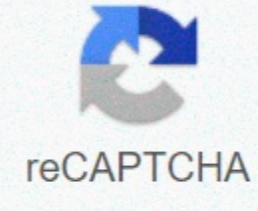




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## Egr valve function in hindi

the strong image of the engine from kuhar from &lt;a href=" ' &gt;Fotolia.com&lt;/a&gt; In the early 1970s, car manufacturers began equipping their vehicles with EGR (exhaust recirculation) valves to reduce the levels of pollutants generated by their vehicles. At high temperatures, oxygen and nitrogen combine to form nitrogen oxide, which is considered one of the main components of the cloud. EGR valves help reduce the amount of nitrogen oxide produced by car engines by reducing the temperature of the combustion process in an engine. Nitrogen oxide is a harmful gas and is one of the main components found in the cloud. It is produced during the combustion process in a car when the temperatures in the combustion chamber exceed 2,500 degrees. The EGR valve works to reduce combustion temperatures in an engine by introducing a controlled amount of exhaust gas into the engine cylinders. These exhaust gases cannot be burned again and merged with the mixture of fuel and air entering a cylinder, which chemically reduces the temperature at which the fuel and air mixture is burned, reducing the production of nitrogen oxides. The EGR valve has an inlet tube connected to the engine exhaust system and an output tube connected to the intake manifold. The main body of the unit contains a valve that opens under certain conditions to allow a certain amount of exhaust gas into the intake manifold, where it is then mixed with the fuel and air mixture and cools the combustion process. EGR valves in older vehicles manufactured before 1981 operate according to the amount of vacuum created by the engine under different operating conditions. These units have an empty tube attached to them connecting to the intake manifold and provide the ported vacuum necessary to operate the valve. As the throttle opens, more vacuum is created, which causes the valve to open and exhaust gas into the intake manifold. These early EGR systems also used a thermal switch that prevented the vacuum from running the EGR valve until the engine reached normal operating temperature. Newer vehicles manufactured after 1981 use vacuums and electronic signals to control the operation of the EGR valve. The EGR valve is connected to a vacuum source from the engine and also has one or more cables connecting it to the vehicle's computer. The computer uses sensors to monitor engine function and sends signals to tubulars within the EGR valve to more accurately the operation of the valve than the vacuum function only can. This allows the EGR valve to operate much more efficiently and further reduce nitrogen oxide production. When the EGR valves fail, the system is unable to properly insert the exhaust gases into the fuel and air mixture, which causes the temperature to rise inside the combustion chambers. This increase in temperature cause pre-ignition, hitting and ping, and overproduction of nitrogen oxide. To avoid this, modern vehicles use computer controls that note when the EGR valve no longer adds exhaust gases to fuel and air mixtures. The computer then reduces the amount of the ignition advance, which in turn slows down the combustion process, but at the cost of reducing fuel efficiency and mileage. When the EGR valve fails, a code is entered on the vehicle computer, which causes the control engine light to be adjusted. This code also allows car technicians to quickly determine the cause of the problem. The exhaust recirculation valve (EGR) is probably one of the most misunderstood parts found under the hood of a modern car. Designed to help control pollution, along with the PCV valve, it has helped clean air in and around cities. But to understand what it does, you first need to understand a few things about how fuel burns inside the engine. Gasoline combustion engines work by mixed fuel with air, compressing it into the cylinder and igniting it with the spark plug. Ideally, gasoline burns oxygen. But the air contains 70 percent nitrogen and has traces of other gases. Nitrogen is quite inert and does not like to be combined with gasoline. But as combustion chamber temperatures rise, nitrogen is much more likely to be combined with oxygen and form hypoxes, also known as NOx. Nitrogen oxides are an important element of urban air pollution. Gasoline also burns better when combined with air in a ratio of 14.7 air to 1 fuel. But the most frugal combinations improve fuel economy. The problem is that when gasoline burns lean it tends to hit. Hitting significantly reduces thermal efficiency and can damage the engine if allowed to continue. While there are practical limits to how lean a machine can be forced to run, it can be improved somewhat with lower combustion chamber temperatures. By reducing the temperatures of combustion chambers, pollution decreases and fuel economy improves. Performance will be sacrificed somewhat, but this is a necessary price for air quality. There are two ways to reduce the temperatures of the combustion chamber. The first is to reduce the compression ratio. Compression