



<b>Independent Study Title</b>	Application of Failure Mode and Effect Analysis of Bus Tire Wear Rate
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### ABSTRACT

The research objectives is to study and analyze tire wearing damages and the impact on by FMEA (Failure Mode and Effect Analysis) Technique in order to decrease the wearing down rate. The results of Inspection the bus “Sunlong”, 6 kinds of tire wearing are figured out as followings: 1)Overinflation, 2)Underinflation,3) Feathered edge,4)Shoulder wear, 5)Cuppling wear,6)By this research from the study maintenance process the tire and defects that occur in the tire. And the defects that occur in the tire, After brainstorming to find the factors that have an impact on the defects using the map fishbone diagram and technical analysis of defects and impact (failure mode and effect analysis) By the team technical support in maintenance department to analyze is to assess the severity the opportunity to defect (occurrence: O), and the ability to detect the defect levels to apply to calculate the improved risk priority number: RPN) The RPN with the most will be used to improve the before and select Edit the defect 3 items as follows:

1. Loose of ball pin was reduced from RPN 240 to 120
2. Hub bearing worn or damage was reduced from RPN 240 to 120
3. Wearing of king pin and bushing was reduced from RPN 162 to 90

And Compare the rate of wear and tire of the bus. The total number of 50 Bus ( Bus is 300 wheel ) Measuring. The investigator has resolved the problem with the way the Crew Training (On The Job Training), age 1) spare wheel bearings 2) the areca nut the stroke units 3. The bolts and set the Preventive Maintenance Plan based on the distance from the define all the 30,000 kilometers away