## *ABSTRACT*

*PT Combiphar is one of the largest pharmaceutical companies in Indonesia. In order to support the production process of the company split the production line into four of the plant. Plant Padalarang produce products OBH, Peditok, Scout, Panadol. Cikarang Plant produce products Eporon and Insto. Plant Cimanggis produce products Insto and Aimo. Plant Gersik produce products Avta. One plant padalarang there are two machines used for producing OBH, namely Machine Fillomatic Rotary Filler & Capper Vectra 4012 SB and Machine Nastec, but the Engine Fillomatic Rotary Filler & Capper Vectra 4012 SB is the machine that most often experience downtime. The Downtime that occurs due to the lifespan of the machine which are old and often cause a lot of damage to the engine components, in addition to these machines often do not meet the target availability set out by the company. It did not meet the target availability of the machine it could be due to maintenance intervals, and task selection that are less appropriate or not appropriate. Therefore for based on historical data and the level of urgency high Machine Fillomatic Rotary Filler & Capper Vectra 4012 SB is used as the object of research. The purpose of this study is to determine the policy effective care and maintenance appropriate intervals. RCM (Reliability Centered Maintenance) is used to determine the policy effective care and maintenance appropriate intervals. The RPN is used to determine the critical systems and subsystems critical and achieved a critical system namely the mechanic as well as the critical subsystem that is the conveyor, center plate, capper and star wheel so that the research will focus on the four subsystems. From the results of the calculation of the RCM, obtained 10 Scheduled On Condition Task and 3 Scheduled Restoration Task with the total cost of maintenance of the proposed Rp 13.758.098.719,25,. To get the cost of an optimal maintenance approach of integer programming is then obtained the total cost of maintenance of the proposed Rp 10.931.720.460,16.*



*Keywords* : *Integer Programming, Maintenance Interval, Reliability Centered Maintenance*