

ABSTRACT

Spark plug is one of the most important components in the vehicle system. PT DNS is one of the manufacturing industries that produce Spark plug.

Many machines in the production section of PT DNS need maintenance activities so that existing machines can work without inhibiting the production process, therefore required the right preventive maintenance activities. The existing caulking machine on line 6 is experiencing frequent damage.

Based on the result of determination of critical subsystem on Caulking machine using RPN (Risk Priority Number) chosen hydraulic system as critical system which need to be determined the right treatment policy using Reliability Centered Maintenance (RCM) method and the requirement of the optimal spare part component that must be available In the company using Reliability Centered Spares (RCS) method.

Based on the result of measurement using RCM method obtained maintenance policy for critical subsystem at Caulking machine is scheduled on-condition task as much as 6 which exist in Piston Pump subsystem, Scheduled Discard Tasks as much as 3 which exist in subsystem Hydraulic Cylinder and Scheduled Restoration Tasks as much as 2 which exist in Solenoid Valve subsystem up down. Treatment time intervals were obtained varying based on their respective tasks and the cost of the proposed treatment was Rp 2.321.757.069,97 where the cost was less than the cost of the existing maintenance. And result from RCS method obtained by spare part requirement for critical subsystem of Solenoid Valve Up-Down 84 for four years, Pistons Pump critical subsystem 12 for four years and critical Hydraulic Cylinder critical subsystem 104 for four years.

Keywords : Preventive Maintenance, Risk Priority Number, Reliability Centered Maintenance, Reliability.