

## **ABSTRACT**

*The growth of transport demand has increased along with the growth of human population numbers. The number of companies engaged in the field of bus transportation service providers increased by 2.82% from 2007-2011. The data show that the increase in transportation, business sector. And service to be able to show superior compared to rival a company must be able to provide an adequate supply of the fleet that there are stable and operated optimally.*

*PT. Primajasa is one implementer transportation services considerable in indonesia and is one service provider transportation service enough old. PT. Primajasa with 3 a kind of machine in performing services transportation that is the machine HINO RG, HINO RKZ, and HINO RKT. HINO RKT engine is a machine that has the highest frequency of damage in the last two years (2011 – 2012), so this could disrupt the company's operations and can result in losses the company if not carried out improvements in terms of engine maintenance policy.*

*Life Cycle Cost is a summation method to calculate the estimated cost from start to completion, either project or equipment as prescribed by the study estimated total expenditure analysis and experienced during the lifetime of a machine.*

*Of a result of calculation method life cycle cost obtained that the number of life cycle cost of machine HINO RKT, PT. Primajasa has a value of life cycle cost is the least expensive Rp38,257,282,190.98. With the number of maintenance set crew optimal for machinery HINO RKT is 1 maintenance set crew. 1 of this team consisting 2 the maintenance of the operator. This policy is optimal when the company operates 49 engines. The optimal machine age based on the method of life cycle cost is  $n = 5$  years, because at the age of the machine resulting in the total cost of the least expensive of the LCC.*

**Keywords:** *Maintenance Management, Optimization, Life Cycle Cost*