

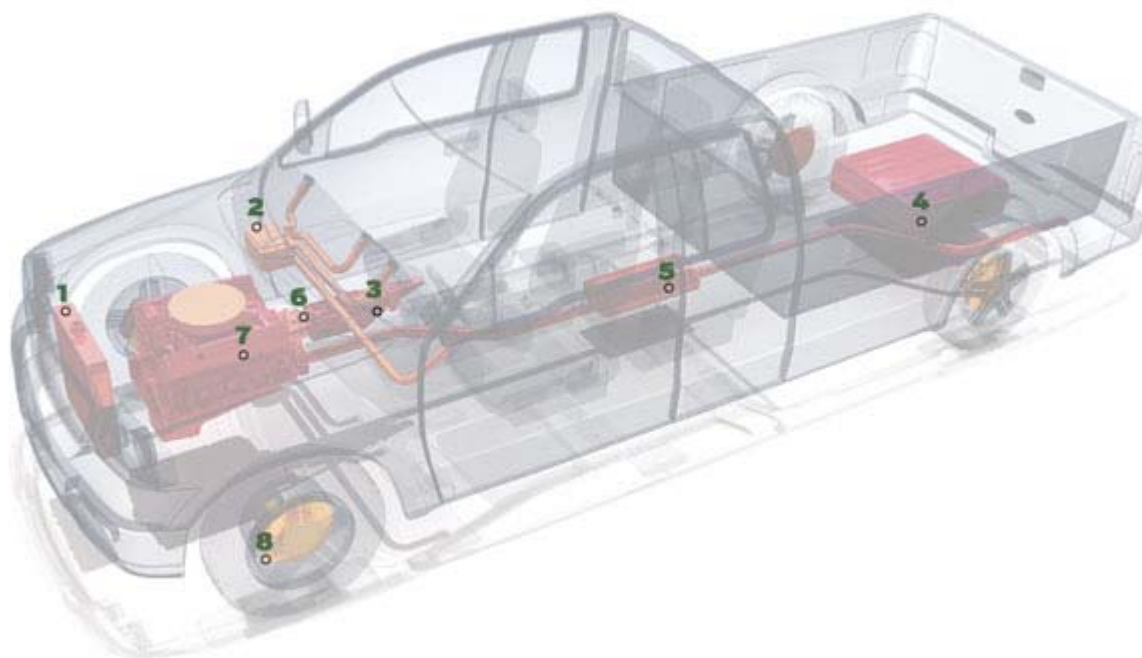
# What's That Smell?

Remember that new-car smell? Actually, new cars haven't had that smell since manufacturers took the solvents out of the glues in the interior in an attempt to save a lot of UAW members' livers. Oh well. But there are plenty of other smells emanating from your car. Some of them are perfectly normal, even if they're annoying. Other odors are definitely evidence of Something Wrong. You--or your mechanic--can tell a lot about the source of an odor by simply walking around the car. Some odors are only apparent when the car is running, others when it's hot, others when it's sitting.

**BY MIKE ALLEN**

**Illustration by raz.ro**

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## **(1) SMELLS LIKE: MAPLE SYRUP**

**WHEN:** After the engine has warmed or possibly even after it's shut off for a few minutes.

**THE CULPRIT:** Coolant containing sweet-smelling (but toxic) ethylene glycol is leaking from somewhere. It could be coming from a radiator or heater hose, a failed intake manifold gasket or cylinder head. It might be coming from a leaky radiator cap or the radiator itself, especially if you smell it outside the car. A strong odor inside the passenger compartment probably means a bad heater core.

## **(2) SMELLS LIKE: GYM SOCKS**

**WHEN:** You turn on the heater/air-conditioner fan and you get a whiff of that high-school gym locker.

**THE CULPRIT:** It's good, old-fashioned mildew growing in the moisture condensing inside your a/c evaporator. And no, drizzling Listerine down the vents won't fix it, in spite of what your brother-in-law read on the Internet. Check [popularmechanics.com/musty](http://popularmechanics.com/musty) for advice on curing this. Cheap solution: Turn off the a/c a mile from home and run the fan on high to dry the system out.

## **(3) SMELLS LIKE: HELL**

**WHEN:** All the time, especially after the vehicle has been sitting after a long drive.

**THE CULPRIT:** Yes, it really is brimstone, or, as it is usually called today, sulfur. This means gear lube is leaking from the manual transmission, transfer case or differential housing. Sulfur compounds in this oil serve as extreme-pressure lubricants for the gears, and can get pretty funky after a few years in service. Look for sulfury-smelling dribbles of viscous, oily stuff under the car. Unfortunately, leaks here typically mean a trip to the shop.

## **(4) SMELLS LIKE: A GAS STATION**

**WHEN:** Parked, especially inside a garage or when the weather is really warm.

**THE CULPRIT:** This is raw gasoline. On older cars--pre-1980 or so--some odor after a hot shutoff is normal from fuel afterboil in the carburetor float bowl. Modern cars have an evaporative-emissions system that's tighter than our managing editor's deadline schedule, so any fuel smell means something is wrong. There may be a leak from a fuel-injection line or a fuel-tank vent hose.

## **(5) SMELLS LIKE: ROTTEN EGGS**

**WHEN:** Any time your engine is running.

**THE CULPRIT:** Hydrogen sulfide in the exhaust, which is produced by trace amounts of sulfur in gasoline. It's supposed to be converted to sulfur dioxide in your catalytic converter. This may be indicative of a fuel-injection problem, and can be cured by a sharp mechanic. But often it means a failed catalytic converter. The bad news: A new cat is expensive. The good news is it's probably covered under warranty. Check with your dealer.

## **(6) SMELLS LIKE: BURNT PAPER**

**WHEN:** At all speeds, particularly when you're working your way through the gears.

**THE CULPRIT:** The clutch facing is burning off as the clutch slips. The odor is reminiscent of smoldering newsprint: like trying to burn the Sunday newspaper all at once in the fireplace, especially if it's been used to wrap sardines. The friction material is actually a paper composition, which explains the papery part of the smell. Either replace the clutch, or learn to stop riding the clutch pedal.

## **(7) SMELLS LIKE: HOT OIL**

**WHEN:** Your engine is hot.

**THE CULPRIT:** Oil is leaking onto the hot exhaust manifold. This is an acrid, burning smell. It's earthier and more nose-wrinkling than the odor of cooking oil used for french fries. If it's from a leaky crankshaft seal

that's spraying oil all over, some of it will find the red-hot manifold--but most will be on the pavement. A leaky valve cover won't necessarily leave a drip on the floor if all the oil drizzles onto the exhaust, vaporizing immediately. Look for smoke and try to stem the leak.

### **(8) SMELLS LIKE: BURNT CARPET**

**WHEN:** After you've been using the brakes a lot, or hard, or both.

**THE CULPRIT:** The brake pads are overheated. This is perfectly normal after riding the brakes coming down a long mountain pass--but you should learn to downshift, you flatlander. If you smell this under normal driving conditions, you've got a dragging brake caused by a seized-up brake caliper piston. Or maybe you just left the handbrake on. Check the temperature of the brakes by hand--the hot one is probably the smelliest.

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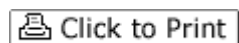
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