Motion Compensator Fluids

• Compensator System Manufacturers
  – NOV, Aker Solutions

• Compensation Systems
  – Crown Mounted Compensator
  – Marine Riser Tensioner
  – Drillstring Compensator
  – Guideline Tensioner
  – …
Motion Compensator Fluids

• Industry Firsts:
  – Supplier of Water based fluid to Rigs
  – Compenol remains NOV reference Fluid

• Ongoing Projects with Equipment manufacturers
  – No Recognised International Standard
  – End Users want longer Operational Life
  – Longer Warranty on New Equipment (1 year…)
    Reduce down time for Maintenance &/or Repairs
  – Better Coating & Sealing Technology
Fluid Properties

• Technical Performance
  – Fire & Explosion Resistant
  – Heave/Motion Compensation in Hot & Cold Climates
  – Ferrous and Non-Ferrous Corrosion Protection
  – Vapor Phase Corrosion Protection
  – Lubrication Properties: Anti-Wear and Anti-Scuffing properties (‘stiction’ resistant)
  – Resistant to Microbial Contamination
• Compression Ignition Ratio Recognized Test Methods:

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<thead>
<tr>
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<th>MIL-H-22072C</th>
<th>DEF Stan 91-110</th>
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<tbody>
<tr>
<td>Injector Pressure</td>
<td>103 Bar (1500psi)</td>
<td>275 Bar (4000 psi)</td>
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<tr>
<td>Acceptance Ratio</td>
<td>50:1</td>
<td>40:1</td>
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<tr>
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<th>DEF Stan 91-110 Test</th>
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<tr>
<td>Erifon 818</td>
<td>R&amp;D</td>
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<tr>
<td>Compression Ratio</td>
<td>47:1</td>
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</tbody>
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Erifon Motion Compensator Fluids exceed 40:1 Compression Ratio requirement and are explosion resistant.
Corrosion

- Corrosion can cause iron oxide particles which abrade seals in N-line Riser Tensioners
Lubrication Properties

- Anti-Wear Lubrication
- Seal Lubrication
- Field performance is the best predictor
Product Range:

• Erifon 818 Series
  – Erifon 818 (Basic All Round Fluid)
  – Erifon 818 TLP (For TLP’s and HP systems)
  – Erifon 818 TLP HV (High Viscosity)

• HFC R&D (Performance Improvements)

• Erifon 818 still best water-based performer
Field Experience

• Long Service Life
  – Contamination with dirt, sand, seals, oils
    (Increases rate of cylinder wear)
  – Additive levels deplete over time
    (Increases risk of corrosion & poor lubrication)

• Poor /No Fluid Filtration

Recommend Regular Condition Checks