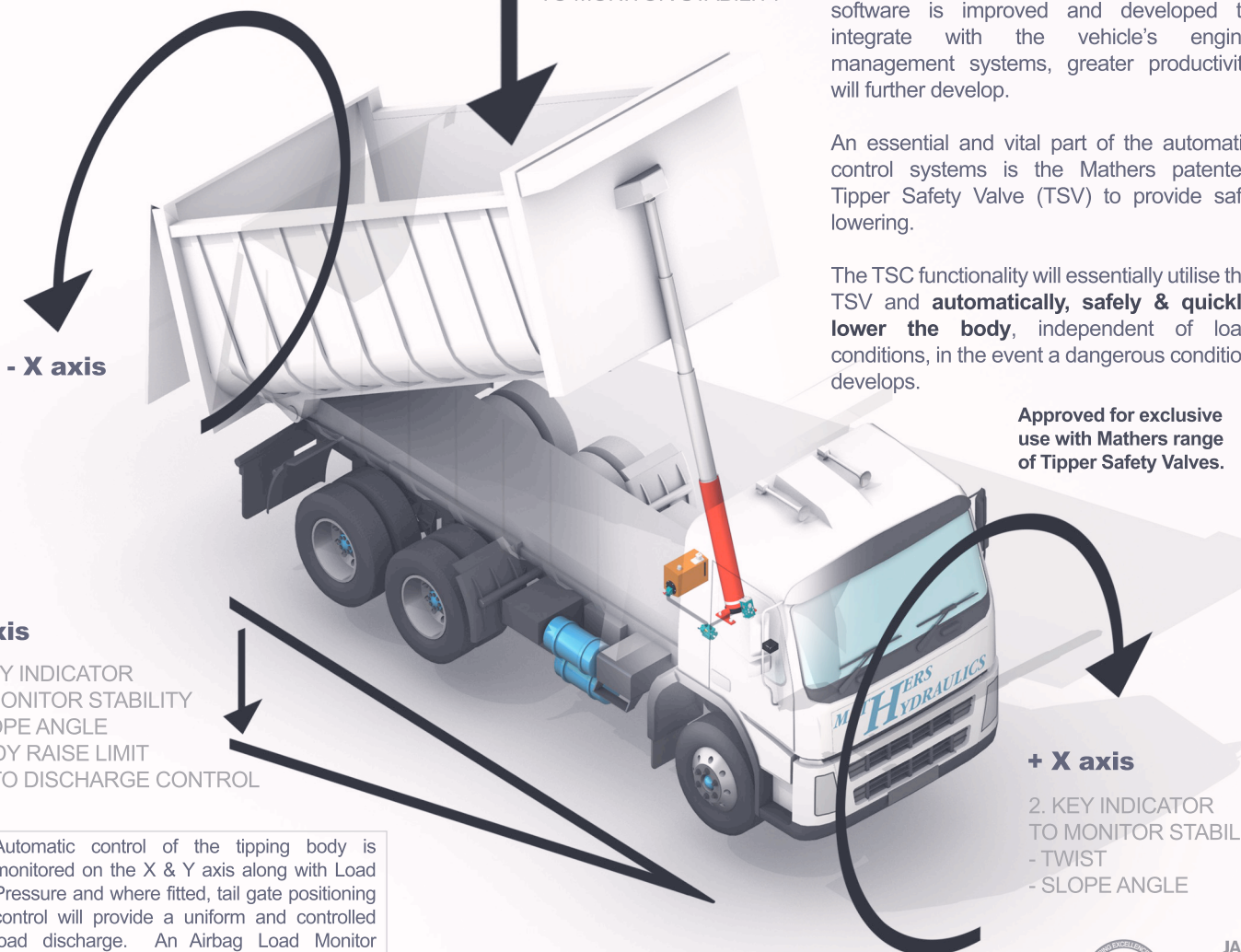
Automatic Tip/Dump Operation

Automatic control of the tipping function is programmable, and inevitably as system software is improved and developed to integrate with the vehicle's engine management systems, greater productivity will further develop.

An essential and vital part of the automatic control systems is the Mathers patented Tipper Safety Valve (TSV) to provide safe lowering.

The TSC functionality will essentially utilise the TSV and **automatically, safely & quickly lower the body**, independent of load conditions, in the event a dangerous condition develops.

Approved for exclusive use with Mathers range of Tipper Safety Valves.



