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How Expensive are Cheap Lubricants?



My grandfather on my father's side was born between the two world wars and just before the great depression of 1929 to 1933. Like most people of his generation, they learnt to save what you can and not be wasteful with money. One such practice was to fix something yourself rather than pay someone to do it. This was also true for the cars he drove.

Granted, in those days, cars were mainly mechanical with no electronic components and computers. I also drove a Volkswagen Beetle as a student and spent more time taking the engine out and fixing it than driving the car. So, fixing it yourself took some effort, but was manageable. .

My grandfather purchased a vehicle based on his own in-depth study of which type of car would give him best value for money. To further optimise his spending, he would then strictly follow the maintenance plan. I use the word strictly because that was how my grandfather did things. If the doctor told him to take his medication at 07:30 in the morning, then he would religiously take his medication every morning at exactly 07:30.

He was keenly aware of the potential cost involved if he did not follow the proper maintenance programme. So even though he was all about saving as much as possible, he did not hesitate to spend money on car services. In today's terms, the cost involved to replace or fix an engine due to failure caused by poor maintenance policies can easily be from at least a few thousand rand to about R200 000, depending on the extent of wear.

One of the main causes for failure can be attributed to lubrication. Often, this is due to incorrect lubricants used or lubricants that do not meet the required specifications. A lubricant that is past its useful lifetime can also be catastrophic, both on your engine and your wallet, possibly compromising the warranty. The first mistake that I avoid when buying engine oil, is to purchase the cheapest lubricant possible.

Cheap is *really* nasty

A good example is an investigation by an Original Equipment Manufacturer (OEM) into vehicle breakdowns in one of our neighbouring countries. This story was told to me by one of my associates a year or so ago. Special delegates from the OEM were sent to determine the cause of an unusually high number of breakdowns. My associate by chance identified their problem for them. When he went into a supermarket, he noticed an unfamiliar brand of engine oil sold at a very cheap price. Naturally it leapt off the shelves at an alarming rate and, unsurprisingly, this was also the root cause of the engine failures.

So, the potential savings on an engine oil might be about a R100 if you take a cheap option. If your car is then serviced four times a year, you're saving about R400, until you have an engine failure, in which case your small saving bears no resemblance to the cost of fixing your engine or buying a new car.

The second problem is: Can the buyer believe the specifications that are listed on the label? How do we know if the oil you buy really complies with the performance the label claims? In the UK and USA, there are special governing bodies to regulate the lubricant quality, and to verify that it meets specifications it claims to comply with. Luckily for me, I am working in the lubricant field and have access to colleagues and associates who I can contact to verify a lubricant's quality. Unfortunately, the average consumer must simply trust the dealer they are buying from.

I have heard accounts of used cooking oils, used engine oils and straight base oils that are bottled and labelled which are then sold as formulated engine oils. This therefore highlights the necessity for South Africa to have a similar system in place. It would not only protect the consumer, but it would also protect the suppliers and blenders who produce quality products.

If we move away from engine oils and look at the lubrication requirements at a plant or a mine, the same principle applies. To replace equipment or fix it, not only eats away at the maintenance budget, but also increases down-time. In South Africa, we are all familiar with a specific downtime known as load shedding. Suddenly, a saving of a couple hundred rand or a few thousand rand on lubricants can escalate into costs of millions of rands.

Destroying your maintenance budget

So, if we apply proper maintenance strategies, we essentially will save money. The key is not to save money on the lubricant. In selecting the appropriate lubricant, the first and most obvious step is to consult the operating manual of the piece of equipment which normally tells you which oil to use. It is tempting to only notice and compare the price of lubricants and go for the cheapest option, but it can very easily destroy your maintenance budget.

It is therefore important to remember that oil is not just oil, but it is a careful blend of base oils with additives and balanced to achieve a specified performance. The higher the performance of the oil, the better the quality of the base oil and additives used in the formulation. This is apparently not a very well-known concept as a fellow student once commented to me while I was a post graduate student: "Why not just add more oil?"

So, to conclude, cheap lubricants are not cheap, but very expensive. The cost to replace or fix broken components dwarfs the small amount that is saved by going for cheaper lubricant options. It is also essential for South Africa to have a governing body to verify the quality of lubricants on the market, to both protect the consumer as well as the producer of quality goods.

Howard Benadé, South African Institute for Tribology Committee Member

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One Response



Vernon Benjamin

24 Mar 2022 at 2:59 pm (<https://samemechanicalengineer.co.za/how-expensive-are-cheap-lubricants/#comment-22>)

says:

I fortunately live in a country where what the Standards stated on the packaging, is really what the oil complies with. By reading the car owner's manual, I can know what Standard is required