

Ask the Mechanic

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A Q&A page where
expert advice, too

How can a motorist tell their engine is underpowered?

Hello Paul, my car has no dashboard warning lights on, yet it feels sluggish and less responsive than before. Are there early signs that experienced drivers or mechanics look for before a fault becomes serious, and how can an ordinary driver learn to detect these problems early? **Jennifer Babirye**

Hello Babirye, if your car has no dashboard fault lights but has lost power, it is not running at its peak performance. This situation can occur even if the on-board diagnostic system has not reported a fault or displayed a check engine light. Reduced engine performance may be due to the aging of performance parts such as spark plugs, air filters, or fuel filters. A dirty air filter can restrict the air intake, preventing the engine from achieving an optimal air-fuel ratio. This leads to incomplete combustion of fuel and decreased performance. Conversely, a dirty fuel filter, blocked fuel injectors, or a weak fuel pump can also hinder engine power without illuminating the check engine light.

Additionally, a faulty emissions system may cause reduced engine performance without displaying the check engine light. When a vehicle's emissions system is malfunctioning, it can lead to blockages that restrict exhaust outflow. This is akin to gagging an athlete or covering their mouth and nose with a dirty cloth while expecting them to perform at their best; they simply will not have the power to finish. Similarly, when exhaust emission

devices such as the Diesel Particulate Filter in diesel engines or the catalytic converter in many gasoline engines become damaged or blocked, the vehicle cannot expel exhaust gases freely, resulting in diminished power and performance. In many diesel engine cases, the engine management system may detune or reduce power to prevent damage.

A defective transmission or gearbox can also lead to sluggish performance, even when the engine has sufficient power. This is because the transmission transfers power from the engine to the wheels. If the transmission is faulty, it may fail to transfer the engine's power efficiently, resulting in a sluggish performance. For instance, a malfunctioning automatic transmission may cause gears to slip or shift improperly, delaying the transfer of engine power to the wheels. Similarly, if a manual gearbox has a faulty clutch, power from the engine will not be adequately and timely conveyed to the wheels, also resulting in sluggishness.

There are early signs that expert me-

chanics or knowledgeable drivers can use to detect engine faults even in the absence of a check engine light. Ordinary motorists can learn to recognise these signs and seek guidance from mechanics to avoid missing critical indicators. Unusual sounds can signal specific problems. For example, if there is a tapping noise at the top of the engine, it might indicate a faulty valve train. Engine valves control the intake of air and the exhaust of gases.

Worn or damaged intake valves may not allow the appropriate amount of air into the engine, altering the air-fuel ratio and affecting the engine's ability to burn fuel efficiently. This can lead to misfiring, erratic idling, and reduced performance. On the other hand, damaged intake valves can result in loss of engine compression, which hampers combustion and reduces power.

A dry rattling sound might suggest that the timing chain system is loose, worn, or not lubricated adequately. This can disrupt engine timing, which is crucial for the proper delivery of air, fuel, and spark necessary for complete combustion. Retarded engine timing can result in reduced power and poor fuel economy.

Other visual indicators may also suggest that something is wrong with the engine, such as an erratic movement of the Revolutions per Minute (RPM) gauge on your instrument cluster. If your engine is idling inconsistently, the RPM gauge will move up and down, indicating that your engine might be underpowered and in need of attention. A decrease in fuel economy is another sign that your engine requires assistance. A spike in fuel consumption could indicate worn spark plugs, a dirty air filter, or developing issues with the emissions system.

These are observations that ordinary motorists can make without waiting for the check engine light to appear on the dashboard. Understanding how a car performs when running normally provides a useful reference point for detecting any changes in engine performance due to the audible or visible signs mentioned above.

NOTE
KNOW HOW A
CAR PERFORMS
OPTIMALLY

