

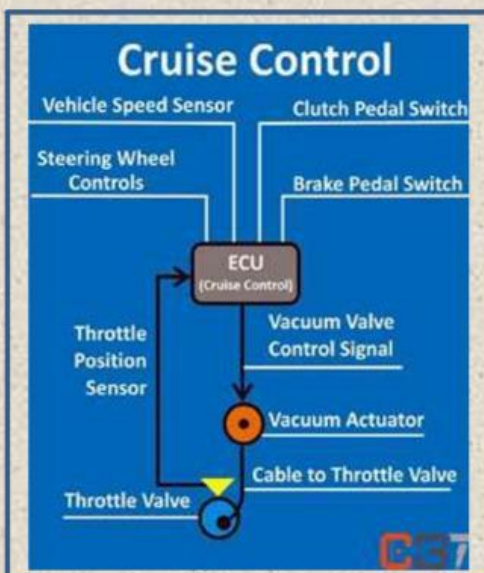
Cruise Control System. DISTRONIC.



The Cruise Control is a system capable of automatically maintaining the desired speed (i.e., speed set by the driver) without pressing the accelerator pedal. This system is beneficial while driving at a constant speed as it significantly reduces driver fatigue.

1. Match the components of Cruise Control System to their definitions:

- | | |
|-----------------------------|---|
| 1. Steering Wheel Controls | a. a sensor that detects when the brake is applied. |
| 2. Vehicle speed sensor | b. a component that prevents the vehicle from moving unexpectedly when the engine is started. |
| 3. Clutch pedal switch | c. a sensor used wherever precise control of the vacuum level is required. |
| 4. Brake pedal switch | d. several buttons and surfaces with specific functions, such as the horn, or driver display. |
| 5. Throttle position sensor | e. a device that controls various subsystems of an internal combustion engine. |
| 6. Vacuum valve control | f. a sensor used to monitor the throttle body valve position for the engine control units. |
| 7. Vacuum actuator | g. a type of position sensor which is used to measure rotational speed. |
| 8. Engine control units | h. a component that utilizes vacuum pressure to generate force and motion. |



2. Read how Cruise Control works. Choose the correct verb.

After attaining the desired speed, the driver can _____ this system with the help of steering-mounted controls. Usually, manufacturers _____ buttons named ON, OFF, SET/ACCL. However, they _____ broadly from manufacturer to manufacturer. For example, the ON and OFF buttons are for activation and deactivation, respectively, while the SET/ACCL button helps _____ the required speed.

But, the vehicle must _____ that speed before setting. Thus, the system comes to know the vehicle's speed from the speed of the driveshaft. Alternatively, it takes the input from the wheel speed sensors and sets the throttle fixed at that location. In addition, the manufacturers mostly _____ vacuum-operated actuator mechanisms to hold the throttle in position.

Almost all cruise control systems get disabled as soon as the driver touches either the brake or the clutch pedal. Manufacturers _____ these systems in such a way that they turn 'OFF' upon human intervention.

3. True or False? Choose the correct variant. Justify your choice.

Advantages of Cruise Control System:		
1. This system helps improve driving comfort on long journeys as there is no need to press the accelerator pedal.	True	False
2. It increases driving fatigue to a great extent.	True	False
3. It worsens the fuel economy of the vehicle significantly.	True	False
Disadvantages of Cruise Control System:		
1. This system is helpful in heavy traffic conditions with varying speeds.	True	False
2. Its inability to recognize the road surface may lead to skidding on wet or icy surfaces.	True	False

4. Watch the video. Pick the Right Answer about Distronic!

1. ***What is Distronic Plus?***
 - a. A type of car radio
 - b. An adaptive cruise control system
 - c. A navigation tool
 - d. A brake system
2. ***How does Distronic Plus work with traffic?***
 - a. It stops the car completely
 - b. It ignores other cars
 - c. It adjusts speed automatically based on traffic flow
 - d. It only works on highways
3. ***What happens if traffic stops for more than 3 seconds?***
 - a. The car continues driving
 - b. An alarm sounds
 - c. You need to tap the gas pedal or use resume feature
 - d. The car stops permanently
4. ***What is an important warning about Distronic Plus?***
 - a. It works perfectly in all conditions
 - b. It can detect all vehicles and pedestrians
 - c. It cannot recognize road curvature or predict other vehicles' actions
 - d. It is safe to use on all road types
5. ***Where is the cruise control stock located?***
 - a. On the right side of the steering column
 - b. On the dashboard
 - c. On the left side of the steering column
 - d. Near the gear shift
6. ***How can you increase the set speed?***
 - a. Press the brake
 - b. Tap the lever up
 - c. Turn off the engine
 - d. Adjust the twist knob
7. ***What is the minimum speed for setting Distronic Plus?***
 - a. 10 miles per hour
 - b. 15 miles per hour
 - c. 20 miles per hour
 - d. 25 miles per hour