ratio is the amount of compression provided by the cylinder. But significantly reducing this factor to less than 8:1 or so drastically reduces both performance and effectiveness. Another way to reduce the temperature of the combustion chamber is to add something inert to the air-fuel load. Something it won't burn. Fortunately every car and truck has a ready supply of inert gas - the exhaust. Surprisingly, adding exhaust gas to the inlet air load actually reduces the maximum combustion chamber temperature. This seems counter-intuitive since the exhaust is hot. However, when exiting the cylinder it is cooler than the maximum temperature of the combustion chamber. So by pumping back back the combustion chamber will not burn again and absorbs heat. EGR means exhaust recirculation. The valve directs a small portion of the exhaust gas back to the creek air load and lowers the maximum temperature of the burning fuel. The valve ensures that the EGR system is idle, where it would lead to irregular and idle tilting, and at maximum power, since the addition of exhaust gas deprives the engine of power. In addition to reducing pollution and reducing the temperature of the combustion chamber, exhaust gas recycling also results in a reduction in pumping losses. Pumping losses are the work the engine must do to pump inlet air beyond the throttle plate. Since the EGR reduces power, the throttle should be opened more widely for a desired power supply, which means that the throttle opening is wider so that the engine does not have to work so hard to inhale the air. In addition, with a lower combustion chamber temperature there is less heat loss in the metal walls of the cylinder, piston and cylinder head, so as to maintain more internal heat to turn into mechanical work. The first EGR systems in the early 1970s operated strictly in multiple vacuums. They had a huge impact on performance, driving ability and reliability. Many owners simply removed them and modified the carburetor to prevent lean operation. Slightly later the systems added electronic controls that improved both performance and reliability but problems continued and the systems, while authorized by federal law, were unpopular with drivers. Some foreign manufacturers chose to make their engines very small and, since they produced so little exhaust, they were able to completely eliminate the EGR system. This move helped them gain a place in the American market. The system continued to evolve, however, and combined with modern computer-controlled engine management systems, they have no impact on driving ability at all, and in fact provide a significant benefit to both pollution control and improved fuel economy. Andrey Malinkin/iStock/Getty Images Exhaust recirculation systems are not exactly the brightest systems in the average car, but they perform several very important tasks. An EGR may not help you get to where you're going faster or looking any better, but a job will get you there a good deal cleaner and cheaper. An EGR valve works by recycling used exhaust gas in your engine. These gases contain non-combustible fuel very little oxygen, and it's too hot. A hot intake charge brings less oxygen, so an EGR working system effectively makes your engine act smaller than it really is. In terms of driving, an EGR valve that is stuck open will cause a noticeable drop in horsepower at least. Along with this can come explosion - blow or ping - under hard acceleration, and the attendant cylinder misses. The engine will also see an open EGR valve as a huge vacuum leak, so hard start and a very rough inertia. An EGR stuck closed or clogged with carbon won't show many symptoms, since the engines don't technically need them to run. But expect a very noticeable drop in fuel economy, a noticeable smell of gasoline from the exhaust pipe, a very hot catalytic converter, or all of the above. All modern vehicles monitor the EGR system, so any error with the system should cause a light control engine. You'll get one anyway if the machine ends up detonating, misfiring or running richly; All of this will trigger diagnostic codes. But you need to find EGR diagnostic codes with them if the EGR is the source of the problem. By David Karanja A dual adjustment valve, also referred to as a balancing valve, is used in plumbing to control water temperature. This type of valve is widely used in showers. Double adjustment valves are pressure sensitive. They react to pressure changes from hot and cold water flowing into them. This causes the valve to either open or close a door, thus maintaining the pressure balance. Balancing this pressure between the two water supplies keeps the temperature constant. When there is a sudden change in water, such as the change caused by flushing a toilet, a balance valve keeps shower temperatures stable. This means that there will not be a sudden interruption in the flow of cold water when a toilet rinses. Most new constructions are equipped with balancing valves. Replacing an outdated valve in an existing home may require the help of a professional plumber. Plumber.

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