

# FUTURE DIRECTIONS IN CAR SERVICE

## The return of the 'Black Death'.



### -by Richard Phillips

I know, it's a dramatic headline, but an old enemy has come to call. 'Black Death' is the name given to the oil sludge epidemic that choked engines by the thousands worldwide in the 80's.

Imagine my disbelief when, during several totally unrelated conversations with Service Managers during the month, the subject raised its head again. Oil sludge, it seemed, was making a comeback.

Stories of recent model trade-ins with difficult to remove dipsticks, rocker covers removed to expose a meatloaf of sludge, and vehicles in for service having sump plugs removed and the used oil taking forever to drain were stories I hadn't heard for nearly twenty years.

I'd made a mental note to do some research of my own to see if the problem was unique to Australia when two publications I subscribe to in the U.S. hit my desk. Both of them carried articles on the return of engine sludge.

One quoted one of their own fleet cars, regularly serviced and maintained, blowing an engine at 40,000 miles (24,000 kms). The cause - engine sludge. The OEM agreed to foot the bill, total cost \$11,850 USD.

The second article was far more in depth, and talked of the return of engine sludge in the U.S. nearing epidemic proportions. The story is accompanied by several case histories, one featuring a driver with barely 20,000 miles on the clock and a bill for \$6,100 USD. No, engine sludge isn't covered under warranty.

It seems that sludge is turning into a customer relations nightmare for automakers in the U.S.

A few telephone calls to contacts in Europe confirmed that 'Black Death' is back on the lips of industry experts there too. The stories being related to me regarding the return of engine sludge in Australia were clearly being repeated worldwide.

Sludge is gelled oil that can't disperse itself around the engines oil system the way it should. Some manufacturers blame customers who fail to change their oil frequently enough, but if it were simply a matter of poor maintenance more engines would be failing. Industry experts say modern engines are even more prone to sludging than older ones.

So what's the cause, and why is it making a comeback? There are several key reasons.

### 1. Crankcase Ventilation.

Oil vapour and combustion gasses must be removed, usually by being channelled through the combustion process. If these gasses are not disposed of efficiently, sludge will form. Some modern breather systems are more successful than others.

### 2. Temperature.

Changes to the positioning of the Catalytic Converter have led to changes in temperature, hot and cold spots, in and around the engine. Hot spots bake oil, cold spots cause acid and sludge.

### 3. Crankcase Acidity.

Modern fuels produce much more acid when burnt. A proportion of this acidity enters the crankcase. Experts say that long term engine wear is now as likely to be down to acidity as friction.

### 4. Tighter Tolerances.

Engines are no longer manufactured down to Thousandths but Microns. Tighter tolerances mean engines are using less oil, and as a result customers fail to check levels and miss oil changes, which brings me on to number five...

### 5. Poor Maintenance.

Drivers who miss recommended oil changes are without doubt contributing to the problem. Lease vehicle drivers especially are quoted as being among the worst for neglecting DIY level checks.

### 6. City Driving.

Constant stop/start city driving accelerates sludge formation. Drivers who spend most of their time in urban traffic should be advised to book oil change services more regularly.

An industry contact in Europe told me that for the first time in twenty years, Engine Sludge is back toward the top of the agenda for large sections of the auto industry. Engineers say that unless action is taken, the numbers of sludged engines will escalate as vehicles age.

Engine Flushing before an oil change has become the accepted norm once again throughout Europe and the United States. It will improve the situation dramatically, but it's not the whole answer. We must constantly educate our service customers when these issues strike, and give them our best advice on how they can help us in our quest to look after their cars better.

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