Y axis

3. KEY INDICATOR TO MONITOR STABILITY
- SLOPE ANGLE
 - BODY RAISE LIMIT
 - AUTO DISCHARGE CONTROL

Automatic control of the tipping body is monitored on the X & Y axis along with Load Pressure and where fitted, tail gate positioning control will provide a uniform and controlled load discharge. An Airbag Load Monitor provides faster response on side slipping loads.

+ X axis

2. KEY INDICATOR TO MONITOR STABILITY
- TWIST
 - SLOPE ANGLE

MHTSC-ANS

Patent Applied For.
Mathers Hydraulics reserve the right to change specifications at any time without notice.



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MATHERS
HYDRAULICS

TIPPER STABILITY CONTROL SYSTEM

Overview

The X & Y stability monitor is specifically designed for mobile equipment monitoring in arduous conditions and is resistant to shock, vibration & environmental conditions.

- The X Axis Monitor

The X axis monitors uneven ground conditions and side slope.

- The Y Axis Monitor

The Y axis monitors slope; negative slope angles increase instability when the rear wheels are not horizontal, along with the body raised position. The Y axis monitor as well as identifying the ground slope angle automatically monitors the body tilt position, relative to ground slope. The Y axis monitor ensures discharge is controlled for flat ground, negative or positive slopes & controls the end stop position for body tilt, thus ensuring unnecessary stresses are eliminated by preventing the cylinder hitting the end stop on empty bodies causing cylinder, seal or premature hydraulic failure.

- Hydraulic Cylinder Pressure Monitor

Automatically monitors load condition proportional to the X axis ground condition, ground slope & body tilt position. The cylinder pressure monitor is also essential in ensuring an even discharge on systems using automatic control to limit the ejection rate.

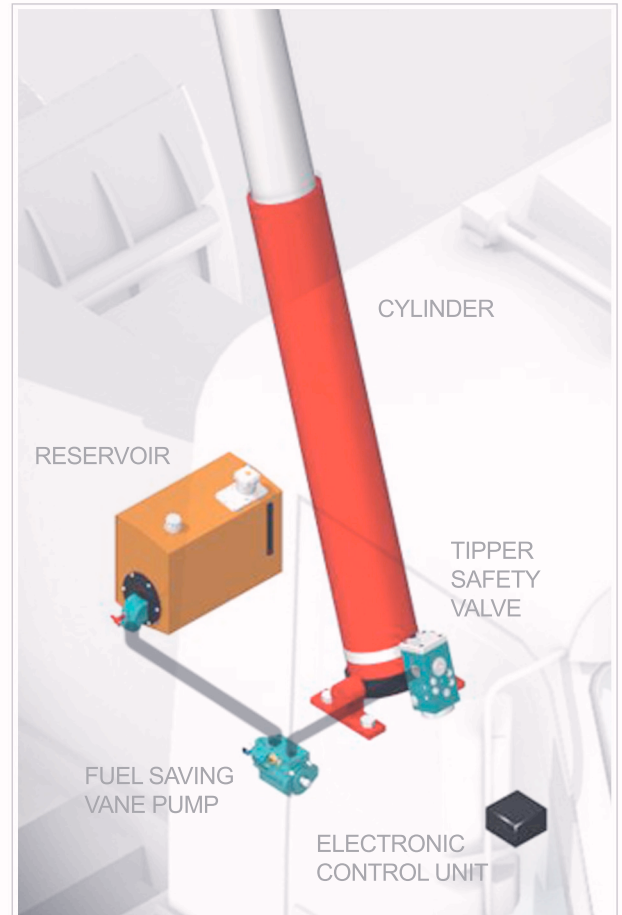
- Airbag Suspension Monitor & Tail Gate Control (Optional)
Where fitted increases control by monitoring load and discharge rates and adjusting cylinder position as required.

- Programmable Electronic Control Systems
Electronic Control Units (ECU) are standard throughout machinery today and the Mathers TSC software is designed to improve safety and productivity . **In particular the TSC system will respond faster and more safely than any operator could in dangerous conditions, greatly reducing driver risk.**

- Cabin Controls

Cabin controls include raise/lower buttons, digital readout of X & Y axis, warning lights of impending unsafe conditions and automatic cycle selection.

SYSTEM PRESSURE MONITOR



INCLINOMETER FOR SLOPE ANGLES

Inclinometer Model Code

MH-B2N45H-Q20L60-2LU3-H1141

Measuring Range	x axis -10... 10° y axis -20... 70°
Operational Voltage	10... 30 VDC
Response Time	0.1... 0.05 s
Housing	rectangular, Q20L60
Dimensions	60 x 30 x 20 mm
Housing Material	plastic, PBT-GF-20-V0

