

# Wipers age with or without use



Did you know that even when you aren't using your windshield wiper blades they are wearing out?

Laboratory tests show that air pollution ages the rubber wiping element of the wiper blade and causes it to age significantly faster than through normal or heavy use.

In tests conducted by ANCO, manufacturer of windshield wiper products, ozone — a major component of air pollution — was found to be the single most important factor in causing wiper blades to deteriorate.

Ron Henrichs, manager of ANCO's quality control testing laboratory, says that when windshield wiper rubber is exposed to ozone, a chemical change similar to metal rusting occurs. This oxidation process causes the rubber to become dry and

brittle and more prone to wear.

"This means that motorists should think in terms of how long they've used the rubber wiping element on the wiper blade.

"How long, instead of how much or how often they've used the windshield wipers," Henrichs says. "Pollution causes more wear — faster than normal use."

Henrichs points out that for a number of years, the effect of ozone on wiper blades was minimized due to automobile design.

"In the late 1960s, cars were first designed with front hoods that hid the wipers from view," he says. "This design feature had the effect of reducing exposure of the wiper blades to ozone.

"But styles change, particularly as more and more

cars are downsized. Now, manufacturers have by and large eliminated the hidden wiper feature and the wiper blades are exposed to the air again."

Henrichs says that every wiper blade manufacturer adds "anti-ozonites" and "anti-oxidants" to the rubber compounds used to make the wiping element and that these significantly slow the deterioration process.

"However, no one can prevent the ozone from attacking the rubber," he says. "It's a natural process that affects all rubber products, including overshoes and bicycle tires."

The effects of ozone on windshield wiper rubber were tested by exposing the rubber to ozone concentrations of 50 parts per 100 million.

This is more than seven times greater than the ozone level of an "ozone alert," which is 6.5 parts per 100 million.

"Our tests show that the ozone causes more rapid aging than we see caused by regular use," Henrichs says.

"Rubber wiping elements aged by exposure to ozone may streak or chatter across the windshield, failing to clean it effectively and seriously limiting visibility."

Henrichs advises motorists to watch carefully for signs of wear on wiper blades, and replace them immediately if the rubber portion appears brittle, dry or cracked. A good rule of thumb is that the rubber wiping element should be replaced at least once a year, and occasionally as often as every six months.

# Debate hits tinted windshields

Tinted windshields cut visual illumination by 50 percent at night and should be outlawed, according to an Indiana optometrist.

"Even though a tinted windshield, most often, is an extra-charge option, it is hard to buy a car without one," said Dr. Merrill J. Allen, an authority on vision and auto safety.

"Auto dealers tell people that a tinted windshield is effective against glare at night and people believe that. But tinted windshields are very dangerous, and I guess the only thing we can do is outlaw them as Australia has."

Allen drives a car with a clear windshield in Bloomington, Ind., where he is a professor of optometry at Indiana University.

He said sunglasses at

night make the problem even worse and should never be worn while driving at night.

"Sunglasses are a no-no at night, but for persons with normal vision they seem to help in the daytime," he said.

He said recent studies show that persons with normal vision are able to detect target spots on the roadway faster in the daytime wearing sunglasses.

"Now that people are pumping their own gasoline," Allen said, "they are driving cars with dirtier windshields. It is not unreasonable for an optometrist to go out and check the windshields of his patients' cars.

"If a person is myopic (nearsighted), dirt on the windshield at night can be devastating."

He said that nearsighted people tend to focus on the dirty window, not the road, even when wearing glasses. "And when looking through a windshield," Allen said, "the background can be critical to your health."

Allen said some cataract patients and persons with retinal problems are helped by wearing yellow lenses at night, "but they should be worn only on a prescription basis, because yellow lenses can be a dangerous filter for some people."

In the daytime, Allen said, yellow lenses decrease visual acuity.

He said that care should be taken, too, in prescribing another kind of visual aid now legal in some states.

These are telescopic aids that are fitted in various ways to permit legally blind persons (20-200 vision) to be issued driver's licenses.

Persons fitted with these devices should have good peripheral vision, Allen said. "Driving with telescopic aids without good peripheral vision is an extreme hazard."

In fact, he said, peripheral vision is more important to safe driving than good central vision. "That's the way people see as they drive," he said. "We monitor the whole field of our vision peripherally."

"If telescopic aids are worn, the driver must be trained in their use. The aid

must be out of the way most of the time, and used only for a quick look every so often to check position."

Allen said that people with poor vision have less time in which to react and should drive correspondingly.

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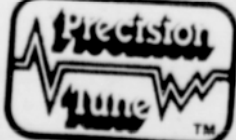
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