ABSTRACT

DESIGN OF SIMPLE REPLACEMENT TOOLS FOR SIMILAR WHEELS WITH VALUE ENGINEERING METHODS
(Case Study: Gaul Jaya Motor Workshop)

Bengkel Gaul Jaya Motor SME is a workshop that serves service and repair services for four-wheeled vehicles. In this study, it is necessary to replace the wheel bearing, this bearing has a diameter of 6 cm and the replacement process carried out so far is only using hammer and iron, the bearing replacement time is 8 minutes and often the left bearing pads occur. So the researcher chose a change aid so that the replacement process of the pads became faster. Value design technique. The results of the design of the changing pads are 60 cm high, the width of the tool 50 cm, the length of the jack stand 50 cm, the width of the jack stand 10 cm, the height of the retaining spring 10 cm, the height of the bearing holder 8 cm and the cost incurred for this tool is equal Rp 500.000.00. This tool is used by placing the bearing housing in the bearing holder which is then pressed using the jack to the bearing as well as installed. After this design was made, this tool was used directly in Gaul Jaya Motor SME Workshop to find out whether this tool accelerated the time of release and did not occur due to the allocation of bearings. From the results of the implementation, the time needed to replace the wheel bearing of the car is 3.5 minutes and there is no bearing loss, so this tool can accelerate the process of bearing replacement by 70%.

Keywords: Design of bearing replace aids, enggenering value, bearing replacement time.