NEW AGE SOLUTIONS

PRACTICAL USE OF NEW AGE TECHNOLOGIES

– Not technology for technology’s sake
– Useful tools to help lower owning and operating costs

Simple solutions to help operators do their job
easier and more efficiently.

NEW AGE SOLUTIONS

AS SIMPLE AS:
The clothing your crew wears—safety and comfort

AS COMPLEX AS:
Utilizing satellite mapping and base stations to ensure
accuracy and productivity on the jobsite

SAFETY AT CAT PAVING

Safety Continuous Improvement
Injuries significantly and steadily
reduced since 2004
• Safety Recipe Established
• Set Safe Behavior Expectations
• Engaged Safety Committee
• Leader Safety Walks
• Transition from GAO to Global Paving

2013 YTD
RIF = .49 LTCFR = .37

Global Paving Minneapolis

PRACTICAL APPLICATION: SAFETY

Hi-tech Jobsite Clothing
• Day-glo and reflective materials for high visibility
• Dry-fit materials for cool performance in high ambient temperatures
• Special materials and treatments
makes clothes easy to clean and
resistant to asphalt stains

Personnel are cool, comfortable and
easy to see, allowing them to safely
focus on work.
OPPORTUNITY: PRODUCTIVITY
HOW TO MAKE MY CREW MORE PRODUCTIVE
Make work simpler and more consistent.

PRACTICAL APPLICATION:
Compaction Control Technology
Three technological components

MEASUREMENT
- Asphalt: Mat Temperature
- Soil: Indications of soil stiffness

MAPPING (GPS)
- Pass count, coverage
- Ties measurement to precise location

DATA ANALYSIS: utilizing software to harvest the data

When you have all three components, you have INTELLIGENT COMPACTON

COMPACTION CONTROL TECHNOLOGY:
MEASUREMENT
Compaction Meter Value (CMV)
Measures ground response to being struck by vibrating drum to indicate soil stiffness
- Improves uniformity, enhances quality of work
- Makes consistency easy, like a video game
- Eliminates human guesswork
- Maximizes efficiency and optimizes fuel use
- Measures deep, from 1 to 1.5 m, ideal on granular soils

Helps find buried objects that affect compaction.
Gives operator confidence to move on to next job.

COMPACTION CONTROL TECHNOLOGY:
MEASUREMENT
Machine Drive Power (MDP)
Measures energy required to overcome rolling resistance to indicate soil stiffness
- Improves uniformity, enhances quality of work
- Makes consistency easy, like a video game
- Eliminates human guesswork
- Maximizes efficiency and optimizes fuel use
- Measures less deep, the depth of a lift

Helps find buried objects that affect compaction.
Gives operator confidence to move on to next job.

COMPACTION CONTROL TECHNOLOGY:
MEASUREMENT
Machine Drive Power (MDP)
Wider application range than CMV.
Accomplishes tasks that CMV can’t

COMPACTION CONTROL TECHNOLOGY:
MAPPING
Pass Count, Measurement Mapping
- Ensures 100% coverage
- Asphalt and soil applications
- Improves uniformity, enhances quality of work
- Makes consistency easy, like a video game
- Eliminates human guesswork
- Maximizes efficiency and optimizes fuel use

Personnel can complete their work with confidence and move on to the next job.
COMPACTION CONTROL TECHNOLOGY: DATA ANALYSIS

Vision Link™ Software
Data analysis drives improvement
- Data maps can provide quality control documentation
- Can highlight trouble areas when they are easier to fix
- Can show opportunities to improve efficiency

Compaction is an inexpensive way to reduce costs and improve overall job quality.

OPPORTUNITY: ECONOMY
HOW TO SAVE ON OPERATING COSTS
Reducing waste, improving profit.

PRACTICAL APPLICATION:

Eco-mode
- Simple operation ensures use
- Reduces fuel burn under normal operating conditions
- Provides efficiency that could not be otherwise achieved

ECO-MODE: EXAMPLE OF FUEL SAVINGS
Vibratory Soil Compactors

OPPORTUNITY: EFFICIENCY
GET THE MOST OUT OF YOUR FLEET
Keep your machines healthy, at work.
**PRACTICAL APPLICATION:**

Fleet Management: Product Link™
- Remote monitoring of fleet
- Fuel status, consumption
- Machine location: jobsite, theft prevention
- Fault codes

Provides "big picture" of fleet asset use, health. Promotes uptime and reduces waste.

**OPPORTUNITY: EFFICIENCY**

LEVERAGING NEW TECHNOLOGY
Increasing uptime, productivity.

**NOVAPICK TECHNOLOGY: REDUCED FUEL BURN**

EXAMPLE:
- Reduced drag coefficient
- Lower rotor torque
- Reduced load on engine.

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**NOVAPICK TECHNOLOGY: GREATER PRODUCTIVITY**

EXAMPLE:
- Reduced drag coefficient
- Lower rotor torque
- Higher average speed
NOVAPICK TECHNOLOGY: KEY BENEFITS
NovaPick vs Carbide
- Reduced labor costs – fewer change-outs
- Reduced fuel consumption – sharper, longer
- Greater productivity – faster operating speed, more uptime
- Higher quality milling – sharp bits cut cleaner, uniformly

NEW AGE SOLUTIONS - Summary
PRACTICAL USE OF NEW AGE TECHNOLOGIES
- Not technology for technology’s sake
- Useful tools to help lower owning and operating costs

Simple solutions to help operators do their job easier and more efficiently.

NEW AGE SOLUTIONS
TAKEAWAYS
- Safe, practical, common sense applications of New Age technology and solutions
- Useful tools to help lower owning and operating costs

Improve your competitiveness and profitability.

QUESTIONS?

Thank you

Back up slides
OPPORTUNITY: EFFICIENCY
WORKING SMARTER, NOT HARDER
Reduce wasted effort, unnecessary steps.

PRACTICAL APPLICATION:

Operations Training
- Enhances skills of inexperienced crew
- Reinforces good technique for experienced crew
- Ensures entire crew working as one unit
- Helps retain employees and keep them working safely
- Helps you get the most out of your investment

Promotes teamwork, improves understanding, keeps crew sharp and safe.