A REVIEW PAPER ON FUEL SAVING DEVICE FOR 110CC HERO MAESTRO

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ABSTRACT

Abstract- From a very long time we all researched so many kinds of fuels to enhance the performance of vehicle which can enough capable to full-fill future need. We all know the scenario of today in terms of fuel scarcity, fuel is going down year by year, pollution at peak causing dieses, effecting environment and raising global temperature of mother earth.

And to figure out this major problem so many scientist and engineers developed new technologies, mechanisms and fuels in last 10 years. Some vehicles run on solar energy or battery, where some vehicle runs on new kind of fuels enhancing the performance of vehicle.

In the same way we also tried to explain new kind of fuel i.e., blend of HHO and Petrol and we proved it on 110CC Hero Maestro which not only saves the fuel consumption rate but also enhances the performance of vehicle.

KEYWORDS: Catia V5, 110CC, HHO

I INTRODUCTION

We all very well understand today’s scenario of Fuel Scarcity. So many scientists in same searched new techniques and technologies. And they inspired me to work on the same field there are list of following researchers and their work given below.

Almost all energy of world is because of fossil fuels. Fossil fuel burns and emits waste, fuel gases, dust and ashes. And these exhausted elements have hazardous effect on mother earth.(1)

Another problem with fossil fuel is emission of pollutant, like CO2, NOX, CO. in order to decrease these pollution, alternative fuels are being considered such as hydrogen oxygen mixture. Normally what we found that the pollution kickoff cause of waste or incomplete combustion that is not supported by our environment that interrupts our basic natural cycles such as oxygen cycle and carbon cycle.

Hydrogen has been identified as a fuel having some unique and desirable traits for application in versatile I.C engines, it has been used as alternative fuel several time, though chiefly intended to be used secondary to a shortage of fossil fuels. Hydrogen has clean burning properties. When it burns, combustion does not produce byproducts except water and in the era when the global warming is serious problem it’s not less than a boom for future generation. The main advantage of
hydrogen combustion is that greenhouse gases (CFC’s) not produce.
Not only does the continued use of large amounts of fossil fuels cause a serious threat to the environment, but also in limited amount. These are debates amongst scholars related to the plucked amount of fuels. At the starting of 21th century most half of fossil fuels had already been exhausted. The known worldwide reserves of petroleum are 1000 billion barrels are these petroleum reserves are predicted to be exhausted in 40 years.(2)
Need for this paper arises because of shortage of crude-oil resources for satisfying our needs and papers catches attention to develop an system which can serve as a basis of driving wheels.(3)
In order to check emission control devices are incorporate by many countries in vehicle as a result reduced vehicle reduced mileage is extended by 15%. Without introduction of new technology.(4)
This work presents an investigation to effect of hydrogen boost on exhaust gases emission of an internal combustion engine. The hydrogen booster generates hydrogen and oxygen using six water fuel cells and water droplets from the bubbler, these gases are then injected into intake system of engine. This water fuel cells are provided with electrical power from the dynamo of the engine. It’s found that the fuel consumption decreases and the value of the octane no. of gasoline also increases(5)
The goal of this work is to search out constituent of exhaust gases from i.c engine when petrol is used. This paper inspire to find out the fuel that produce minimum pollution when used in the same auto-vehicle, thereby finding eco-friendly fuel (6)
Evaluated the effect of adding steady quantity of hydrogen to the petrol-air mixture for S.I engine. As a result that addition of hydrogen helped brake specific fuel consumption of petrol decreased about 11.5%, while the thermal efficiency and the air/fuel ratio increases (7)
Above statements by the researchers motivate me to work on this field and we proved it on 110CC Hero Maestro.

Figure of HHO mechanism

This figure of HHO kit mechanism is created on Catia V5. And the line diagram is traced from the installing guidebook which very beneficial to understand the working of HHO kit in our vehicle fuel mechanism. Here in this figure HHO gas kit have two ports one is attached to the battery and other port is attached to the Dryer.
In HHO cell we import first distilled water to avoid problem of scaling and sedimentation then after connected to power source i.e., battery. Now, as battery
turn on the process of electrolysis comes in action and water start bubbling and this affect causes separation of H2 and O2 from the water molecules. This gaseous molecule of H2 and O2 is then supplied to the dryer. Dryer is used to heat up both gases H2 and O2 to check entrance of moisture to the combustion chamber and after that, gases is supplied to the hosepipe from where both gases is guided to combustion chamber and as a result it enhance the performance of vehicle.

II PERFORMANCE CHARACTERISTICS

After Installing the HHO kit we first check the emission of gases by using AVL Co Gas Analyzer. Now, AVL machine is stands for Automatic Vehicle Locator which is basically an electronic device having sensor inside it and activated when exhaust gases is allow to pass through it. Working region analyze and then displayed it on digital screen it also used to enumerate emissions like CO, HC, NOX and lambda. For enumeration of performance we used eddy current dynamometer. It’s very heavy device used to measure force, torque or power characteristics of a machine under test.

III. CONCLUSION

After the enumeration of performance and emission analysis we come to the following conclusion.

1. Fuel consumption rate decreases.
2. CO drops a very high percentage with respect to oxygen.
3. Lower noise and vibrations in the engine.
4. Increases the power and performance of maestro.
5. Increases the life span.

REFERENCES