

Integrated Technology Package FOR ELECTRIC ROPE SHOVELS

IMPROVE YOUR MINING OPERATION

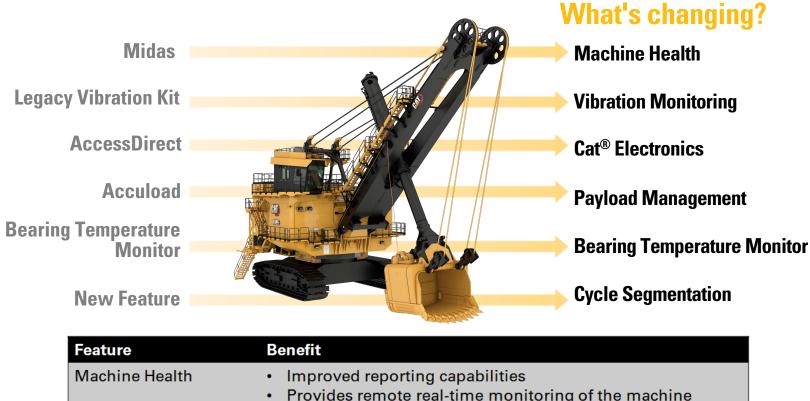
Engineered for the future, the Cat[®] Integrated Technology Package fully incorporates Cat Electronics and provides the platform to support technology expansion. The package features six standard technologies, including Machine Health, Vibration Monitoring, Cat Electronics, Payload Management, Bearing Temperature Monitor and Cycle Segmentation. The enhancements support higher productivity, improved reliability and increased security. The technology upgrade also provides a gateway for seamless integration of Cat MineStar[™] Solutions, a comprehensive suite of operational technologies that help track, monitor, and manage the electric rope shovel.





Cat[®] Electric Rope Shovel - Integrated Technology Package

APPLICABLE MACHINES 7495 ER601143-up / 7495HF ER801136-up



	 Provides remote real-time monitoring of the machine Delivers insight on how to best utilize machines in mine operations
Vibration Monitoring	 Monitors vibration signals for changes allowing for proactive maintenance and in turn maximizes the life of the gearcases and motors Reduces downtime from unplanned outages
Cat [®] Electronics	 Reports health, productivity and offboards data in a consumable format Increases protection against cyber security threats by confining to a single network layer reducing impact and vulnerability
Payload Management	 Provides real time feedback on material moved Monitors overloading and underloading trucks Empowers operators to study their loading efficiency
Cycle Segmentation	 Tracks machine performance through each dig cycle and across different shifts and operators
Bearing Temperature Monitor	Alerts users for temperature outside of thresholdAllows for preventative maintenance

