ABSTRACT

PT Trans Primas is a shipping services company. PT Primas Trans delivered Coal and Iron Sand. PT Primas Trans used Mitsubishi Fuso is Fn-527-M 6x4 Dump Trukc as vehicles. PT Trans Primas should make a decent vehicle to be operated. Actuallly, Mitsubishi Fuso Fn-527-M 6x4 Dump Truck is a key facility that is owned by PT Trans Primas are still experiencing travel disruption and damage that resulted in delays and vehicle operation.. Maintenance that do not consider the characteristics of the damage and the age of the components to be the possible cause of the high amount of damage. The high amount of damage it will interfere with the performance of the vehicle resulting in maintenance costs and the risk of damage tothe company. It is therefore necessary to evaluate and repair the optimal preventive maintenance activities.

Based on Pareto diagram, from the 21 systems Mitsubishi Fuso Fn-527-M-12 6x4 Dump Truck elected critical systems, namely Lubrication Systems, Steering Systems, Fuel Systems and Air, Transmission, Clutch, Rear Axis, Brake System, Drive Shaft, Suspension System, Starter System, Cooling System and Accu. Twelfth critical system that was later used as the object of research for the specified time interval maintenance optimization using the Risk-Based Maintenance (RBM). Activity optimal maintenance is effective and efficient care. Effective characterized by high reliability of the system, while efficient refers to the size of the cost of care and the risk of damage that may arise. By combining the two is expected to be obtained care activities that can improve the reliability of critical systems at the cost and risk of damage as small as possible.

Based on the results of data processing, optimal maintenance intervals based RBM is 300 hours for Clutch, Transmission, Drive Shaft, Rear Axis and Steering System, 600 hours for Fuel and Air Systems, Lubrication Systems, Brake Systems, Starter System, Accu, 900 hours for Suspension Systems, and 1200 hours for the Cooling System by 80% over the critical system reliability values between 0.5 to 0.8. Activities and proposed treatment time interval gives the total cost and risk of Rp 29,518,847.00 less than the total costs and risks existing maintenance of Rp 54,441,227.00.

Keywords: reliability, RBM, preventive maintenance, optimization time interval