

**Diagnostic Questions:** Does the company maintain optimal equipment conditions by involving machine operators in daily inspection, cleaning, and lubrication of their own machines?

Are operators learning basic equipment function and structure, e.g., mechanics, hydraulics, pneumatics, electrical systems, drive systems, etc.?

Can operators apply this knowledge in conducting daily inspections of their own equipment, in lubricating equipment regularly, and in making occasional basic repairs, replacements, and improvements?

Level 1 Plan	Level 2 Apply	Level 3 Deploy	Level 4 Integrate	Level 5 Excel
<ul style="list-style-type: none"> <li>▪ High functional walls create ineffective communication among engineering, maintenance and production personnel</li> <li>▪ Preventive maintenance is carried out by maintenance personnel</li> <li>▪ Operators “operate” equipment. When it goes down, they expect maintenance to “fix” it. Maintenance has learned not to expect cooperation from production</li> </ul>	<ul style="list-style-type: none"> <li>▪ Operator teams are formed to work with maintenance and take responsibility for establishing and maintaining optimal equipment conditions</li> <li>▪ Operators expose and correct equipment abnormalities</li> <li>▪ Steps 1, 2 and 3 of Autonomous Maintenance implemented in initial application area:                             <ul style="list-style-type: none"> <li>▪ 1. Clean to inspect</li> <li>▪ 2. Identify and eliminate sources of dirt and contamination</li> <li>▪ 3. Operators create provisional standards for cleaning, inspection, and lubrication</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Working closely with maintenance and engineering personnel, operators learn and understand equipment functions and structure</li> <li>▪ Steps 1, 2, and 3 implemented in initial application area - and rolled out companywide</li> <li>▪ Step 4 implemented in pilot areas:                             <ul style="list-style-type: none"> <li>4. Operators are trained to conduct general equipment inspections</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Operators learn the relation between equipment conditions and quality</li> <li>▪ Step 4 implemented in initial application area and plantwide</li> <li>▪ Steps 5 and 6 of Autonomous Maintenance implemented in initial application area:                             <ul style="list-style-type: none"> <li>5. Operators conduct general inspections autonomously</li> <li>6. Operators organize and manage equipment and the workplace with the 5S's and visual controls</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Steps 5 and 6 implemented throughout facility</li> <li>▪ Autonomous Maintenance fully implemented in all areas (Step 7)</li> <li>▪ Operator teams incorporate maintenance standards into their daily routines</li> <li>▪ Operators participate in ongoing equipment improvement activities with support of engineering and maintenance personnel</li> </ul>