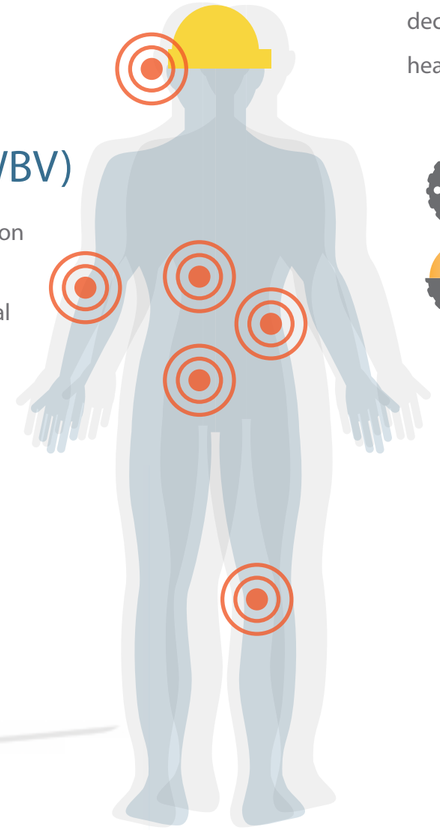
What is Solid Shock?

Solid Shock refers to the harsh impact of g-force vibration transmission to heavy industrial vehicle operators and their equipment from solid aperture tyres. Not only is Solid Shock a major source of wear and tear on machines, but it's also a leading cause of operator injury.



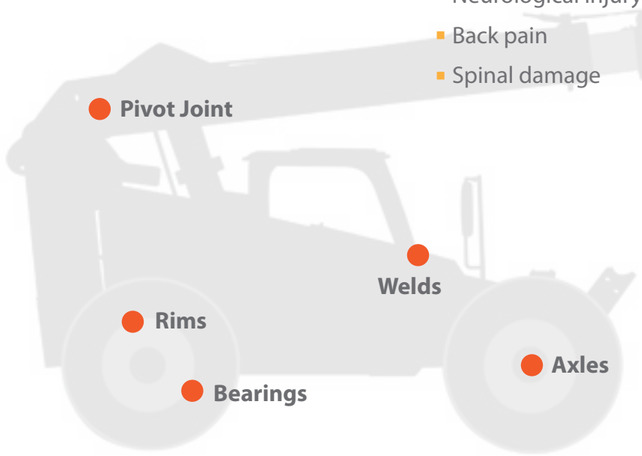
The After Shock—Whole Body Vibration (WBV)

Daily exposure to Solid Shock can cause the operator to experience:

- Headaches
- Lower back pain
- Joint pain
- Fatigue

Prolonged exposure to g-force transmission from Solid Shock can lead to Whole Body Vibration (WBV). This serious physiological condition may result in operator attrition and job absence due to measurable:

- Muscular-skeletal injury
- Neurological injury
- Back pain
- Spinal damage



Solid Shock To Equipment

Solid Shock transfers unnecessary excessive g-force on equipment causing costly and premature wear and tear.

Reducing Solid Shock And Increasing Productivity Begins With Tyre Selection

Research shows that the Solid Shock experienced by the operator can be upwards of 400 times or more per day which is wreaking havoc on the 3-axis of the body. As a part of any Solid Shock prevention program, tyre choice is paramount to decreasing exposure to excessive g-force transmissions and the resulting adverse health risks.

	G-force Transmission	Flatproof	Recyclable
Solid Aperture	Extremely High	Yes	No
TyrFil	✓ Very Low	✓ Yes	✓ Yes

G-force Testing is Where the Rubber Meets the Operator

Front End Loader Testing Results

Solid Aperture Tyre

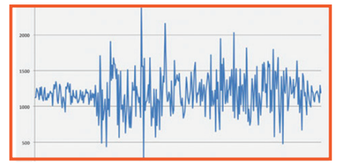
1.39 G-forces

TyrFil Processed Tyre

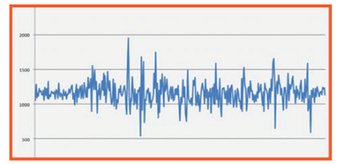
0.8 G-forces

TyrFil Processed Tyres – 41% less g-force transmission to cab/operator than solid aperture tyres. Data was collected on a front end loader tested on a track replicating real jobsite conditions.

Telehandler Testing Results



Solid Aperture Tyre testing shows 3 severe spikes in g-force within 3 minutes. In an 8 hour shift that equates to 480.



Tyre Filled Pneumatic Tyre testing shows 19% less g-force to the operator/cab and 17% less g-force to the axle/equipment.

The Testing Proves It

Test results prove that pneumatic tyres processed with Accella TyrFil outperform solid aperture tyres.

Learn more at:
nomoresolidshock.com

- **Telehandler Testing** - In the telehandler test, tyre filled pneumatics transferred 19% less g-force to the operator/-cab and 17% less g-force to the axle/equipment.
- **Wheel Loader Testing** - significantly lower g-force transmission resulting in less equipment stress (36%) and less adverse WBV (Whole Body Vibration) effects (41%) to operator.

"...the effects of vibration on the human component cannot be ignored."

Helmut Paschold, PhD., CSP, CIH
Indiana University of Pennsylvania
Whole Body Vibration, Field Testing
Project Consultant

TyrFil®

High Performance Flatproofing Technology

TyrFil® is a patented polyurethane material that is pumped into OTR pneumatic tyres, replacing all the air. It cures into a flexible, durable filling that acts as a shock absorber and completely eliminates flat tyres. Compared to other flatproofing products such as solid tyres, cores and liners, TyrFil is the most cost-effective solution and provides the best overall performance.

Performance

- Eliminates 100% of flat tyres
- Lowers g-force impact to operator and equipment
- Maintains constant internal pressure and distributes loads evenly
- Extends tyre life
- Increases heat resistance
- Eliminates rim slippage
- Improves traction and stability
- Retreadable—up to four times

Safety

- Prevents catastrophic blowouts
- Eliminates Solid Shock and Pneumatic Bounce to operator and equipment
- Improves vehicle stabilization, enhances ride and reduces operator fatigue
- Helps minimize worker compensation claims

NO MORE SOLID SHOCK

Learn more at:
nomoresolidshock.com

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TyrFil™ A CARLISLE BRAND

Can you tell which operator needs a safer ride?