PRODUCT BULLETIN
All Season Hydraulic Oil 5W-20
PRODUCT #148

CAM2 ALL SEASON HYDRAULIC OIL 5W-20 is a very high viscosity index hydraulic oil for use in mobile and industrial equipment operated in equipment that must be started at temperatures as low as -29°F and will continue to provide protection at temperatures as high as 194°F. This product meets SAE 5W-20 and ISO 46 viscosity grades. ALL SEASONS formulation offers superior shear stability performance.

CAM2 ALL SEASON AW HYDRAULIC OIL 5W-20 contains a polymeric viscosity improver and pour point depressant providing low temperature characteristics that may eliminate the need to change hydraulic oil seasonally. It is specially formulated for use in mobile equipment hydraulic circuits where wide temperature ranges are encountered. (Cherry pickers, bucket trucks and marine hydraulics).

It also can be used for traditional in-plant hydraulic applications, and exceeds most industry hydraulic fluid specifications, including: Denison HF-2, HF-0 Commercial Shearing, Vickers, Sunstrand, Rexnord, Cincinnati Milacron.

APPLICATIONS
May be recommended in the following equipment:
- Eaton
- Bosch Rexroth
- Vickers
- Oilgear
- Denison
- Hydrec
- Komatsu
- Dynex
- Sauer-Danfoss

SPECIFICATIONS
- Eaton E-FDGN-TB002-E
- Denison HF-0
- ISO 11158 HV
- DIN 51524 Part 3 HVLP
- ASTM D6158 HV
- AIST 127 & 127

FEATURES
- Excellent thermal stability - contain the latest thermally stable zinc type additives, virtually eliminating the formation of heat-related sludging in electro-hydraulic servos associated with conventional zinc-type oils.
- Enhances, long lasting anti-wear protection – specially developed additives form a protective layer on the wear surfaces, reducing component wear in high-pressure piston, vane, and gear hydraulic pumps.
- Holds water in dispersion – contains emulsifiers specifically designed to disperse water. CAM2 does not recommend oils that “separate,” “shed,” or “release” water. Separated water drawn through the hydraulic system can damage pumps and other components. If this water freezes, it can cause serious damage.
- Low temperature performance – allows start-ups down to -29°F; eliminates the need for seasonal fluid changes
- Improved corrosion protection – protects metal surfaces from rust

See Technical Data on pg 2.
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## TECHNICAL DATA

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<table>
<thead>
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<tbody>
<tr>
<td><strong>Product Code</strong></td>
<td>148</td>
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<tr>
<td><strong>ISO Viscosity Grade</strong></td>
<td>46</td>
</tr>
<tr>
<td><strong>Viscosity @ 40°C, cSt</strong></td>
<td>41.05</td>
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<tr>
<td><strong>Viscosity @ 100°C, cSt</strong></td>
<td>7.68</td>
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<tr>
<td><strong>Viscosity Index</strong></td>
<td>159</td>
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<tr>
<td><strong>Flash Point: °F</strong></td>
<td>390</td>
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<tr>
<td><strong>Pour Point: °F</strong></td>
<td>-45</td>
</tr>
<tr>
<td><strong>Oxidation Test Hours to 2.0 acid number</strong></td>
<td>5000+</td>
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<tr>
<td><strong>Low Temperature Pumpability</strong></td>
<td>Pass</td>
</tr>
<tr>
<td><strong>Dielectric, min. KV</strong></td>
<td>+35</td>
</tr>
<tr>
<td><strong>Rust Test</strong></td>
<td>Pass</td>
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Contact your CAM2 representative or CAM2 distributor for additional information.