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16.Title	Stochastic Behavior of System with Varying Workload, Post Repair and Inspection
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Abstract	In the present paper, there is two-identical-unit deteriorating standby system with post-repair. The workload on the system increases and decreases randomly. After repair of the failed unit post-repair is required to make it as good as new. Initially, one unit is operative and the other is kept as standby. Upon failure of the operative unit the standby starts operation instantaneously. Post-repair of the just repaired unit starts immediately (within no time). Failure time distributions of operative and standby units are exponential with different parameters. There is a single repair facility which repairs one unit at a time. The repair of the failed unit starts instantaneously upon failure. Repair time distribution are arbitrary. i.e. Time dependent. Using the regenerative point technique(Markov Renewal) , we obtain the following measures of reliability: <ul style="list-style-type: none"> ● Steady state transition probabilities and Mean Sojourns times. ● Distribution of time to system failure (TSF) and its mean (MTSF) ● Point wise and steady state availability of the system ● Probability that the repairman is busy. ● Expected number of visits by the repairman. By using different repair and inspection time the measures of reliability are estimated and their behavior is represented graphically to have an idea about repair policy. Further, several practical problems on the above models is explained.