NOTES:

1. ROTATION (BI-DIRECTIONAL): WHEN RED LEAD IS POSITIVE (+)
   AND BLACK LEAD IS NEGATIVE (-) ROTATION IS COUNTER CLOCKWISE
   VIEWING THE SHAFT END.

2. PERFORMANCE:
   VOLTAGE: 10 VDC
   NO LOAD SPEED: 81 ± 7
   NO LOAD CURRENT: 0.820 AMPS MAX.
   STALL TORQUE: 150 IN.LB.

NOT RELEASED - FOR REFERENCE ONLY
GLOBE MOTORS Performance Data

P/N 409A587
MAX RATED TORQUE = 2400 OZ-IN
WWW.GLOBE-MOTORS.COM
Date of Printing: 01-21-1999
Time of Printing: 17:10:21

APPLICATION DATA FILE:
MOTOR NUMBER: Model Motor

**COMPUTED PERFORMANCE DATA**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Load Speed (rpm)</td>
<td>79.87</td>
</tr>
<tr>
<td>Stall Torque (oz-in)</td>
<td>3194.53</td>
</tr>
<tr>
<td>No Load Current (amps)</td>
<td>0.58</td>
</tr>
<tr>
<td>Stall Current (amps)</td>
<td>21.58</td>
</tr>
<tr>
<td>RMS Torque (oz-in)</td>
<td>0.00</td>
</tr>
<tr>
<td>Max Efficiency (%)</td>
<td>53.77</td>
</tr>
<tr>
<td>Max Power Out (watts)</td>
<td>47.16</td>
</tr>
<tr>
<td>Max Temp (deg C)</td>
<td>1812.95</td>
</tr>
<tr>
<td>Rated Torque (oz-in)</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**PERFORMANCE AT CURSOR**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed (rpm)</td>
<td>74.28</td>
</tr>
<tr>
<td>Torque (oz-in)</td>
<td>223.62</td>
</tr>
<tr>
<td>Current (amps)</td>
<td>2.05</td>
</tr>
<tr>
<td>Temp Rise (deg C)</td>
<td>60.45</td>
</tr>
<tr>
<td>Power Output (watts)</td>
<td>12.28</td>
</tr>
<tr>
<td>Efficiency (%)</td>
<td>49.92</td>
</tr>
</tbody>
</table>

**MODEL MOTOR CONSTANTS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Voltage (volts DC)</td>
<td>12</td>
</tr>
<tr>
<td>Torque Constant (oz-in/amp)</td>
<td>1.69</td>
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<tr>
<td>Winding Resistance (ohms)</td>
<td>.556</td>
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<tr>
<td>Temperature Rise (deg C/watt)</td>
<td>7</td>
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<tr>
<td>Typical No Load Torque (oz-in)</td>
<td>.98</td>
</tr>
<tr>
<td>Motor Inertia (oz-in-s^2)</td>
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</tr>
</tbody>
</table>

**MODEL MOTOR GEAR BOX DATA**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gear Box Reduction Ratio (x:1)</td>
<td>117</td>
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<tr>
<td>Torque Multiplier</td>
<td>90</td>
</tr>
<tr>
<td>Gear Box Inertia (oz-in-s^2)</td>
<td></td>
</tr>
</tbody>
</table>

**MODEL MOTOR DERIVED DATA**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Slope (rpm/oz-in)</td>
<td>0.03</td>
</tr>
<tr>
<td>Voltage Constant (Volts/Krpm)</td>
<td>1.25</td>
</tr>
<tr>
<td>Gear Box Efficiency (%)</td>
<td>76.92</td>
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</tbody>
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