

**From:** [Anderson, Chuck](#)  
**To:** [Cooper, Mark \(MAWC\)](#); ["Abi-Akar, Hind"](#); [Alessi, Michael \(michael.l.alessi@exxonmobil.com\)](#); [Athey, Allison](#); [Bea, Douglas \(DOBE\)](#); [Berman, David \(bermadl@cpchem.com\)](#); ["jason.bieneman@us.mahle.com"](#); [Bishop, Zack](#); [Boese, Doyle \(Doyle.Boese@Infineum.com\)](#); ["Bond, Stacy"](#); [Booth, James E.](#); ["Buck, Ron"](#); ["Budd, Arnel"](#); ["Buscher, Bill"](#); ["Campbell, Bob"](#); [Carabell, Kevin \(kedc\) \(KCarabell\)](#); [Carter, Brad \(bradley.carter@intertek.com\)](#); ["Carter, James"](#); ["Castanien, Chris"](#); [Cauley, Chris](#); [Jeff Clark](#); ["Conti, Riccardo"](#); ["Devlin, Cathy"](#); ["Fetterman, Pat"](#); [Franklin, Joe \(Intertek\)](#); ["Goshorn, Ken"](#); [Rich Grundza](#); ["Gutzwiller, Jim"](#); [Haeglin, John \(Intertek\)](#); [Highum, Eric](#); ["Jones, Ron"](#); ["Kennedy, Steve"](#); ["Kersey, Victor"](#); [Kleijwegt, Peter \(pek\)](#); ["Larch, Bill"](#); ["Lu, WenTong"](#); ["Matasic, Jim"](#); [McGeehan, James](#); [Menasco, Michael \(ENAS\)](#); ["Miller, Greg"](#); ["Minotti, Michael"](#); [Moritz, Jim \(Intertek\)](#); [Sean A. Moyer](#); ["Nann, Norbert"](#); [Parsons, Gary](#); ["Passut, Charlie"](#); ["Polley, Kris"](#); ["Pridemore, Dan"](#); ["Rajakumar, Allison"](#); [Rele, ter, Ruud \(RUUD\)](#); [Richards, Scott M. \(srichards\) \(SwRI\)](#); [Ritchie, Andrew \(Andrew.Ritchie@Infineum.com\)](#); [Rutherford, Jim \(JARU\)](#); [Salgueiro, Bob \(Bob.Salgueiro@Infineum.com\)](#); [Santos, Elisa](#); ["Schweitzer, Addison"](#); ["Selby, Keith"](#); ["Shank, Greg"](#); [Sutherland, Mark](#); [Sztenderowicz, Mark](#); ["Urbanak, Matt"](#); [Tomforde, Jeremy](#); [Van Dam, Wim \(WVDA\)](#); [VanScoyoc, Jonathan \(vanscj@cpchem.com\)](#); ["Weber, Ben"](#); [Wong, Andrew P](#)  
**Subject:** RE: Mack Surveillance Panel Teleconference - Thursday, February 7, 2013, 10:30 AM - Noon Eastern  
**Date:** Tuesday, February 05, 2013 11:23:10 AM

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Below is the detail on Federal Mogul honing process

## **Federal Mogul honing process for 509GC471**

### **Wc787 (Nagel Hone)**

- Abrasives
  - Roughing stones – CBN 150 grit
  - Finishing stones – Vit 320 grit
- Features
  - Work Holding
    - Dual zone bladder fixture
    - Top load
  - Roughing
    - Mechanical expansion
    - 2 separate feed speeds (micron/sec)
    - 2 separate pressures (torque)
    - Through the spindle air sizing (mechanical only = part to size)
  - Finishing
    - Hydraulic expansion
    - 2 separate expansion pressures (high / low)
    - 2 separate stroke counts (high / low)
  - Stroke
    - Both rough and finish hydraulically controlled
    - Mechanical and hydraulic are independent
  - Misc
    - PLC controlled with AB
    - Automated process

