Imperfect inspection optimization for a two-component system subject to hidden and two-stage revealed failures over a finite time horizon

Seyed-Mohammad Seyed-Hosseini , Hamid Moakedi , Kamran Shahanaghi

PII: S0951-8320(17)30793-7
DOI: 10.1016/j.ress.2018.02.024
Reference: RESS 6082

To appear in: *Reliability Engineering and System Safety*

Received date: 1 July 2017
Revised date: 23 December 2017
Accepted date: 14 February 2018

Please cite this article as: Seyed-Mohammad Seyed-Hosseini , Hamid Moakedi , Kamran Shahanaghi , Imperfect inspection optimization for a two-component system subject to hidden and two-stage revealed failures over a finite time horizon, *Reliability Engineering and System Safety* (2018), doi: 10.1016/j.ress.2018.02.024

Highlights

- A two-component system subject to hidden and two-stage revealed failures is studied.
- Each revealed failure increases the occurrence rate of hidden failure.
- Both periodic and opportunistic inspection may be imperfect.
- The goal is to find the optimal periodic inspection interval that minimizes total cost.
- Recursive formulation is supplied for creating expected values applied in simulation.