SMART Benchmarks!

SMART Benchmarking Working Group Update 2016

May 1, 2016

2016 CIM Vancouver





Surface Mining Association For Research & Technology



Production Shovels & Excavators

SMART Performance Benchmarks, 2003-2015

Equipment Fleet	SMART Benchmarking Company Participants										
	1	2	3	4	5	6	7	8	9	10	
BE 295		_		-			-				
BE 395											
BE 495											
BE 595											
Marion 301											
Marion 351											
P&H 2300											
P&H 2800											
P&H 4100											
Cat 375											
Demag 455											
Demag 485											
Demag H655SP											
Hitachi EX1800											
Hitachi EX5500											
Hitachi EX8000											
Hitachi UH501											
Komatsu PC1800											
Komatsu PC8000											
O&K RH120											
O&K RH200											
O&K RH400											



Production Trucks, Draglines & Loaders

SMART Performance Benchmarks, 2003-2015

SWART Performance Benchmarks, 2003-2015										
Equipment Fleet	SMART Benchmarking Company Participants									
	1	2	3	4	5	6	7	8	9	10
Cat 988										
Cat 992			000000000000000000000000000000000000000	000000000000000000000000000000000000000						
Cat 994										
LeTourneau L-1800				000000000000000000000000000000000000000						
LeTourneau L-1850										
BE 1360-W										
Marion M7800										
Marion M8050										
Marion M8750										
Cat 777										
Cat 789										
Komatsu 685E										
Komatsu 730E										
Cat 793										
Komatsu 830E										
Cat 797										
Hitachi EH5000										
Komatsu 930E										
Liebherr 282					000000000000000000000000000000000000000					

No longer participating

SMART Benchmarks!

Accomplished in 2015-2016

- Onboarding 2 new benchmarking subscribers
- * Developed proposal for system enhancements with Golder Associates & SMART Benchmarks! team Why?
 - * 2007 website has seen little change since its inception
 - * Web-server technology compatibility issues
 - * Update website to provide quality user experience on traditional and smart devices including tablets and phones
 - * Offer enhancements Phase 1, No New Data Required
 - * Expand features, including fleet classification, additional metric(s) and improved data-chart reports
 - * Improved user accessibility to data.



Continuous Improvement Plan, 2016-2017

- * Audit equipment fleets
 - * add any new equipment fleets & data
- * Audit of normalization of the data
 - * ensure equivalent assignment of time elements
- * Marketing strategy to reach new subscribers



SMART Benchmarks!

Next Steps for Subscribers

- Respond to queries from SMART Data Management team -Golder Associates on equipment audit/ update process
- 2. Consider path forward on system enhancements
 - * Decide on Phase 1
 - * Subscriber call-in meeting to discuss details and feedback, May-June 2016

New Business

- 1. Understand GMSG Mining KPI project
- 2. Develop Phase 2 Enhancements
 - * enhancements that may require subscribers to submit new data elements and for the system to be modified to import and use the new data
- Promote & Grow SMART Benchmarks!
 - Low-cost, high-value product with long-standing and new subscribers
 - Consider other engagement opportunities
 - Continue to leverage quality technical support from Golder & Associates.

2015-2016 SMART Benchmarks! Working Group welcomes your

Questions & Feedback

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2016 Subscriber Fees

The fee schedule starting January 1, 2016 is summarized below:

Fee Item	Amount (\$CAN)				
Annual Subscription Fee	\$7,500				
Development Fee (for first operation)	\$12,500				
Development Fee (for additional operations)	\$10,000				
Initial Data Setup Fee (varies based on requirements)	Approx. \$10-\$15k				

Note: Fees are subject to change with approval from the SMART organization.