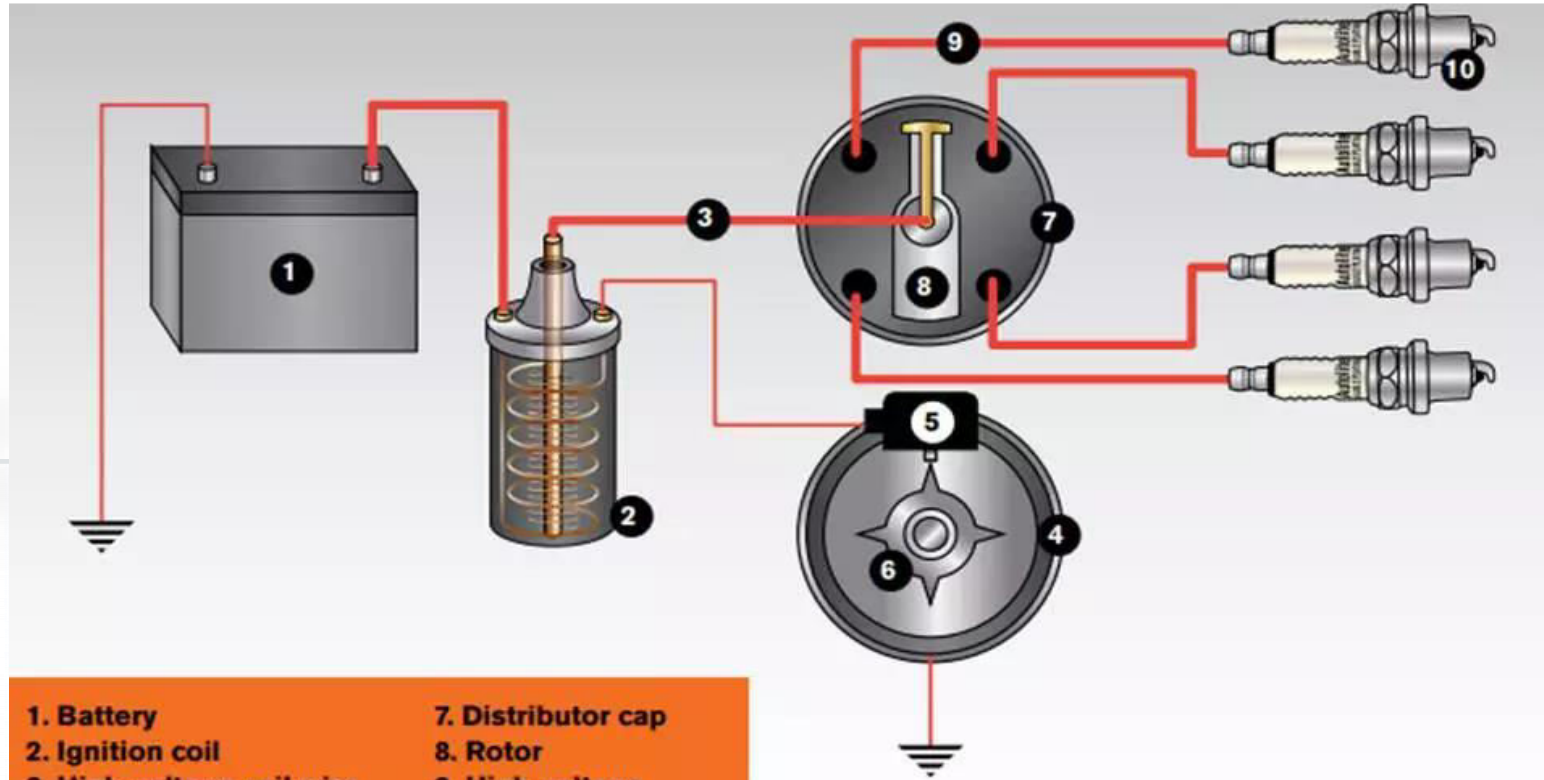




19M0611 - AUTOTRONICS

UNIT 2 - PROGRAMMED IGNITION SYSTEM

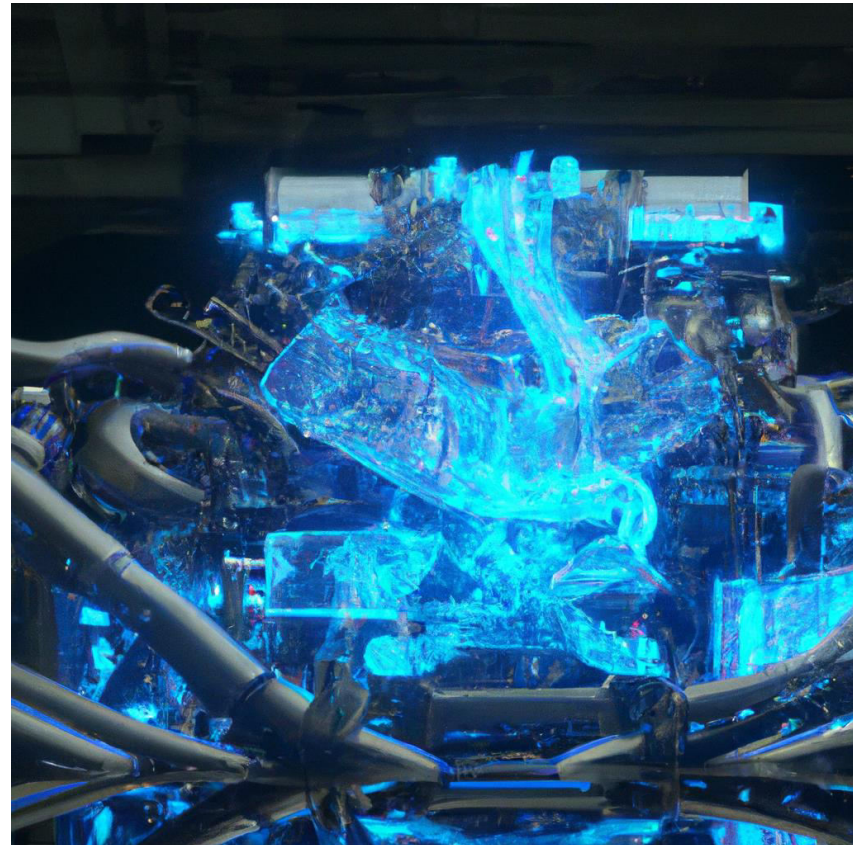


- | | |
|---------------------------|----------------------------------|
| 1. Battery | 7. Distributor cap |
| 2. Ignition coil | 8. Rotor |
| 3. High-voltage coil wire | 9. High-voltage spark plug wires |
| 4. Distributor | 10. Spark plugs |
| 5. Timing pickup sensor | |
| 6. Signal generator | |



