



SDI Review Form 1.6

PART 1:

Journal Name:	British Journal of Applied Science & Technology
Manuscript Number:	MS: 2012/BJAST/2341
Title of the Manuscript:	CONDITION BASED MAINTENANCE OPTIMIZATION FOR FAULTY GEARBOX UNDER CONTINUOUS NOISE MONITORING.

General guideline for Peer Review process is available in this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

- This form has total 9 parts. Kindly note that you should use all the parts of this review form.



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PART 2: Review Comments

	Reviewer's comment	Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<u>Compulsory</u> REVISION comments	This paper presents an experimental example applying well known maintenance techniques to a gearbox monitored by noise in a laboratory facility. The novelty and special contribution in the state-of-the-art of the field do not exist. However, as a practical example about well known theories could be interested for people not involved deeply in the field. The structure of the paper is not suitable. When the authors review the state-of-the-art, they do not comment the new advance or new ideas that their contribution tries to add., or the gap that tries to cover. After the section 'Experimental methodology' (it should be convenient to use numbered sections) (The mistake in the title exists) a set of definitions appears without any connection and any reason for appearing. Two pages later in 'Results and Discussion', the reader could suppose that the contents of pages 4 to 6 will be used when you read 'Results and Discussion'. It is convenient to reformulate all the organization of the paper from page 4 and to present in a coherent way the concepts and their use. The concepts that support the paper are well established in the literature, the only contribution of the paper is to put values to the variables. No novelty appears. The title of the Section 'Proportional Hazard Model' is not correct due to the equation 1 does not correspond to	Corrected O.K. For equation (1), the expression of PHM model is corrected to be "Hazard Rate Model".



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	this type of model, but a simply Weibull model. It is convenient to use the exact term. There is an important mistake in the first paragraph of page 7. The parameters of the weibull distribution are obtained for faulty condition for real data. This is OK, but for healthy condition the parameters used are coming from a different reference. The question is "Is the same gearbox this used in the reference [16] and the used by the authors in their laboratory?" Why the authors were not using real data from their gearbox before this was damage? The authors are using the term CBM in several parts and they do not justify it. Even more, they are not using typical criteria of CBM for the maintenance that they are proposing. Another important failure of the whole paper is that all the results obtained and the conclusions claimed by the authors are only valid for the particular failure that they produced in this particular gearbox. It is possible to reorganize the paper in order to apply a well known methodology, but the particular results obtained cannot be easily extrapolated to other lees or deeper fault ion the gearbox. It is convenient that the authors reconsider their exposition.	The approach used in this study is to apply the weibull distribution constant while the gearbox is in faulty conditions. In the case of healthy gearbox, this can not be applied unless the fault occurs. This takes a long time of testing. However, these constants were taken from other reference. Bearing in mind that the gear is in the same material and geometries. CBM is well known to every body. It is well known that in the less or deeper fault, the SPL decreases or increases respectively. The results will be repeated.
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Minor REVISION comments	There are many different mistakes along the text. Page 3 first paragraph has to be TABLE 2 and not TABLE 3 for the first time that the word Table appears. There are tables and figures showing the same thing. For example Table 1 contains information reflected in other figures.	Unfortunately, there is no table in Page 3 Unfortunately, there is no such situation.
Optional/General comments	It is needed a deep reformulation of the paper and correction of all the grammatical and technical mistakes.	Corrected