Abstract

Masters of Engineering Degree (Mechanical)

Project Title:

Dynamic Analysis of a Sanderson Rocker Arm Mechanism

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This paper details the rigid-body dynamic analysis of a Sanderson Rocker Arm Mechanism (S-RAM). The analysis was performed using numerical methods through the rigid-body dynamics module in ANSYS, and is intended to allow the verification of an analytical solution developed by Professor John Booker. For the purpose of this comparison, various results are presented for the special case of constant crankshaft angular velocity with no cylinder pressure. However, the model may easily be extended to more general cases if necessary.