

Reliability Analysis of Two Non-Identical Unit System Having Master And Helping Unit With Two Repairman

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ABSTRACT

The present paper deals with the analysis of a two non-identical units connected in parallel configuration with one unit as master unit and other as helping unit. In the system there in an assumption that master unit can also work when helping unit fails but with increasing failure rate. Failure time distribution of master and helping units are exponential. Two repair facility are used to make the system more elective. Repair time distribution of master and helping units are general and exponential respectively. By using regenerative points technique in Markov Renewal Process the various measures such as Reliability, MTSF, Availability analysis, busy period analysis, cost benefit analysis of the system effectiveness are obtained.

Key words: Reliability analysis, mean time to system failure (MTSF), Availability busy period, cost benefit analysis.