

# Performance Monitoring Carry-back



**TSGlobal<sup>®</sup>**  
Conveyor & Polyurethane Specialists





**Carry-back** refers to the accumulation of residual material that remains adhered to the conveyor belt after discharge. It is a common issue in bulk material handling systems and can lead to increased maintenance requirements, spillage, equipment wear, and environmental and safety risks. It is estimated to cause up to 85% of conveyor maintenance issues, making it the biggest single source of fugitive material.

**Key Outcomes & Operational Gains**

Utilising our carry-back testing and solutions delivers **measurable benefits**, including:

- Improved workplace safety
- Lower maintenance frequency and optimised maintenance planning
- Increased operational efficiency and productivity
- Extended conveyor belt lifespan
- Reduced environmental impact
- Minimise airborne dust
- Cost-effective operations through targeted interventions
- Enhanced performance with water integration.

1. Carry-back can cause serious operational and safety issues, such as environmental hazards, slip risks, material loss, and premature wear of conveyor components. Common causes include:

- Ineffective or worn belt cleaners
- Sticky, high-moisture materials
- Poorly designed or installed belt cleaning systems.

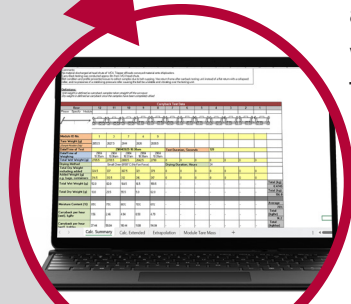


**1. Carry-back Build-Up**



**2. Testing Begins**

2. We provide a specialised carry-back testing service. Our testing accurately measures material adhesion and evaluates its impact on conveyor belt efficiency and performance.



**3. Reporting**

3. Our experienced service technicians deliver a detailed report within one week of testing, with clear, actionable recommendations. The report includes insights such as:
- Material type, size, and moisture content
  - Throughput (TPH)
  - Belt and splice specs
  - Carryback rate (kg/h and kg/yr), including both wet and dry totals
  - Performance of current belt cleaners
  - Trends of carry-back bypassing the belt cleaning system.

5. For optimal conveyor performance and long-term carry-back prevention, we recommend repeating the testing process every six months. This proactive approach supports sustained efficiency by enabling:

- Early detection of changes in material behaviour or system performance
- Timely adjustments to cleaning systems and maintenance schedules
- Improved efficiency, safety, and cost-effectiveness across operations
- Data-driven decision making through ongoing performance trends.



**5. Ongoing Monitoring**



**4. Solutions**

4. Based on carry-back analysis, we recommend targeted solutions to reduce or eliminate material build-up, including:
- Optimise belt cleaner performance through scheduled inspections
  - Water integration for improved cleaning and lubrication
  - Monitor carryback via scheduled testing
  - Install advanced belt cleaning technology
  - Upgrade or modify system components
  - Perform scheduled adjustments/refurbishments.

## Performance Monitoring

Testing Options	
Temporary Setup	<ul style="list-style-type: none"><li>• Single-use setup for one-off testing</li><li>• One-time setup and testing cost</li></ul>
Permanent Setup	<ul style="list-style-type: none"><li>• Long-term solution with ongoing monitoring</li><li>• One-time setup cost plus ongoing test fees.</li></ul>

Most testing setups can be completed in 30 minutes, subject to site conditions.





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**PHONE** 1300 418 298 • **EMAIL** [sales@tsglobal.net.au](mailto:sales@tsglobal.net.au) • **WEB** [www.tsglobal.net.au](http://www.tsglobal.net.au)

**WELSHPOOL WA • TOMAGO NSW • MACKAY QLD**

ABN 30 603 644 748