

ABSTRACT

PT Dirgantara Indonesia is one of the company's aircraft industry in the world. To produce products with competitive prices, The company must be able to optimize its resources and to maintain product quality. Production machine is one of the resources that must be optimized to use. To ensure that the engine can operate properly and optimally required to do a good maintenance system. One of the machines that use for the production process is a CNC machine. CNC machines have five systems, namely mechanical systems, electrical, machine, pneumatic and programming. From the five systems, will be chosen one of the most critical systems based on the highest frequency of occurrence of damage and number of corrective maintenance activities. In mechanical systems there are 18 components. Based on the total failure frequency, obtained four critical components in mechanical systems. From these critical components will be determined preventive task and preventive maintenance intervals.

Currently, maintenance division of PT Dirgantara Indonesia implements the maintenance activities are preventive maintenance. Activities implemented preventive maintenance is a maintenance activities based on the number of engine operating time. However in determining the amount of time the operation, maintenance division does not take into account the age of machine components. This resulted in the number of corrective maintenance, so spend a large maintenance cost.

Determination of the preventive tasks and preventive maintenance intervals based on the optimal age of components that can minimize the maintenance cost is a refinement that can be done on the maintenance policy applied PT Dirgantara Indonesia. The determination of this interval-based on reliability in order to describe the ability of components in performing its functions during operation period. The determination of this interval also using Reliability-Centered Maintenance (RCM) and Maintenance Cost Minimization Model. With the RCM method, maintenance policy (preventive task) that must be done can be determined. Results obtained from data processing are preventive task and time interval prevention in the following table :

Kebijakan Perawatan untuk Komponen Kritis		
Nama Komponen	Task	Interval waktu (<i>day</i>)
Gear Axis	Scheduled On Condition	39,765
Servo Spindle	Scheduled On Condition	48,07
Servo Axis	Scheduled On Condition	51,52
Lube & Coolant	Scheduled On Condition	65,26

In all of the RCM Decision Diagram available preventive task for the mechanical system components on CNC machines consists of 4 components with discard schedule maintenance activities, 12 components with a schedule of activities on condition and 3 components with restoration task schedule.

Keywords: CNC machine, RCM, Preventive Maintenance,