

Power Flo

TYPICAL PHYSICAL PROPERTIES

Viscosity cSt @ 40°C.....	46
SUS @ 100°F.....	215
Reserve Alkalinity.....	170
Specific Gravity 20/20°C Kg/L.....	1.092
Pour Point °C.....	< -50
Appearance.....	Clear Blue Fluid
Water Content WT%.....	36 ± 2

PUMP WEAR PERFORMANCE

TEST STAND	DATA AND EVALUATION												
ASTM D-2882 — Vickers Vane 104-C pump — 28.4 L/min Flow @ 1200 rpm — Pressure Load 2000 P.S.I. — Duration: 100 hrs. — Pass Criteria: Physical Wear <1.0 mg/hr	COMPARATIVE WEAR RATE IN Mg/hr <table border="0"> <tr> <td>*WG200R</td> <td>H.P.W.G.</td> <td>Phosphate</td> <td>AW Mineral</td> </tr> <tr> <td></td> <td>46B</td> <td>Ester</td> <td>Oil</td> </tr> <tr> <td><1.0</td> <td><0.1</td> <td><0.1</td> <td><0.1</td> </tr> </table> H.P.W.G. 46B exhibits a wear rate that is a significant improvement over traditional water glycol products(*) and equivalent to values typically expected from phosphate ester and mineral oil based hydraulic fluids.	*WG200R	H.P.W.G.	Phosphate	AW Mineral		46B	Ester	Oil	<1.0	<0.1	<0.1	<0.1
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HIGH PRESSURE WATER TOLERANCE — Sundstrand 22-2132 (Var. Disp) Axial Piston Pump — Input speed 3100 rpm — Pressure Load 5000 P.S.I. — Duration: 225 hrs. — Pass Criteria: <10% Flow rate decrease.	FLOW RATE GAL/MIN <table border="0"> <tr> <td>Time (hrs.)</td> <td>1</td> <td>75</td> <td>125</td> <td>225</td> </tr> <tr> <td>Flow Rate (gal/min)</td> <td>24.9</td> <td>24.9</td> <td>24.9</td> <td>24.7</td> </tr> </table> H.P.W.G. 46B exhibits flow rate decrease of less than 1% indicating minimal wear, supported by visual inspection of pump parts.	Time (hrs.)	1	75	125	225	Flow Rate (gal/min)	24.9	24.9	24.9	24.7		
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HIGH PRESSURE HYDROSTATIC DRIVE SIMULATION — Sundstrand Series 20 Motor and Pump — Case Drain Flow 5 gal/min — 600 sec. pressure cycle 1300 P.S.I. to 4500 P.S.I. — Duration: 500 hrs (5 days/week, 16 hrs/day) — Test stand was subjected to operating temperature variations from +14°C to -21°C — Pass Criteria: <5% Flow rate decrease. Visual inspection of pump parts. Fluid integrity remains constant	OBSERVATIONS: — Sundstrand pump and motor performed well during test and visual inspection (before/after comparison) confirmed no unusual wear or stress. — Hourly date log confirmed no significant change in flow rate over test period. — Fluid showed excellent resistance to shear, and all chemical and physical fluid properties remained virtually unchanged. CONCLUSIONS: — H.P.W.G. 46B is a very stable fluid with excellent lubrication properties. The fluid performed well under high pressure loading and is suitable for winter operating conditions.												

FIELD TRIALS

The excellent pump wear performance levels exhibited in the test stand results have been corroborated in various industry field trials. Your Forsythe representative can provide specific information relating these results to your potential application.