

## **ABSTRACT**

*PT. Mandala Karya Prima is a mining company that has mining operational cooperation with PT. Mandiri Inti Perkasa which is located in Sembakung District, Nunukan Regency and Sesayap Hilir District, Tanah Tidung Regency, North Kalimantan. The current overburden stripping activity is carried out using the Komatsu PC2000 as a loading excavator, and the Komatsu HD785-7 as a dumptruck. This research was conducted to determine the level of production of each tool to be able to achieve the production targets that have been set.*

*The problem that occurs at this time is that the production of overburden stripping has not reached 397,600 bcm / month. Production that can be produced by loading excavator is 336,275.28 bcm / month and 5 units of dump truck is 330,780.48 bcm / month. There are inhibiting factors that affect production, so it is necessary to study the inhibiting factors so that production targets can be achieved. The data taken in the form of loading time of loading excavator, transport time of dump truck, swell factor, bucket fill factor, road geometry, work efficiency, and specifications of mechanical equipment.*

*Efforts can be made so that the production target of overburden stripping can be achieved by increasing the working time so that the work efficiency of the tool increases and optimizes the circulation time of the equipment. The work efficiency of loading excavator increased from 69.19% to 74.39%, and the efficiency of dump truck increased from 67.65% to 74.05%. The loading time of loading excavator after repairs from 37.68 seconds to 33 seconds, and the transport time of dump truck from 936,6 seconds to 843 seconds. After repairs to the effective working time and distribution time of the equipment, the production capacity is 412,941.68 bcm / month for loading excavator and 402.280.32 bcm / month for dump truck.*