



Life Cycle Management Solutions

LCM



Configurable Solution Based on Customer Needs

- Improve safety
 - Reduce maintenance time
 - Komatsu personnel on Komatsu equipment
- Optimize machine performance
 - OEM continuous improvement activities within factory and mine settings
- Decrease costs
 - Customizable and predictable pricing structures
- Availability guarantees (with select offerings)
- Global Monitoring
 - Benchmarking, performance and issue resolution
- Risk Sharing/ Reconciliation
 - 100% Komatsu risk/ benefit
 - Shared risk/ benefit
 - 100% customer risk/ benefit (Reconciliation)

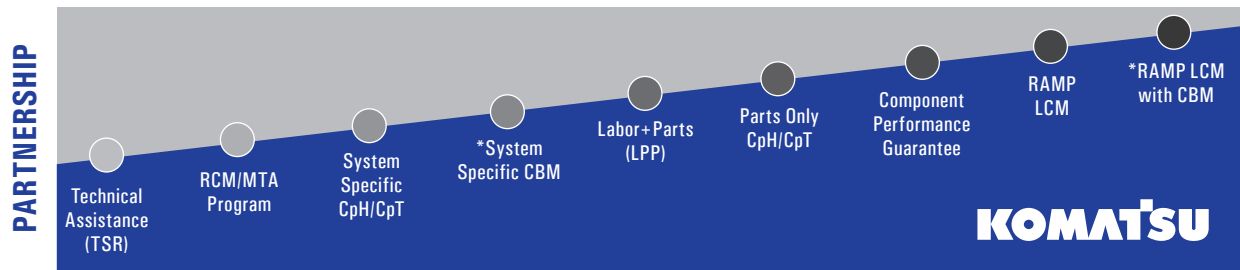
Description

Komatsu Mining's LCM solutions team partners with customers to scope their requirements and design the best service offering to reduce mining costs and optimize machine performance throughout the asset's life cycle.

Primary areas of emphasis are safety, performance, planning, machine monitoring, maintenance, repairs, technical service, training, and efficient administration.



LEVEL OF SERVICE



*CBM is under development

LCM Service Offering Sliding Scale

- **TSR – Technical Service Representative**
 - Onsite Komatsu specialists to provide technical assistance and/or oversee maintenance work
- **RCM/ MTA – Reliability Centered Maintenance/ Maintenance Task Analysis**
 - Form a partnership with mine site and conduct a thorough review of maintenance tasks required for the machines, customized according to actual mine maintenance practices
- **System Specific Cost per Hour/ Cost per Ton**
 - Coverage of a specific system or subset of components on a machine (such as motors only, undercarriage only or major components only)
- **System Specific Condition Based Maintenance**
 - Coverage of a specific portion of the machine by Condition Based Maintenance philosophy (monitoring actual estimated life and point of estimated failure by the actual work done by the component)
- **LPP - Labor Plus Parts**
 - Planning and/ or maintenance execution labor is provided by Komatsu while parts are billed by actual consumption of components
- **Parts Only Cost per Hour/ Cost per Ton**
 - Components are forecasted at the start of the contract and billed by a predetermined rate per unit (Fixed/ Level or Variable) across the term of the contract - labor is provided by the mine site
- **Component Performance Guarantee (CPG)**
 - Defined component benchmarks - customer risk coverage on premature failure -reward payment on outperformance parts are billed upon consumption
- **RAMP – Repair and Maintenance Program**
 - Full coverage of the machine, consisting of both a Labor & CpH/ CpT program - billed as two invoices (Monthly Fixed Labor and Monthly Units x Rate) – providing availability and additional KPI guarantees
- **RAMP LCM with CBM – Repair and Maintenance Program with Condition Based Maintenance**
 - Full coverage of the machine based on the CBM philosophy, consisting of both a Labor & Parts program, providing availability and additional KPI guarantees

The Future of LCM

Based on customer feedback, work site observation, and data analysis, our LCM team pursues a strategy of focused innovation and continuous improvement of core competencies.

- Expand our suite of standard commercial offerings and support custom solutions to optimize any operation
- Optimize machine life cycle models to reduce our customers' costs and allow accurate forecasting
- Implement asset management tools to enable Komatsu personnel to provide unrivaled customer service
- Develop machine prognostics and health management technologies, driving towards industry changing Condition Based Maintenance

Komatsu: Revolutionizing the mining industry for a sustainable future

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