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سلامتك تهمنا

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Introduction

The tire is the most important safety element in the car. It is the "link" between the driver and the road, supports the car with the air inside it and the rubber coating around it, improves the car's grip and absorbs shocks that occur while driving. An incorrect or inappropriate tire may expose passengers to danger, and may constitute the difference between life and death. Therefore, it is necessary to maintain the car tire in good shape through regular maintenance to ensure your safety.

Methods

Materials:
- sensor BMP180
- LCD screen
- wires
- Ohm Potentiometer
- Arduino uno- Breadboard

Methods:
1-we have installed all the required libraries for our project in Arduino IDE.
2- Building the electrical circuit and connecting the sensor and Arduino uno and LCD to display the pressure and temperature
3- Write the code in Arduino IDE
4- connect the arduino with the laptop and run the program to display the readings

Diagrams/Figs

Electronic Circuit :

Results

You should have a sensor with you to check tire pressure when the tire is "cold."
- Open the air valve cap in the car tire.
- Place the tire sensor on the valve to know the pressure measurement,and the air pressure and temperature will be displayed on the digital screen. If the reading matches the recommended pressure, this is what is needed.
- If the pressure is lower than the minimum, more air is added, but if the pressure is high, part of the air is leaked.
- The measurement process is repeated to ensure the pressure again.
- The valve is tightly closed to prevent air leakage.

Conclusion

In conclusion, our project aims to address recurring accidents caused by malfunctions in tire pressure and temperature. Therefore, air pressure and temperature must be measured and monitored regularly to reduce the occurrence of these accidents. Regular monitoring of these critical factors is essential for the safety of drivers and passengers. By implementing our solution, we aim not only to prevent accidents effectively, but also to maintain optimal tire safety standards. Through this project, we envision a safer driving experience.

References

1-justdoelectronic: https://justdoelectronics.com/bmp-180-sensor-arduino-tutorial/

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3-The importance of correct air pressure in car tires: https://carbonchromes.com/%D8%A3%D9%87%D9%85%D9%8A%D8%A9-%D8%A6%D8%BA%D8%B7-%D8%A7%D9%84%D9%87%D9%88%D8%A7%D8%A1-%D8%A7%D9%84%D8%B5%D8%AD%D9%8A%D8%AD-%D9%81%D9%8A-%D8%A5%D8%B7%D8%A7%D8%B1%D8%A7%D8%AA-%D8%A7%D9%84%D8%B3%D9%8A/