ABSTRACK

The development of the automotive industry in Indonesia is growing rapidly in the Indonesian economy. PT.XYZ *is one of the companies in the field of automotive in Indonesia.* PT.XYZ *produces a variety of different cars and engines. The production process in PT.XYZ is the most important process, because at this stage the process of making the car engine is done on TR Crank Shaft Line, TR Cam Shaft Line, TR Cylinder Block Line, TR Cylinder Head Line, and Assembly.* ILA-0005 *engine is one of the machines that are in TR Crank Shaft Line.*

ILA-0005 *Machine L-Turning P Grooves is a lathe machine used for cutting a rotated object, in a workpiece process. Based on the condition of the mechine, optimum maintenance method is required and know the level of IL-0005 machine using the Risk-based maintenance method. So to rate how muchthe costs generated by the issues of unreliability the system required a method of Cost of Unreliability.*

From the result of the date processing carried out, Risk-based maintenance method ILA-0005 *engine has Risk of* Rp 991.271.047 (1,076%) . *The risk goes beyond the criteria for corparate earnings* Rp 921.600.000 (1% *of income per year).The resulting mainteance interval is a Restoration task and a discard task. The maintenance interval for the detectore subsistem is* 395.037 *hours, the mechanic is* 1415,95 *hours, the spindel is* 452,666 *hours, the jig is* 834,321 *hours and teh fixture is* 496,008 *hours. In the Cost Of Unreliability method found the cost caused by the system's inability to* Rp273.703.696 *based on active repair time* Rp 346.986.572.

Keywords : : Risk-Based Maintenance, Cost Of Unreliability, preventive maintenance, corrective maintenance