The following conditions signal the replacement of a brake drum or rotor:

- Brake surface diameter at or above max allowed diameter for a drum. The maximum diameter is cast on the outboard region of the brake drum. The drum should be replaced when it reaches this diameter.
- Brake surface width dimension less than or equal to the minimum allowed thickness for the rotor. The minimum thickness allowed will be cast or stamped on the rotor. The rotor should be replaced when it reaches the minimum thickness.
- Martensite formation on the brake surface. Martensite is characterized by localized black spots on the braking surface. (Image B)
- Scored drum brake surface, which cannot be turned without exceeding the max allowed diameter.
- Scored rotors.
- Cracked drum or rotor. (Image A)
- Heavy heat checking on the brake drum surface or on the rotor brake surface. (Image B)
- Walther EMC does not recommend turning, resurfacing or machining brake drums or rotors.
Walther EMC hub and rotor assemblies are bolted together with Grade 8 hex bolts or Grade 8 flanged hex bolts; therefore, when using new fasteners be certain to use Grade 8 fasteners that are the same length as the original equipment fasteners.

When using a hex bolt, always place a hardened washer of the appropriate diameter under the hex head of the fastener. The table below provides the proper torque ranges for the fasteners used in Walther EMC hub and rotor assemblies:

<table>
<thead>
<tr>
<th>Thread Size</th>
<th>Torque Requirement (lb-ft)</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/16-12</td>
<td></td>
<td>125</td>
<td>150</td>
</tr>
<tr>
<td>9/16-18</td>
<td></td>
<td>135</td>
<td>160</td>
</tr>
<tr>
<td>3/4-10</td>
<td></td>
<td>320</td>
<td>345</td>
</tr>
</tbody>
</table>

**WARNING**

Walther EMC does not recommend turning, resurfacing or machining brake rotors.