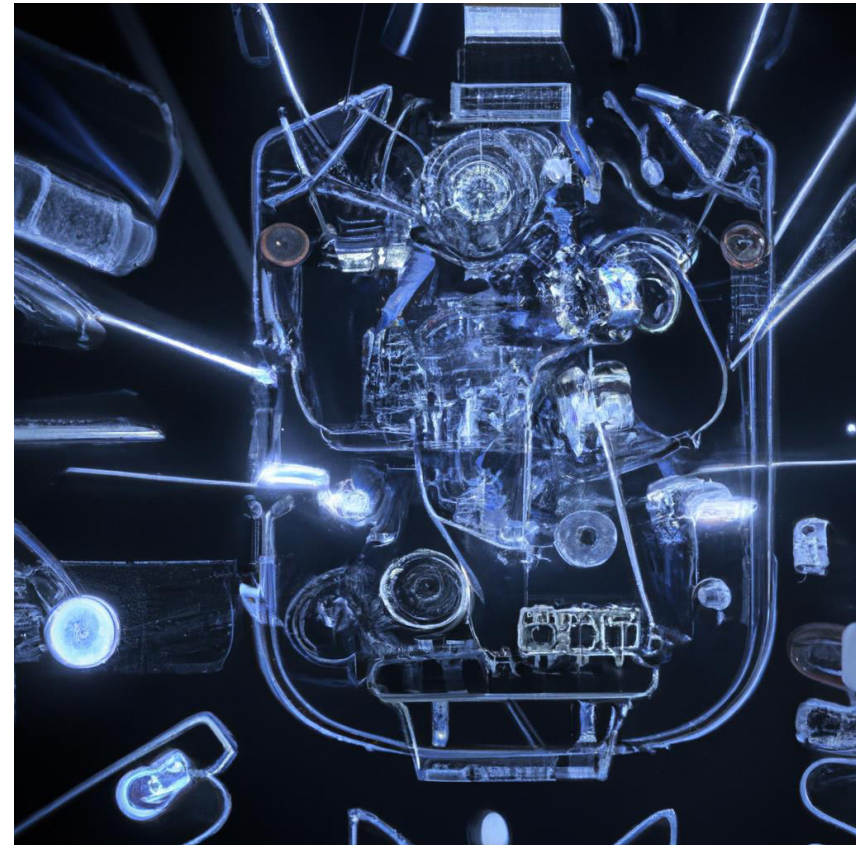
INTRODUCTION

- ❑ The programmed ignition system is a vital component in modern automobiles, providing reliable and efficient ignition for the engine. This system uses electronic controls to manage the ignition timing and spark intensity, resulting in improved performance and reduced emissions.
- ❑ One of the key advantages of a programmed ignition system is its ability to adapt to changing conditions.



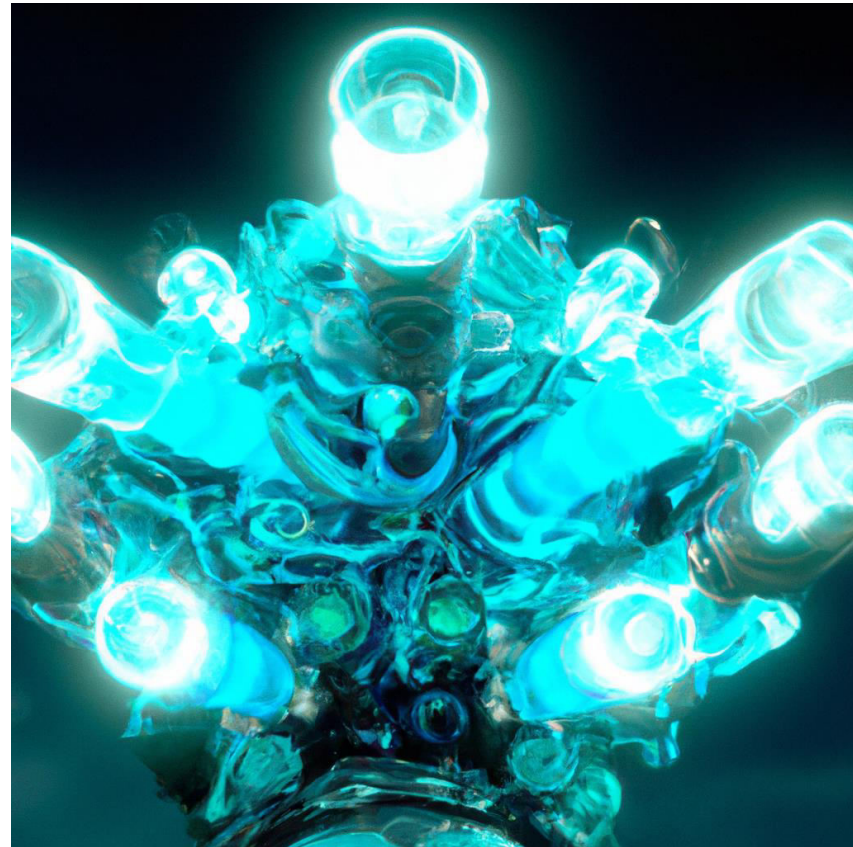
COMPONENTS OF A PROGRAMMED IGNITION SYSTEM

