NOTES:

SHAFT STIFFNESS:

SHAFT MATERIAL:
STEEL - C45E-N TO BSEN 10083-2 2006 (APPROVED BY MARINE AUTHORITIES WHEN APPROPRIATE).

MAXIMUM RECOMMENDED VIBRATORY STRESS LEVEL IN THE SHAFT IS $3.447 \times 10^6$ N/m² FOR A SPEED RANGE OF 0.95 TO 1.1 TIMES CRITICAL SPEED, AND $6.94 \times 10^6$ N/m² FOR RUN-THROUGH CONDITIONS, FOR INDUSTRIAL MACHINES.

FOR MARINE AUTHORITIES, THEIR APPROPRIATE RULES WILL APPLY.

CUMMINS GENERATOR TECHNOLOGIES SHOULD BE NOTIFIED OF ANY ROTORS NOT COMPLYING WITH THESE RULES.

CUMMINS GENERATOR TECHNOLOGIES BALANCE ROTORS TO COMPLY WITH INTERNATIONAL STD. I.S.O. 1940 GRADE 2.5 AND B.S. 6861 PART 1 GRADE 2.5

FOR UNBALANCED MAGNETIC PULL (U.M.P.) FORCES REFER TO FACTORY.

### Conversion Factors

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>Mass Kg</th>
<th>lbm/lbm-conn.</th>
<th>SPLUNG COUPLING</th>
<th>SPLUNG ASSY</th>
<th>SPLUNG COUPLING</th>
<th>SPLUNG STIFFNESS</th>
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<td>SHAFT</td>
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<td>24</td>
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<td>111.32</td>
<td>246.6</td>
<td>XX</td>
<td>YY</td>
<td>316.8</td>
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<td>SUPPORT</td>
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<td>50.9</td>
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<td>15.4</td>
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<td>32</td>
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<td>MAIN ROTOR</td>
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<td>402.6</td>
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<td>34</td>
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<td>EX. ROTOR</td>
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<tr>
<td>P.M. Rotor</td>
<td>9.91</td>
<td>21.8</td>
<td>24</td>
<td>37</td>
<td>278.1</td>
<td>12</td>
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<tr>
<td>P.M. SHAFT</td>
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<td>6.5</td>
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<td>18</td>
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</table>

### Conversion Factors

- **To Convert:**
  - Kg to lbm: Divide by 0.453592
  - M²/m to ft²: Divide by 0.092903
  - N/m-rad to lbm-ft/rad: Divide by 6894.76

- **To Divide By:**
  - Kg to lbm: Multiply by 0.453592
  - M²/m to ft²: Multiply by 0.092903
  - N/m-rad to lbm-ft/rad: Multiply by 6894.76

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**CUMMINS Generator Technologies**

**P80 IT**

**MOMENTS OF INERTIA AND SHAFT DETAILS**

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**SITE CODE:** STA

**DISC SIZE:** L18-10558

**SHEET:** 1

**KEY:** A3