

## **Analysis of Reliability Characteristics of a Parallel System with External Supporting Devices for Operation**

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### **Abstract**

This paper deals with analysis of reliability characteristics of two unit active parallel system connected to external supporting devices in cold standby for its operation. First order differential equations method is used to obtain the explicit expressions for mean time to system failure, steady-state availability, busy period of repairman and profit function. Some numerical experiments are conducted in order to illustrate the effects of failure and repair rates on reliability indices mentioned above.

*Keywords:* Parallel system, supporting unit, reliability characteristics.