# IMMERSIVE TECHNOLOGIES Simulation Delivering Safety & Productivity





# Conversion Kit® for Komatsu Hydraulic Shovel & Excavator



#### WHAT DOES THIS LOGO MEAN?

After extensive review of the simulation industry, Komatsu entered into a license agreement with Immersive Technologies in 2006 (Renewed in 2011).

Komatsu exclusively allows Immersive Technologies to use its proprietary machine information to ensure its simulators are engineered to the highest fidelity and realism.

As part of this agreement Komatsu exclusively recommend Immersive Technologies' Advanced Equipment Simulators to Komatsu dealers and mining customers worldwide.

# Increase operational safety and productivity while reducing your maintenance spend

Immersive Technologies' Conversion Kit development for the Komatsu PC4000-6 Hydraulic Diesel Shovel and Excavator provides the ultimate in training realism for mines focused on increasing operator safety, improving productivity and reducing levels of unscheduled maintenance.

Original Equipment Manufacturer and industry endorsed PC4000-6 operating procedures are tightly integrated with an extensive learning system within the Advanced Equipment Simulators. This system has been repeatedly demonstrated via evidence collected from within mining operations to provide rapid, correct and effective learning and assessment.

With mining equipment becoming increasingly technically sophisticated, the level of information, experience and organizational competencies required to accurately simulate these machines also increases.

Through Immersive Technologies' industry experience and exclusive alliance with Komatsu, you can be assured your training solution will be the only accurate and true representation of the real machine available.



Accurate operational characteristics using technology and proprietary data licensed from Komatsu



Conversion Kits utilize genuine Komatsu cab controls and instrumentation

### Simulation Delivering Safety & Productivity

### E157 Conversion Kit for Komatsu PC4000-6 Hydraulic Shovel & Excavator

Immersive Technologies' E157 Conversion Kit provides the ultimate in training realism for mines focused on increasing operator safety, improving productivity and reducing levels of unscheduled maintenance.

The Conversion Kit includes a complete replica cab of the Komatsu PC4000-6 Hydraulic Diesel Shovel/Excavator cabin, with fully functional controls and instrumentation sourced from Komatsu.

These include an operational Vehicle Health Monitoring System, a powerful tool for machine management that provides operators with information on a wide range of vital machine functions, display unit keypad, dual axis control joysticks and Komatsu pedals.



Vehicle monitoring screen and keypad



Control Panel



Left hand joystick with swing speed switch & horn



Right hand joystick with truck counter & idle speed switch



Left & Right propel pedals as well as bucket



Implement lockout lever





**Digging Training** 



**Spotting Training** 



**Dumping Training** 





### Innovative Simulator Training Software

Immersive Technologies' SimControl software includes a range of specific Komatsu PC4000-6 operator errors for recording and



measuring incorrect operator behaviours. In addition, the SimControl software includes Komatsu PC4000-6 events which allow a trainer to initiate machine faults or incidents in order to train and assess operators in responding appropriately. This combination of errors and events provide a mechanism to ensure operators are working at maximum efficiency while minimizing equipment damage. It also ensures operators are able to avoid or respond correctly to hazards and potentially life threatening scenarios.

Operator errors and events include a focus on the following areas:

- Hazard Avoidance
- Hydraulics Management
- Operator Productivity
- Minimizing Unscheduled Maintenance
- Site Safety Procedures



# Komatsu Supported Development

Developed together with Komatsu's Product Engineering, the E157 Conversion Kit combines machine specific technical data exclusively licensed to Immersive Technologies by Komatsu.



With mining equipment becoming increasingly technically sophisticated, the level of information required to accurately simulate the machines also increases. Through Immersive Technologies' exclusive alliance with Komatsu, you can be assured your product is the most accurate and true representation of the real machine.









**Environmental Conditions** 

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#### Transforming data to information

SimMetrics<sup>™</sup> is a powerful reporting system that helps you review, measure and visualize your simulation data. With an intuitive click-and-drag user interface, you don't need to be a programmer to quickly generate detailed reports on the results of your training.

#### SimMetrics Benefits:

- Operator and crew benchmarking
- Trending analysis of operator performance
- Early identification of equipment misuse and damage
- Recording of emergency scenario training results
- Enables comparative analysis against site in-pit results.





#### Support where and when you need it

You purchase the world's best mining simulation to get the job done. Immersive Technologies provides you the support and peace of mind to make sure your simulator achieves this goal.

Our customers receive a range of comprehensive support services:

- 24hr phone support
- Rapid emergency visits
- Scheduled on-site service
- Regular maintenance support
- Hardware and software upgrades
- Extended parts warranty
- Best practice training and community networking.

Contact Immersive Technologies today to discuss which of our five year Customer Support Programs best suits your sites' requirements.

## Training Systems Integration for Komatsu Hydraulic Shovels & Excavators

The success of your simulator training depends largely on the knowledge and application of the technology. Immersive Technologies offers on-site and customized consultation programs to assist mines to rapidly integrate their simulator technology, implement training program best practices and achieve maximum return on investment.

Immersive Technologies application specialists work closely with you to develop a customized Komatsu Hydraulic Shovel & Excavator training curriculum, including the development of detailed performance based benchmarks and reporting systems tailored to your site's specific objectives.



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