- ❑ A programmed ignition system consists of several components, including the ignition coil, distributor, spark plugs, and control module. The ignition coil converts the battery voltage into high voltage needed for the spark plugs to ignite the fuel mixture.
- ❑ The distributor distributes the high voltage from the ignition coil to the correct spark plug at the right time. The spark plugs ignite the fuel mixture in the combustion chamber, and the control module manages the ignition timing and spark intensity.



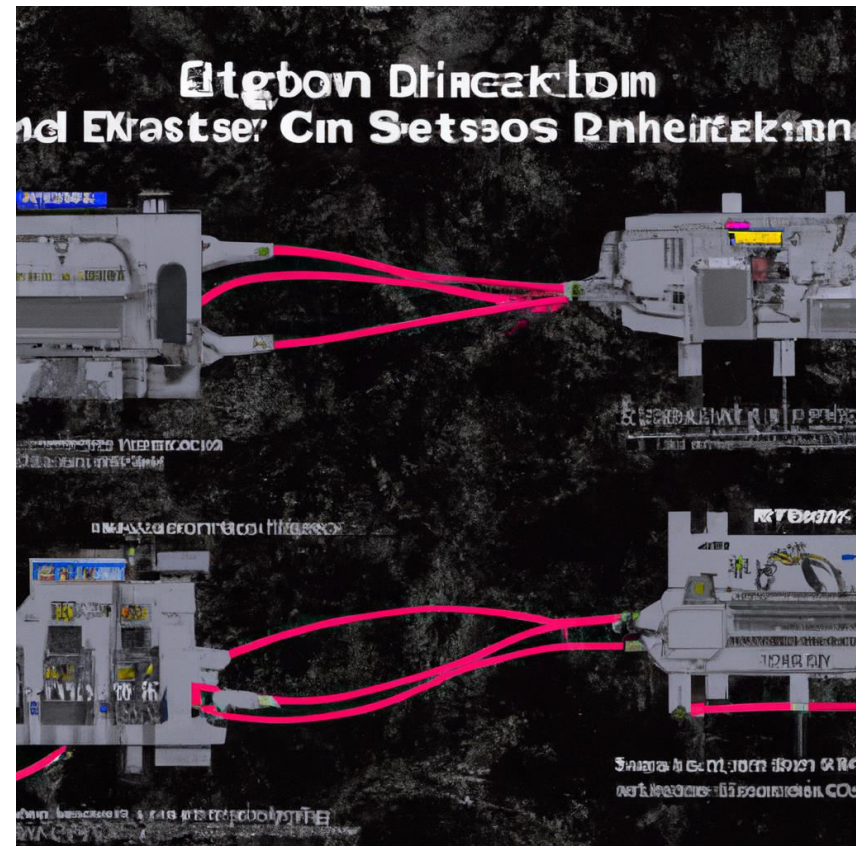
ADVANTAGES OF A PROGRAMMED IGNITION SYSTEM

- ❑ There are several advantages to using a programmed ignition system in an automobile. One of the most significant benefits is improved fuel efficiency. By precisely controlling the ignition timing and spark intensity, the system ensures that the fuel is burned more efficiently, reducing waste and improving overall fuel economy.
- ❑ Another advantage of a programmed ignition system is improved performance.



TYPES OF PROGRAMMED IGNITION SYSTEMS

- ❑ There are several types of programmed ignition systems, including distributorless ignition systems (DIS), coil-on-plug (COP) systems, and direct ignition systems (DI).
- ❑ Distributorless ignition systems use multiple coils to control the timing and intensity of the spark, while coil-on-plug systems have a separate ignition coil for each spark plug. Direct ignition systems integrate the ignition coil directly into the spark plug, eliminating the need for spark plug wires.





THANK YOU