

ROCKY MOUNTAIN MASTER MECHANICS

DECEMBER 8, 9, 2011

Next meetings are scheduled for:

May 3 & 4, 2012 @ Holiday Inn, Sheridan, Wyoming

November 29 & 30, 2012 @ Holiday Inn, Rapid City, South Dakota

Chairman, Scott Anderson
scott.anderson@colloid.com

605-580-0264

Vice Chairman Mobile, Kelly Hardy
khardy@archcoal.com

307-464-2303

Vice Chairman Plant, Mike Lucy
mlucy@archcoal.com

307-464-2731

Sec. Treas., Miles Dockter
miles.dockter@coteau.com

701-873-7335

Five one thousand dollar scholarships were awarded this year,

Trapper Rieniets, Gillette, WY

Austin Smith, Zap, ND

Lucas Schaaf, Glen Ullin, ND

Nathan Tryon, Gillette, WY

Seth Johnson, Moorcroft, WY

Collins Communication, Security and Safety

www.collinscom.net Tony Becker

tbecker@ccihq.net

Dave Vaughn

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- Axis communication video surveillance system
 - Can monitor a location for up to one year
 - Is a standalone system does not have to be part of an existing IT system
 - Thermal cam allows operator to detect individuals at night

- PTZ Cameras
 - Zoom cameras functional up to one mile
- Alertus Mass Notification System

An emergency mass notification (EMN) device that makes people aware of various situations that are deemed dangerous.

Device is hooked to server and will alert all or specified work stations.

Not meant to take the place of conventional fire alarms but to work in conjunction with them.

OPEN/SAFETY DISCUSSION

- A number of locations have experienced hand and arm injuries
 - Stay focused on task to prevent injuries
- Are synthetic ropes being used in place of dump body cables?
 - Yes, several locations using them with good results
- Is anyone chaining down equipment when hauling?
 - Yes, it is an MSHA requirement
- Chocking of equipment wheels
 - Are locations mounting chocks on equipment?
 - Most are
 - Some using parking ditches also
 - Are forklifts, light vehicles, etc. being chocked?
 - Most are
- Are locations requiring dual hearing protection when air arcing and using air wrenches?
 - Yes
 - Electronic ear muffs have proven to work well
- Camshaft failures
 - Lead, copper, iron increase in oil samples an indicator
 - Several locations sending in oil filters for analysis also

- Oil Samples
 - Anyone using Laser Net Find analysis?
 - No answer
 - What is it?
 - Method of particle counting
 - Butler Machinery working on it
 - Cashman may be using it
- Undercarriage life
 - Dimension of rebuilt idler center rib can be critical to track life
 - Anyone using weights on ripper to balance machines?
 - Yes, no further comments
- Anyone aware of reusability guidelines for pivot shafts?
 - No answer
- Anyone using non-Cat oil coolers?
 - Yes, Mesabi
- Mesabi radiators in D-11 dozers have proven to work well
 - Interstate stocks the radiator
 - Mesabi option from Cat cost approx. twice as buying directly from Mesabi
- Anyone running deep hardened/anti-scallop track links?
 - Not sure
- 240 ton Komatsu truck parts issues
 - Availability greatly improved
 - Service much better also
 - Exchange component availability has increased
 - Komatsu has new rebuild center in Salt Lake City
 - AC drive has proven to be more efficient than old DC drive
- Anyone have experience with 795 Cat electric trucks?
 - No answer
 - One or two locations may be getting trucks in future

- Where is everyone buying LeTourneau hydraulic cylinders?
 - LeTourneau exchanges
 - Spencer
- Has anyone experienced LeTourneau pivot ball failures?
 - Yes, a number of locations have
 - 15 hour, 300 hour, 21 day failures
 - LeTourneau has sent out a bulletin and is inspecting balls for cracks
- Tire prices expected to go up 15% in next year
 - Shortage possible on some sizes
- Anyone using tire monitoring?
 - Yes, Mimes
 - Having good results
- Anyone using Expander pins?
 - Several locations have tried them
 - Fairly good results so far
- How are Brianna finals doing
 - No complaints

