





PENRITE

Products such as Penrite Engine Flush are NON – SOLVENT based and use similar chemistry to those in engine oils to remove engine contaminants when the oil is drained.

Engine Flushing is done prior to changing the oil. Pour the contents of the engine flush into the crankcase with the old engine oil still in the motor. Start the engine and let it idle for at least 10 minutes with the engine at normal operating temperature. This is all it takes to clean the engine.



Engine Sludge is a major cause of motor failure and can be caused by –

- Skipping service intervals
- Poor quality oil
- Wrong specification oil
- Poor oil filtration
- Oil oxidation
- Overheating engines

Newer specification oils and engine flushes prevent sludge formation and are designed to meet extended life oil change intervals.

Changing the Oil

Once the engine has cooled down from the flushing process, *(Do not change oil immediately as engine oil can get to +100° C which can cause severe burns if it comes in contact with the skin)* arrange the catch pan and tools under the vehicle. Locate the sump plug for the engine. This could be hidden by undercar metal or plastic guards which may have to be removed first.



Sump Guards



Sump Bolt

Once the sump plug is accessible undo and allow the oil to drain into the oil drain pan. Whilst the oil is draining, remove the oil filter with an oil filter removal tool if it is a canister type or remove filter cover and extract paper element filter if it is a cartridge type. Install the new cartridge or filter canister as per instructions from the manufacturer. For canister type, these generally have a rubber seal around the mating surface to the engine. This should be lubricated with a film of clean engine oil prior to installation. Clean the engine surface where the filter sits with some degreaser on a rag to ensure a clean and smooth contact surface. Install filter and do up hand tight, do not over tighten as this can damage the seal and cause leaks.



Canister type oil filter generally screw on and off

Cartridge type filters are housed inside a permanent enclosure



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Once oil has drained from engine, clean around the sump plug area with some degreaser on a rag. Install new sump gasket on sump bolt and re-install sump bolt. Some vehicles require a new sump bolt each service, please check if your vehicle requires this prior to servicing. Do not overtighten the sump bolt, use the correct torque as specified by the manufacturer. It is very easy to strip the threads on an engine sump and expensive and time consuming to repair.



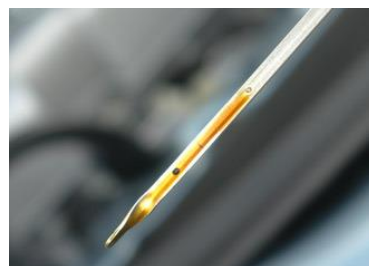
Replace the sump bolt gasket each time you change the oil.



Remove old oil and tools from underneath the vehicle and proceed to add new engine oil to the motor via the engine oil filler. We suggest that you check the vehicle service capacity prior to filling, so as you know approximately how much oil the engine should require. Use a funnel or Penrite pouring spout to pour your new oil into the engine. Once the correct amount is added, replace oil cap and start the engine. Let idle for a few minutes to allow the new oil to circulate and fill the filter. Stop motor, wait for a few minutes and then re-check the oil level with the vehicle dipstick. Add oil if needed, do not overfill.



Use funnel or spout to avoid spillage and check levels with the engine dipstick



Other

Sump bolts can come in differing types. They may have a normal hex head that can be undone with a socket or a spanner or they may have a torx head design that needs a special tool to undo. Make sure you have the correct tool and size before starting.



Drain Times

Some vehicles such as Ford PX Ranger and Mazda BT50 do not have self-priming oil pumps and therefore their engine oil needs to be drained and re-filled before the oil pump completely drains. We recommend that the factory service instructions be closely followed if servicing one of these vehicles.

Trade Professionals

Not everybody wants to change the engine oil in their car. There are many skilled trade professionals in the automotive industry that perform these tasks each day as part of their servicing procedures and vehicle maintenance operations. We suggest that if you are not comfortable changing engine oil or do not have the necessary tools required, to use a Trade Professional Workshop or Service Centre. Penrite will be happy to assist its customers to find a Penrite Approved Workshop that perform high quality automotive servicing, maintenance and repairs.

The Right Oil

At Penrite, our motto is "The Right Oil for the Right Application". To make sure you have the correct oil for the job, use the Penrite on line [Product Guide](#), Smart Phone based Net Lube app or one of our instore touch screens. The Penrite Technical Assistance, please call 1300 PENRIT (736 748).



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