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by

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Over Emissions, Testing, and Environment

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Introduction

The emergence of cars made people move from one to place to another easily. Therefore, vehicles came into existence with significant benefits to humanity, and the rate of vehicle manufacturing has intensified throughout the year. Nevertheless, they also come with significant challenges to the environment because of the exhaust emission. Environmental pollution can occur in different ways, which can have substantial harmful effects on the health of individuals (Lutfie et al., 2018). air pollution is one of the serious environmental challenges across the world. Vehicle exhaust emission contributes to air pollution because it comprises carbon monoxide, hydrocarbons, and particulate matter (Tu, 2021). with the increase in respiratory diseases worldwide, the emission test program was developed to monitor and moderate vehicle air pollution. Therefore, the vehicle emission test was developed to recognize the failures or operations of emission systems and thus ensure that the environment is protected from pollution when the car owners perform repair and maintenance in their vehicles. This proposal will do a quantitative study to identify the effectiveness of the emission test in reducing environmental impacts by using a survey questionnaire.

Purpose of the Study

A vehicle emission test program was developed to monitor and assist preserve the air quality at a suitable level. Although several studies have been conducted to understand the efforts to implement standards that will ensure ambient air in the environment, no research has been done to weigh its effectiveness in the past decade. Previous studies have provided theoretical concepts concerning vehicle emission test programs; for instance, Lyu et al. (2021)

tried to investigate collective car emissions trends. In the study, the objectives comprised projecting the transformation of vehicle emission and realizing how car emissions testing controlled operates. Therefore, since the reasons for emission tests are established, more improvements have been made in the past decade to ensure the process is flexible and enables car manufacturers to enhance their vehicles. It is critical to understand how the vehicle emission test has safeguarded the environment. The study aims to solve the problem of whether the emission test could decrease the level of air pollution to the environment. Iskandar et al. (2020) claimed that several countries had developed agencies that will offer emission certificates to the cars that have passed the emission test. Therefore, it is vital to understand if the tests have accomplished their purpose in decreasing the air pollution in the environment. the study will focus on answering the research question:

Is emission test capable of decreasing the level of air pollution to the environment?

The study hypothesis to be proven is "emission testing has cut down on pollution a significant amount compared to a decade ago. "

The study will use descriptive quantitative research methodology because the topic itself is non-quantified. After all, it is a current issue affecting the environment. Since there is a need to collect data, it will be easy to analyze the data and describe the situation. Also, the study intends to prove the research problem statistically.

Methodology

The study used a descriptive quantitative research strategy. Vehicle gas emissions are critical in the environment. Since implementing the emission test, necessary data needs to be gathered and analyzed to recognize if the test has reduced air pollution in the environment. the

study was conducted using survey questionnaires. The first one comprised thirty participants selected from the automobile manufacturing company and must have worked in the company for more than ten years. Then an interview was done because they have experience making cars without following the emission test standards and using it, thus providing critical insight into vehicle gas emission. All participants were adults between the age of 30 to 40 years. The reason for using this population is because they have significant insight into how the trend of air emission was in the country.

Moreover, the four-wheeled vehicles were also used in the research to be tested using the four-gas analyzer and opacity meter. Moreover, one hundred and thirty-three cars that utilize gasoline and diesel machine were selected and included in the study. The data of the car's gas emission and stipulations are collected through a gas analyzer, observation, and opacity meter. Nevertheless, the vehicles will pass the test in different locations, with the gasoline engine tested in the idle revolution and the diesel one on a free acceleration cycle. The data will then be analyzed and compared with the vehicle emission-quality standard regulations to check if there is a difference in gas emission. The survey questions comprised of three questions including:

Does the test emit emissions when conducting it?

What are the average emissions of vehicles between a decade ago and now?

How do we know that emission testing is working for the environment?

Ethical Considerations

The study will observe all the ethics of a research study to ensure that the data collected is reliable and efficient. The research study is used to ensure the validity of the research. The study design will guide the research question and ensure a correlation between the question and

conclusion. Participants play a vital role in providing data and thus there confidentially is highly respected. For instance, all the participants in the study were provided with informed consent to participate in the research. No participant is coerced to participate in research, and the sample participants work from the car manufacturing company to ensure they know vehicle emission and the emission tests.

Conclusion

Summing up, a vehicle emission test was established to create a standard that will ensure vehicles produce a certain minimum of air pollution to the environment. The environment plays a critical role in individuals' life because it enhances health and wellness; thus, when more vehicle emission occurs in the environment, it causes severe health illnesses to people. The quantitative study aims to understand the extent of vehicle emission tests in reducing air pollution to the environment. one hundred and thirty-three cars are evaluated in study 93 utilized gasoline engine, and forty used diesel. The experts working from the car manufacturing company participated in the study to measure gas emission.

References

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