COLLINS COMMUNICATION – WIRELESS TECHNOLOGY

www.collinscom.net

- Collins covers northeastern Wyoming and the Cheyenne area providing
 - Internet service
 - IT services
 - Voice and data division
 - Security and surveillance services
 - Land mobile radio
 - Cellular phone division
 - Wireless LAN systems

SPENCER FLUID POWER-LINCOLN DOZER AUTO LUBE SYSTEMS

www.spencerfluidpower.com www.lincolnindustrial.com

David Henderson dhenderson@spencerfluidpower.com

Don Fithian dfithian@lincolnindustrial.com

System uses P653S pump and SL-V injectors

- SL-V Injectors
 - Faster venting
 - Cold climate compatible
 - Higher viscosity product can be used
 - Longer life
 - Visual bypass indicator
 - Bolt-on replacement for SL-1
- D-11 Lube system
 - Pump mounted right or left rear of fuel tank
- Points of lubrication
 - Lift cylinder yokes
 - Ripper table
 - Ripper cylinder pins and bushings
 - Equalizer bar end pin available
- Cost for complete system approximately \$8000.00
- CentroMatic Reservoir Fill shut off valve
 - Electronically operated ball valve that will shut off flow to grease reservoir to prevent overflow available spring of 2012

DETROIT HEAVY TRUCK – ELITE 6000

www.dhtellc.com

Jess Ewing jess.ewing@dhtellc.com

- 400 ton class truck
 - Engineering group has years of off road truck experience
 - Truck currently being manufactured in China
- Truck specifications available on website

BRAKE SUPPLY – NORDIC LIGHTS / GEN PRO

www.nordiclights.com

www.brake.com

- Nordic lights
 - Flood, spot, high & low beam available
 - 2 year unconditional warranty
 - Custom light packages to fit specific applications
 - Manufacture LED, Xenon and Halogen lights
 - Suppliers to many OEM's
- Gen Pro Power Systems
 - Power Dak
 - Solar powered light plant
 - Zero noise pollution
 - Uses AGM type batteries
 - 80% efficient
 - Low maintenance & operating costs
 - Programmable timer or photo cell available for operation
 - Three to four hours recharge time with normal sunlight
 - Three to five year estimated battery life
 - \$5000.00 to replace batteries
 - 44 hour operating time between charges
 - Optional battery warmer for cold weather
 - Mast is manually operated

CATERPILLAR-SHAW- FAST FUEL SYSTEMS

www.caterpillar.com

Pawan Arora

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- Two types of systems
 - Pressurized
 - Older and more common
 - Non-pressurized
 - What the industry has moved to

- Why industry move to non-pressurized
 - Environmental concerns
 - To meet certain local regulations for pressurized vessels
 - Less stress on tank during refueling
 - Non-metal tanks can be used
 - New design allows up to 150GPM

B & G MACHINE – CATERPILLAR 3500 ENGINE ISSUES

www.bandgmachine.com

David Bianchi & Johnny Bianchi

- Cam followers
 - Latest version are crowned to disperse load
 - Always replace followers when replacing camshaft
- Cylinder heads
 - Seat and guide have to be concentric
 - Surface finish critical to longevity of head gasket
 - Cam follower bores
 - Bore to follower relationship a possible cause of upper end failures
- Overhead adjustments
 - Overhead check more correct term
 - Only adjust if needed
 - Check for bent push tubes
 - Check for wear on adjuster screw ball and push tube socket
- Cylinder block alignment and machining
 - Assure deck is parallel to main and camshaft bores
 - Deck surface critical for head gasket life
 - Deck inserts if erosion present
- Turbochargers
 - Balancing turbocharger
 - Hot and cold wheel balanced separately
 - Entire unit balanced after assembly
 - Balanced at both low and high speed

