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Engine Sludge: When Good Oil Goes Bad

By CHRISTOPHER JENSEN

FOR people buying a used car, there is a very important but rarely checked factor to consider that goes beyond kicking the tires: original sin.

Some best-selling models appear to have an increased risk of serious mechanical problems, particularly if scheduled oil changes were not made during the vehicle's formative years. The threat is the buildup of sludge — gooey tarlike deposits — that reduces or shuts off oil circulation and can mean thousands of dollars to repair or replace an engine that has seized.

Sludge is a thickening and breakdown of the oil as it deteriorates, as moisture and contaminants build up. This causes the oil to gel, resulting in excess wear as friction increases or, in extreme cases, a stop-right-now failure.

Worse, experts warn that there is no foolproof way subsequent owners of a trouble-prone vehicle can protect themselves. And if there is a problem caused by sludge, an automaker may reject a warranty claim because the new owner may not be able to prove that previous owners made the required oil changes.

Dean Tomazic, director for performance and emissions at FEV Engine Technology, a consulting firm in Auburn Hills, Mich., said the owner of a used car could conscientiously change the oil every 3,000 miles and still have a problem if the previous owner neglected the maintenance. The engine may be so damaged from the past abuse, he said, it could “eternally cause sludge formation.”

Thousands of owners of vehicles of popular brands like Chrysler, Dodge, Toyota, Lexus, Volkswagen, Audi and Saab have had sludge problems.

On Wednesday, a state judge in Louisiana is scheduled to give final approval to an out-of-court settlement of a class-action suit against Toyota covering 3.5 million vehicles. Under the settlement, Toyota will repair vehicles with sludge damage if owners can prove a reasonable effort at maintenance.

Chrysler has a serious sludge problem with the 2.7-liter V-6 engine used on some of its Concordes and Sebrings and also on some Dodge Intrepids and Stratus in the 1998-2002 model years, said Clarence M.

Ditlow, executive director of the Center for Auto Safety. Mr. Ditlow said the center's Web site (autosafety.org) had about 2,800 complaints of failures from sludge.

Sam Locricchio, a Chrysler spokesman, said the center was exaggerating the problem. He said the center received many duplicate complaints as well as cases in which it could not be shown that the vehicle had been properly maintained.

A lack of adequate oil changes is the explanation for damage given by Audi, Lexus, Saab, Toyota and VW. Yet unlike Chrysler and Dodge, those automakers have formal compensation programs for sludge damage, although in some cases consumers must provide detailed service records — and in the case of Saab, must have used oil filters sold only by the company.

Used-car owners are not alone in having sludge problems. The class-action suit brought against Toyota was started by Jeff Meckstroth of New Orleans.

Mr. Meckstroth was so impressed with the high marks earned by Lexus in quality studies by J. D. Power & Associates that he replaced a Mercedes-Benz with a new 1999 Lexus RX 300 sport wagon.

In October 2000, at about 42,000 miles, the engine failed because of a sludge problem. The RX 300 was still under warranty, and though Mr. Meckstroth had receipts showing he had made all the oil changes, Lexus refused to cover the \$8,000 repair, asserting poor maintenance was to blame.

A Better Business Bureau arbitrator later ruled the car was properly maintained and that Lexus should repair it under warranty. But there were other expenses Lexus would not cover, and Mr. Meckstroth was angry about the way he was treated.

"Toyota knew they had a defect and didn't want to admit it," he said. "That's when and why I sued."

Toyota denied there was a problem with the engine. The company said the settlement was similar to a repair program it started in 2002 to fix engines damaged by sludge. But Gary G. Gambel, one of the New Orleans lawyers who brought the Toyota class-action suit, said the settlement went beyond the 2002 program by, among other things, reimbursing owners for the reduction in the vehicle's value.

There is no national database on sludge. Still, problems seem to be increasing, said Mike Caruso, a technical specialist with the Automotive Engine Rebuilders Association, a trade group in Buffalo Grove, Ill.

Mr. Caruso said he suspected that two factors were combining to gum up the internal-combustion works. He said that people might be more lax about changing oil and that oil changes had become very important as engines have become more sophisticated.

Yet, given the millions of engines in the United States, the number of sludge-related failures is microscopic, said Robert J. Last, vice president of operations at FEV.

Consumer Reports magazine has said “the problem rate as reflected in our reliability data is very low.”

That is little consolation to owners who suddenly find themselves with a bill of \$5,000 or more to replace an engine on a vehicle with only 60,000 miles, Mr. Ditlow said. He said that if poor maintenance alone were to blame, virtually every engine from every automaker would have a serious sludge problem. He finds it impossible to believe that maintenance scofflaws are all attracted to certain engines. The logical explanation is that poor maintenance affects some engines more than others, he said.

If the Toyota case had gone to trial, said Joseph M. Bruno, another lawyer representing the plaintiffs in the Toyota suit, expert witnesses would have asserted that the problem was related to design changes made by Toyota to meet emissions standards.

Toyota has denied any design problem with its engines. The proposed settlement (posted at oilgelsettlement.com) notes that it does not mean that “Toyota or Lexus vehicles are predisposed to develop oil gel.”

It is difficult to say why some engines would be more vulnerable than others, although regular oil changes would be more important with turbocharged engines, Mr. Last said. Engines with turbochargers are more highly stressed.

VW and Audi officials have noted that proper maintenance is crucial with the turbocharged 1.8-liter engine used in the 1998-2004 VW Passat and 1997-2004 [Audi A4](#). VW also said that the 1.8-liter engine used in the New Beetle, Jetta and [Audi TT](#) was not as likely to have a problem because that engine contained more oil.

Oil capacity may also be a factor with Chrysler’s 2.7-liter V-6. The automaker decided to use a smaller oil sump so consumers could save on oil, giving the engine a five-quart capacity instead of six, a Chrysler engineer, Burke Brown, said in a 2005 interview with The Plain Dealer newspaper of Cleveland.

“In retrospect, that took away the margin,” Mr. Brown told the paper. “If you don’t change the oil on schedule, they don’t tolerate a lot of abuse in that regard,” he said, referring to the 2.7-liter V-6 engine.

What all this means to consumers looking for a used car is that they need to get the vehicle’s record of oil changes and other maintenance. Then, they need to make sure those records match up with the automaker’s requirements as listed in the owner’s manual.

But the automakers’ extended sludge warranties are still good for only eight years after the vehicle was first sold. So some experts said the smartest thing for consumers was just to stay away from engines with sludge

reputations.

“It is almost like clogged arteries,” said Mr. Caruso of the engine rebuilders association. “You look good on the outside, but you don’t know what is on the inside.”

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