Simulation of an Oil Change Process at an Automobile Repair Shop

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Abstract

The objective of this study is to reduce the waiting time on the queues of an oil change process of a real-world automobile repair shop. The workshop consists of five oil change slots, two attendants at the entrance counter, and one attendant at the checkout. Initially, the customer arrives at the location and goes directly to the main counter where he orders the service. Then, he receives the product and makes the payment at the checkout. After that, he goes to the waiting list, where he waits for his time to go to the oil exchange slot. After completion, the customer leaves the workshop. The observed system takes place on the busies week day. Results observed an improvement on the service level, and consequently on customer's satisfaction.

Keywords
Queue theory, simulation, service level.

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Rodrigo Luiz Gigante is master in Production Engineering from the University of São Paulo (2010); Bachelor of Applied Mathematics and Scientific Computing from the University of São Paulo (2007). He is a professor at Facens

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