

**Wheels:** An e-mail from Vittal says, "As a proud DIY, I recently replaced the window motor/actuator in my Pontiac without a hitch. The question that came to my mind was how does the motor stop when the sash has reached its two extreme positions, all the way up and down. I found no limit switches. Is there a friction clutch, which cuts off as soon as the torque exceeds a normal value a la garage door openers? Please explain. Needless to say I enjoy your columns every Saturday.

**Halderman:** Thanks for writing and congratulations on a successful DIY repair. The power windows work until the switch is released on normal power windows. If the vehicle is equipped with "auto up" feature, you are correct that the module that controls the operation of the power window monitors the current draw of the window motor and stops it if the current exceeds a certain level. This feature is designed to help prevent personal injury in the event that an arm or finger is caught in the window as it closes. Many windows will reverse if the current is too high before the window is completely closed.

