**MEMS® 4 ADVANTAGES AND BENEFITS**

- Highly Reliable Sensors for Harsh Environments
- 3G Connectivity: Both 3G or Ethernet Installation
- Easy to Install and to Maintain
- Powerful Support Included
- Improved Business Efficiency

**MEMS® 4 REAL WORLD RESULTS**

“I AM A TIRE MANAGER at a mine in Canada and I manage a fleet of 50 trucks. One day, we received a low pressure alarm from MEMS®. After a visual inspection, we saw that the tire had a slow leaking valve. The valve was repaired and the truck was returned to work quickly. We avoided downtime in the pit due to tire breakdown and saved both production and capital resources.”

<table>
<thead>
<tr>
<th>WITHOUT MEMS®: NO ALERT</th>
<th>WITH MEMS®: THANKS TO ALERTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downtime</td>
<td>24 hrs</td>
</tr>
<tr>
<td>Cost</td>
<td>$29,000.00 (tire destroyed)</td>
</tr>
<tr>
<td>Production Lost</td>
<td>10,000 tons / $500,000.00(1)</td>
</tr>
<tr>
<td>Total</td>
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</tr>
</tbody>
</table>

(1) Based on data communicated by customer.
(2) Just 8 hours downtime required to repair the valve, meaning just 2,200 tons of production lost.

**STRENGTHENED SAFETY**

**REDUCED MAINTENANCE COSTS**

**REDUCED TIRE BUDGET**

**INCREASED TRUCK AVAILABILITY**

www.michelinearthmover.com
IMPROVING YOUR EFFICIENCY IS EASIER THAN EVER BEFORE

MEMS® 4 IS A COMPLETE TIRE AND MINE CONDITION MONITORING PLATFORM.

- The sensor is placed inside the tire, capturing temperatures and pressures in real-time

MAIN OUTPUT
- Dispatch & maintenance recommendation in real-time
- Tire/Truck anomalies reporting
- Tire performance reporting (hours, mileage, work rates)

NEW EQUIPMENT
- New receiver & active antenna
- Data capture tool & mobile device
- New software platform

- Easier integration
- Vehicle cycle analysis
- Open to mobile
- Android mobile device
- RFID Reader wand saves time and prevents mistakes made by manual entry
- Web-based
- Better network integration

NEW FEATURES
- TPMS
  - Focus on alarms
  - More user friendly
  - Up-to-date technology
- Mapping
  - Position of trucks
  - Lateral acceleration
  - Geofencing
- TKPH Monitoring Ready
  - Real-time tire thermic monitoring
  - Improve productivity

MAIN BENEFITS
- INCREASED TRUCK AVAILABILITY, THANKS TO:
  - No unplanned stops, keeping your machine on the go: minor incidents are faster to fix than major ones
  - Cycle optimization: Prevent excessive heat damage to tires through assisting dispatch route changes
  - Business continuity and less unplanned maintenance

- REDUCED MAINTENANCE COSTS:
  - Reduce unscheduled truck downtime
  - No more need for on-site intervention to check tire pressures, which can be verified from the control room
  - Reduce fuel consumption by optimizing air pressure
  - Reduce maintenance costs through mine condition mapping

- REDUCED TIRE BUDGET:
  - Increase tire life by continuous survey of health risk factors: pressure, temperature, speed in corners, slopes

DID YOU KNOW?
- Tire life is reduced by 20% for every 14.5 psi (1 Bar) of underinflation
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MEMS® 4 ADVANTAGES AND BENEFITS

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- CONNECTIVITY: BOTH 3G OR ETHERNET INSTALLATION
- EASY TO INSTALL AND MAINTAIN
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WITHOUT MEMS®: NO ALERT

- Downtime: 24 hrs
- Cost: $29,000.00 (tire destroyed)
- Production Lost: 10,000 tons / $500,000.00 (1)
- Total: $529,000.00

WITH MEMS®: THANKS TO ALERTS

- SECURED PRODUCTION: 7,800 TONS (2)
- $418K SAVED

(1) Based on data communicated by customer.
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