**Subject:** Comparison Testing of genuine Cameron Ram Packers and Non-Cameron Ram Packers.

**Purpose:**
To show why non-Cameron (often called bootleg) ram packers may not be the bargain they appear to be.

**Background:**
For a number of years, various non-Cameron manufacturers of rubber goods have supplied look-alike ram packers to the drilling industry claiming they are "just as good" as genuine Cameron ram packers. While these packers may look similar to Cameron packers, they are not made to the same quality standards and have not been qualification tested in accordance with API 16A requirements.

**Discussion:**
To prove there is a difference between genuine Cameron and non-Cameron look-alike packers, Cameron conducted comparison testing using API 16A fatigue testing protocol in a fluid media simulating diesel drilling mud at 250°F (121°C).

**BOP Size/Rating**
Cameron 13-5/8” 10,000psi U Type BOP

**Ram Packers Used**
Cameron 5” pipe packers and non-Cameron 5” pipe packers. Please note, both the Cameron and non-Cameron packers were fabricated using flat top and bottom reinforcing plates. Current standard Cameron packers offered are CAM RAM™ which incorporate patented anti-extrusion lips around pipe bore.

**Test Fluid**
Synthetic hydrocarbon motor oil (used to simulate a diesel type drilling mud).

**Test Temperature**
250°F (121°C).

**Test Protocol**
Based on API 16A Fatigue Test requirements, 78 low (200 psi) and high (10,000 psi) pressure test at elevated temperature.

**Test Results**

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<th>Test Results</th>
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<tr>
<td>Cameron Ram Packer after 78 10,000 psi closures at 250°F.</td>
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<tr>
<td>Non-OEM Ram Packer after 78 10,000 psi closures at 250°F.</td>
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**Conclusion**
Genuine Cameron ram packers exceed API 16A fatigue test requirements at 250°F (121°C). Non-OEM packers lose excessive amounts of rubber and fail.

Only genuine Cameron ram packers and top seals assure you of original design performance in your high pressure safety equipment. Use of unqualified look-alike non-OEM replacement parts can result in degraded performance.