

## Usulan pengadaan suku cadang krisis forklift berdasarkan keandalannya = Suggestion for forklift critical spare parts replenishment based on reliability

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### Abstrak

Tingginya biaya pemeliharaan diantaranya disebabkan biaya akibat persediaan suku cadang. Penelitian ini bertujuan untuk mendapatkan jumlah pemesanan yang meminimumkan biaya-biaya yang terkait dengan pengadaan suku cadang kritis forklift. Berdasarkan distribusi weibull dua parameter dapat diketahui laju kerusakan suku cadang terhadap kelompok equipment yang sejenis sehingga kebutuhan suku cadang dapat diramalkan.

Model Economic Order Quantity digunakan untuk mengoptimalkan jumlah pemesanan yang meminimumkan biaya inventori dan biaya pemesanan suku cadang. Hasilnya diperoleh suku cadang yang memiliki demand terbesar pertahun adalah Load Wheel 27631330/EJC-15G dengan ekspektasi kebutuhan sebanyak 16 unit, jumlah order quantity sebesar lima unit dan reorder point sebesar empat unit.

.....High expenses spent by maintenance some of them are caused by expenses of spare parts inventory. The goal of this research is to minimize all the cost associated with the replenishment forklift critical spare parts. Based on twoparameter weibull distribution, the failure rate of spare parts in a group of identical equipments can be predicted, so that the needs of spare parts can be predicted.

Economic Order Quantity model is used to optimize order quantity of spare parts which minimize the combination of inventory cost and purchasing cost of spare parts. The results obtained spare part that has the highest annually demand is Load Wheel 27631330/EJC-15G with the expected needs of as many as 16 units, total order quantity of five units and the reorder point for four units.