



# TECHNICAL BULLETIN

## Picking the right engine oil?

Issue: November 2014

When we change our engine oil it can be daunting to walk into an auto store and be faced with a wall of products of various brands, oil types, different viscosities and of course many different price points. Many people have no idea what product or type they should be pouring into their engine and the wrong choice these days can lead to an expensive repair for not using the right type product.

So if we decide that we are going to do our own servicing, what should we be looking for and what considerations should we make before purchasing an engine oil?

Some of the main considerations –

- **Firstly – Are we driving a Petrol / LPG or Diesel fuelled vehicle?**

Why is this important? Petrol and diesel power plants generally require different types of oil additives to protect them and perform to the standards for which they were designed. Some engine oils have both petrol and diesel specifications but some don't and some engines such as diesels equipped with a diesel particulate filter require specialised additive packs and must meet specifications as outlined by the manufacturer.

- **Viscosity – Do we know the correct viscosity to buy for our engine? i.e. 10W-30, 15W-40, 0W-20**

These numbers are confusing to most people. Basically speaking, the lower the first number, the faster the oil will pump when cold and the higher the second number the less the oil will thin out when at operating temperature. Manufacturers generally specify or give an indication of the correct viscosity to use or a selection based upon the ambient temperature in which the vehicle operates. Newer type engines such as those with multiple overhead camshafts and multi valves generally require lower viscosities i.e. 5W-30, whereas older, larger capacity, pushrod engines may require a higher viscosity i.e. 20W-50. Picking the correct viscosity can improve fuel consumption and long term engine protection depending on the environment in which the engine operates.

- **Specification – Does the engine or vehicle manufacturer specify a particular international specification for the engine oil such as an API, ACEA, JASO or ILSAC specification?**

Vehicle manufacturers generally specify a minimum standard for the oil that should be used in their engines to provide them with the protection they need to operate correctly over the life of the engine. Engine oils and the additives used in them have improved significantly over the last two decades. The later the specification, the better the protection, cleanliness and sludge resistance the oil provides. Specifications will generally be shown in the owner's manual and may read something like use an API SL or ACEA A3/B4 specified oil. Particular attention needs to be paid in this area with late model vehicles as manufacturers will specify a particular standard for some engine types. The use of the wrong or a lower standard product than what is recommended could affect the engines performance and void warranty in some cases.

- **OEM – Does the manufacturer specify that the engine oil must meet either their required standard or that it requires their OEM approval?**

Many manufacturers worldwide, have their own engine oil standards and will only specify oils that meet and are approved by themselves as meeting their OEM requirement. Using an oil that that does not meet their specification and or is not approved can lead to warranty being voided if something goes wrong with the engine. Again, the owner's manual generally provides details of the oil that is needed. Examples i.e. Mercedes Benz, BMW, Volkswagen and General Motors have specific approvals for their petrol and diesel engine oils. If your vehicle requires an OEM approved product, approvals are generally specified on the products packaging label.

- **How do you use the vehicle?**

Is the vehicle a day to day traveller? Does the vehicle do high mileage or low mileage? Is the vehicle used to tow? What climate does the vehicle normally operate in? These and other questions can help determine the type of oil put into the vehicle. For instance, if the vehicle tows heavy trailers and is constantly under load, maybe a higher viscosity will provide better long term engine protection. If the vehicle operates in very cold conditions or fuel economy is a priority, a lower viscosity may be needed. This is a consideration that should be used when picking the correct viscosity for the vehicle. If it is used very infrequently such as a vintage or classic vehicle, you may wish to pick an oil that has a storage additive as part of its additive package.

- **Mineral, Semi Synthetic or Full Synthetic?**

What type of oil should you buy for your vehicle? What's the difference? These are the base oils used for the engine oil. All three type of oils have their benefits for particular purposes and are available over a wide range of viscosities and specifications. There will generally be a price premium between the types with synthetic being the most expensive. Some manufacturers will recommend a synthetic oil and some will recommend a mineral type oil depending on the engine and application. You should pick an oil that best suits your application.



**PENRITE OIL COMPANY PTY LTD**, 88 Lewis Road, Wantirna South  
Victoria AUSTRALIA 3152, ABN 25 005 001 525  
Enquiries: Phone 1300-PENRITE (1300 736 748)  
Fax: 1800-PENRITE (1800 736 748)  
International: Phone: 61 3 9801 0877, Fax: 61 3 9801 0977  
New Zealand Ph: 0800 533 698, Fax: 0508 736 748

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United Kingdom and EU Ph: +44 (0) 1594 562357, Fax: +44 (0) 1594 564234  
Website: [www.penriteoil.com](http://www.penriteoil.com), Email: [penrite@penriteoil.com](mailto:penrite@penriteoil.com)



# PENRITE

- **Pricing**

Oils are generally priced according to their type and specification. They are also priced according to the quality of the base oil and additive packs used in them. There can be price differences depending on whether they are imported or blended locally. Locally produced products can have a good price advantage over imported products whilst providing the same or better specifications than the import. Locally produced product can also be blended to suit local conditions, climate and vehicle types used in that region. No matter whether the product is imported or locally made, cheapest is generally not the best option for quality of base oils and additive packs. When purchasing an engine oil, specification, viscosity, OEM approval, recommended oil type are far more important criteria. If it costs an extra \$5, \$10 or even \$20 more, then that's a cheap price to pay to protect your engine. An engine replacement due to using low quality oil will cost you up to a 1000 times the difference in price between the recommended type and the cheapest price.

So to summarise –

- 1) What Fuel type?
- 2) What Viscosity do you need?
- 3) What Specification do you need?
- 4) Does the vehicle require an OEM approved product?
- 5) How do you Use the vehicle?
- 6) What Base oil type is recommended?
- 7) What oil best fits the specifications and price range you want to use?

Of course, if you choose Penrite, we provide a complete range of lubricants & coolants, including OEM approved products for most vehicles and types. At Penrite, we blend our lubricants with the best quality base oils and additive packs available to protect your engine in all conditions.

Penrite provide both an on line and in store recommendation guide with the correct product for the correct application. Click on the links below to be directed to the Penrite lube guide.

[Click Here](#) to visit the Penrite Recommendation Guide, which will ensure you receive the correct oil for your vehicle

[Click Here](#) to visit the Penrite Pre-70's product guide.

Applications are also available for both Android and I-phone and are free to download to your mobile device.



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Enquiries: Phone 1300-PENRITE (1300 736 748)  
Fax: 1800-PENRITE (1800 736 748)  
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New Zealand Ph: 0800 533 698, Fax: 0508 736 748

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**United Kingdom and EU** Ph: +44 (0) 1594 562357, Fax: +44 (0) 1594 564234  
Website: [www.penriteoil.com](http://www.penriteoil.com), Email: [penrite@penriteoil.com](mailto:penrite@penriteoil.com)