



THE ADVANCED ELECTRONICS IMOBILIZER DEVICE FOR AUTOMOBILES TO PREVENT ACCIDENT IN CASE OF OPEN SEATBELT DRIVE AND ALSO DRIVE WITH LOW BRAKE FLUID LEVEL IN BRAKE OIL RESERVOIR.

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PREFACE

In the modern science and technology age almost everyone have a car for journey. For safety of passengers almost every car makers add many safety features in the modern automobile, like the airbags, seatbelt, BRAKE fluid indicator etc. In current situation during travelling in a car almost everyone do a same mistake, that is when they sit in a car very often they don't lock the seatbelt and just switch on the engine and go away. If they notice that police checking is on progress on the road then they just lock the seatbelt but except it they don't touch the seatbelt. Another is the ignoring the brake oil level Indicator. This indicator lights up due to leakage of the BRAKE system of the vehicle and gives us warning before BRAKE fail problem arrive but in the modern age people have not much time to observe these conditions and that's why these dangerous accidents happen.

The importance of seatbelt in a vehicle is too much necessary. Being buckled up during a crash it helps keep you safe and secure inside vehicle, being completely ejected from a vehicle is almost always deadly. If anyone don't wear the seatbelt then surely the person could be thrown into a rapidly opening frontal airbag. Such force could be injure or even kill you.

The role of the BAS brake fluid sensor/switch is to detect the amount of BRAKE fluid present in the BRAKE fluid RESERVOIR. This is important because the entire BRAKE system relies on BRAKE fluid to operate correctly.

In my system the system controller can be interface with these two features of any modern car by some modifications and when the full system is ready then if anyone try to switch on the engine with open or unlock seatbelt then the engine will not start. The car's ACC loads like head lamps, rail lamps, flasher indicators or car stereo will work without any problem. The engine will be start only when the person just lock the seatbelt properly. This way the traffic rule can be mainrain and also the basic safety of life is secure.

The second important safety of my designed system is to prevent the BRAKE failure problem and switch off the engine automatically during journey time. Actual operation of the system is when my designed device detect that the BRAKE fluid level is decreasing in the brake oil reservoir then the system first light up the BRAKE fluid low level Indicator then the engine switch off time counter led start blinking and a buzzer also beeps with an interval and warn us that we have 15 minutes to drive and park our car in a safe place before the engine will switch off automatically and after the pre determine time the engine will be switch off. The engine can be restart again but not active more than 15 minutes until you solve the BRAKE

fluid leakage problem properly. If the problem is solve them you drive constantly and easily. This way the BRAKE failure problem can be solve at the basic level and massive accidents can be avoided and increase the saftey of life too much.

OPERATING PRINCIPLE OF THE SYSTEM

First 12 volt battery power is always provide to the ignition key common pole and when the key is move to the first ACC position then the tail lamps, brake lamps, head lamps and the other ACC loads get power via the ignition switch. After it when the key is move to the ignition position then first the power goes to the system controller device. Now the two conditions are described here.

In first condition the controller cheak that all seat belts are on lock or unlock condition. As an example if in a four seater car if all passengers are lock the seatbelts then the device will light up engine ing cluster meter section on green led. This means we can start the car. If all passengers or any one among them is not lock the seatbelt then the controller detect it a open circuit in seatbelt system because all reed switches are in series circuit combination. When the seatbelts fitted with magnetic poles are inserted in those buckles. All reed switches are active due to magnetic field and close the circuit and the system understand that all passengers are locked with seatbelt then the seatbelt open indicator will automatically switch off and also the engine ing cluster meter section led colour change from red to green (light up) . Now you can start the engine of the car and if you move the key to the start position then the car's engine starts easily.

The second condition is brake oil level monitor in the brake oil reservoir. When all the passengers of the car are lock themselves in the seatbelt and just wanted to start the engine. In this condition if the brake oil level decreases in the brake oil reservoir due to any leakage from past few days then the brake oil level Indicator must be light up on the dashboard and an warning engine off counter led must start blinking and also a buzzer starts beep and after 15 minutes the system controller will cut off the starter ignition system either the engine is in start or on off mode. This way my system can protect the passengers as well as the from massive accidents before the BRAKE fail problem arrive.

Advantages of the system= First no one can start the car with unlock seatbelt, even if a single one among all passengers not lock the seatbelt. Then the system controller sense an incomplete circuit in the seatbelt system and it disconnect the total stayed and ignition cluster system. So don't start with unlock seatbelt.

Second advantag is that if the passenters of the car think that they just lock the seatbelts and switch on the engine and after this process again they unlock the seatbelts and drive continuously just easily make fool the controller. This is not possible because if any breakege take place in the seatbelt wiring system , the controller instantly cut off the starter and ignition system. That's why without locking all seatbelts the controller system not allow the starter suestem to start the car's engine. During journey time on the road if mistakenly anyone among the passengers is unlock his or her seatbelt then the controller instantly detect and disconnect the starter and ignition system. Then the car graduaply stop due to loss of motion. This way the system works strictly to maintain safety and security for passengers.

The third advantage is one of the most biggest advantage of the system. This is early detection of the brake oil level in the brake oil reservoir. If any leakage appear in the ABS BRAKE system then the brake oil level is start decreasing in the brake oil reservoir. The System controller detect the problem by the fluid level float switch which is present into the brake oil reservoir. The float switch become active when the oil level decrease below a certain point and detect this level the controller activate a fluid low level Indicator on the meter cluster dash board. After it the controller turn on the engine switch off process with an warning counter led start blinking with a buzzer beeping then after 15 minutes duration the engine will be automatically switch off and this mode is also indicated by a red led on the meter cluster dashboard. This feature also have an great advantage that's during journey time if this oil level fault appear and you get the information through the dashboard then it's not be problematic for anyone because you have 15 minutes to drive and park your in a safe location or just reach to a car garage to solve the problem before the engine shut down automatically. If the distance is too much from a nearest garage then also no problem, if the engine will switch off automatically after 15 minutes duration then just switch back the ign key to ACC position and wait for five minutes and again go to the ign mode and then start and repeat

the process until you reach to the garage. This way my designed device can protect the car as well as passengers life very well efficiently.