### **Wc785 Barnes Hone**

- Abrasives
  - Rough / Finish stones – Vit 150 grit
- Features
  - Work Holding

- Dual zone bladder fixture
  - Top load
- Expansion system (dual expansion – capable of plateau honing)
  - Roughing – hydraulic (single)
  - Finishing – hydraulic (single)
- Sizing system
  - Plug gage
  - Expansion is at high pressure until plug gage drops in bore and contacts switch to low pressure
- Stroke
  - Single setting for stroke (rough and finish)
- Misc
  - Mechanical settings
  - Manual process

Chuck Anderson  
 Federal-Mogul  
 651-345-8033  
 651-927-9491 (cell)  
[chuck.anderson@federalmogul.com](mailto:chuck.anderson@federalmogul.com)

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**From:** Cooper, Mark (MAWC) [<mailto:MAWC@chevron.com>]  
**Sent:** Tuesday, February 05, 2013 9:33 AM  
**To:** 'Abi-Akar, Hind'; Alessi, Michael ([michael.l.alessi@exxonmobil.com](mailto:michael.l.alessi@exxonmobil.com)); Anderson, Chuck; Athey, Allison; Bea, Douglas (DOBE); Berman, David ([bermadl@cpchem.com](mailto:bermadl@cpchem.com)); 'jason.bieneman@us.mahle.com'; Bishop, Zack; Boese, Doyle ([Doyle.Boese@Infineum.com](mailto:Doyle.Boese@Infineum.com)); 'Bond, Stacy'; Booth, James E.; 'Buck, Ron'; 'Budd, Armel'; 'Buscher, Bill'; 'Campbell, Bob'; Carabell, Kevin (kedc) (KCarabell); Carter, Brad ([bradley.carter@intertek.com](mailto:bradley.carter@intertek.com)); 'Carter, James'; 'Castanien, Chris'; Cauley, Chris; 'Clark, Jeff'; 'Conti, Riccardo'; Cooper, Mark (MAWC); 'Devlin, Cathy'; 'Fetterman, Pat'; Franklin, Joe (Intertek); 'Goshorn, Ken'; 'Grundza, Rich'; 'Gutzwiller, Jim'; Haeglin, John (Intertek); Highum, Eric; 'Jones, Ron'; 'Kennedy, Steve'; 'Kersey, Victor'; Kleijwegt, Peter (pekl); 'Larch, Bill'; 'Lu, WenTong'; 'Matasic, Jim'; McGeehan, James; Menasco, Michael (ENAS); 'Miiller, Greg'; 'Minotti, Michael'; Moritz, Jim (Intertek); Moyer, Sean ([sam@astmtmc.cmu.edu](mailto:sam@astmtmc.cmu.edu)); 'Nann, Norbert'; Parsons, Gary; 'Passut, Charlie'; 'Polley, Kris'; 'Pridemore, Dan'; 'Rajakumar, Allison'; Rele, ter, Ruud (RUUD); Richards, Scott M. (srichards) (SwRI); Ritchie, Andrew ([Andrew.Ritchie@Infineum.com](mailto:Andrew.Ritchie@Infineum.com)); Rutherford, Jim (JARU); Salgueiro, Bob [[Bob.Salgueiro@Infineum.com](mailto:Bob.Salgueiro@Infineum.com)]; Santos, Elisa; 'Schweitzer, Addison'; 'Selby, Keith'; 'Shank, Greg'; Sutherland, Mark; Sztenderowicz, Mark; 'Urbanak, Matt'; Tomforde, Jeremy; Van Dam, Wim (WVDA); VanScoyoc, Jonathan ([vanscj@cpchem.com](mailto:vanscj@cpchem.com)); 'Weber, Ben'; Wong, Andrew P  
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Our next Mack Surveillance Panel teleconference will be held on Thursday, February 7, 2013, from 10:30 AM - Noon Eastern.

Agenda

T-12 liner surface specifications

Status of T-11 reference tests on 'tweaked' Oil 822

Status and availability of T-12 and T-11 tests

Dial-in number and passcode are shown below.

877-344-4239

483093#

Thanks

Mark Cooper, AEO Development

Chevron Oronite Company LLC

4502 Centerview Dr, Suite 210

San Antonio, Texas 78228

Tel 210-731-5606 Cell 210-867-8606 Fax 210-731-5699

Email: [mawc@chevron.com](mailto:mawc@chevron.com)

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