

C 1 HYBRID ELECTRONIC CHARGER

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Abstract – C 1 Hybrid electronic charger is basically used in the hybrid vehicles. In the hybrid vehicles the car runs on the power of the battery at the sports mode and on the power of the engine during the economy mode. The C 1 hybrid electronic charger uses the exhaust thrust to run the turbocharger. The turbocharger rotates due to the high pressure exhaust thrust given from the engine. As the turbocharger rotates the alternator connected to the system also starts rotating. The alternator produces the electrical energy and it is stored in the battery.

Key Words: Battery, Turbocharger, Wiring, Alternator, Design etc

1.INTRODUCTION:

C 1 Charger is a revolution for the hybrid engine which can be used to increase the efficiency of battery on the principle of free energy power generation. This system will work on the exhaust power from the vehicles silencer. We can observe that the hybrid vehicles runs on two types of energy that is the energy from the engine and that from electricity. When the vehicle runs on the engine the exhaust thrust which is removed which goes wasted. So on that basis our group has develop a new design to charge the battery by the exhaust due to this system we can recover the battery backup of 25 -30 %. This system can make e new revolution in the hybrid vehicles. So on this basis this project has been developed introducing a new concept of charging the battery by the exhaust thrust. By implementing this in actual vehicles we can recover the battery backup upto 25-30%.

The C 1 charger uses the exhaust thrust to run the turbocharger. The turbocharger rotates due to the high pressure exhaust thrust given from the engine. As the turbocharger rotates, it also rotates the alternator or dynamo attached to it. The alternator produces the electrical energy when it rotates. Hence electrical energy is produced and this electrical energy is stored in the battery attached to the system.

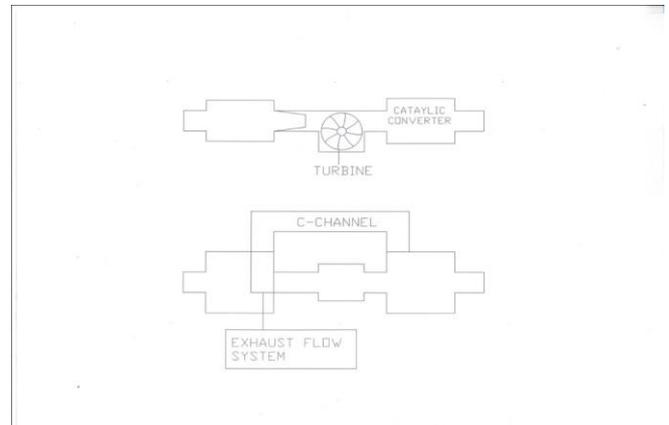


Fig -1: Layout of Hybrid Electronic Charger

1.2OBJECTIVES:

- 1.It can be used to charge the battery in automobiles.
- 2.It can be used for all types of engines like Petrol, diesel etc.
- 3.It can also be used Bikes.

2. CONSTRUCTION:



Fig -2: Actual prototype of Hybrid Electronic Charger

1. INLET PIPE:

The inlet pipe is a component in which the exhaust gases from the vehicles silencer comes toward the turbocharger. The inlet pipe is made up of MS material because the inlet pipe is connected to the vehicles exhaust pipe which is having higher amount of heat, so sustain heat the inlet pipe is made up of MS material.

2. VALVE:

The valve is attached in between the C channel because if the engine is running on low RPM then there is no need to open the C Channel. The C Channel is made to do low

pressure or to stop the turbo lag in the box due to which it will remain safe while in working conditions.

3. BULB:

The bulb is mounted on the frame because the power or the electricity generated by the alternator is indicated by the bulb. The bulb is directly connected to the battery and the battery is connected to the alternator.

4. BATTERY:

The battery is required to ON the bulb because the power of the alternator is a fluctuating power so this fluctuating power is given toward the battery and the battery gives a standard 12V at 3.7AMP to the bulb.

5. TURBOCHARGER:

A turbocharger, or colloquially turbo, is a turbine-driven forced induction device that increases an internal combustion engine's efficiency and power output by forcing extra air into the combustion chamber. [1]

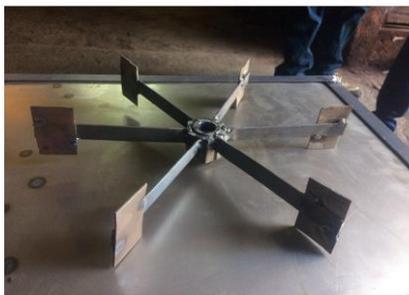


Fig -3: Fan used in the prototype

6. CATALYTIC CONVERTOR:

A catalytic converter is an exhaust emission control device that converts toxic gases and pollutants in exhaust gas from an internal combustion engine into less-toxic pollutants by catalysing a redox reaction (an oxidation and a reduction reaction). [2]

3. WORKING:

The C-1 Charger uses the exhaust thrust to run the turbocharger. The turbocharger rotates due to the high pressure exhaust thrust given from the engine. As the turbocharger rotates, it also rotates the alternator or dynamo attached to it. As we know that the alternator produces electrical energy when it rotates. Hence electrical energy is produced and this electrical energy is stored in the battery attached to the system.

Exhaust comes from silencer which rotates the turbocharger. Exhaust comes through a nozzle where the velocity of exhaust gases increases due to which turbine rotates with high rpm. Turbine is attached to the alternator due to which alternator starts rotating and current is generated. This generated current is stored in battery for further use.

There is one C- channel which is used to remove back-pressure. When valve is opened pressure gets divided and exhaust goes to the atmosphere through catalytic convertor.

4. ADVANTAGES:

1. Increases the efficiency of the engine.
2. Low pollution in the environment
3. The Cost of the system is less.
4. It is Compact in size.

5. DISADVANTAGES:

1. This system cannot be used for car without supercharger. ie:-old cars.
2. Back pressure can act on engine sometimes.

6. FUTURE SCOPE:

1. It can be use to increase the efficiency of automobile by waste exhaust stroke.
2. It can save nature by driving vehicles on hybrid engines
3. It can save environment because of zero emission of battery engine.

7. CONCLUSION:

The prototype of C 1 Hybrid Electronic Charger (a promising new turbocharger technology in the face of stricter exhaust and fuel consumption regulations) was produced and tested to verify it technical possibilities. It will help to decrease the pollution in the nature and to transform the world to the green environment. It can be used in both modes of like eco and sports mode. The C 1 Hybrid Electronic Charger can reduce the pollution and can transform exhaust waste gases into useful energy. The C 1Hybrid Electronic Charger increases the efficiency of the vehicle.

8. REFERNCES:

- 1.<https://en.wikipedia.org/wiki/Turbocharger>
- 2.https://en.wikipedia.org/wiki/Catalytic_convertor