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THREADS AIN'T THREADS

Just like the old ad claiming “Oils Ain’t Oils” just try matching an existing bolt or stud with a suitable nut. Anyone attempting to do this is in for an interesting time.

Bolts and nuts are not exactly a new development – (thanks Archimedes and others). One might think that a thousand or two years on, there might be some common standards. In fact, there are, Acme and Whitworth were among the first to establish standards but this was not good enough for the engineering purists so several other “standards” followed and all are different to each other.

UNC, UNF, Metric, Whitworth. BSF are just the starting categories and there are variations even within each category. Also, we have not even started to think about the variations in the threads that apply to tubing and whether you need brass, steel or high-tensile. The choices will be daunting.

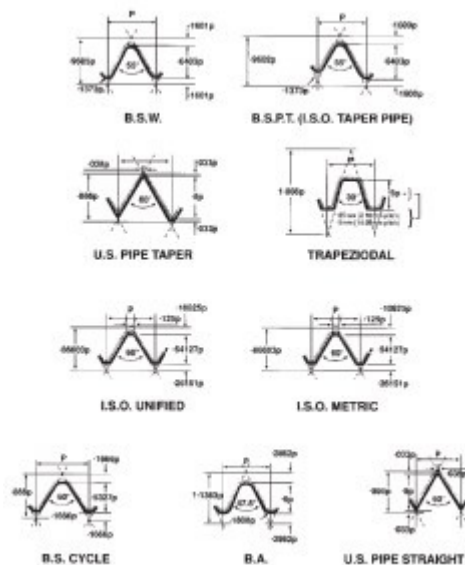


Image source: Newman Tools.Inc

This is not the place to attempt to define and explain each of the different standards but for simple minded folk struggling with Land Rovers, the following might be helpful. For starters, forget finding suitable nuts at your friendly hardware store. Industrial suppliers are probably better but even there, the choices will either be limited, or comprehensive enough that it will make a selection even harder. The best bet by far is to ask an experienced Land Rover repair shop, explaining precisely what it is you are trying to do and on what vehicle model and year.

Here are some examples:

Radius arm chassis ends: Most are M20 but early models have a different end-shaft diameter to later models – measure the actual diameter with a calliper and consult an experienced Land Rover parts supplier to ensure you get the correct nut to fit onto the shaft

Brake lines: These may be imperial or metric, depending on the model and age of the vehicle. 3/8 is easily confused with 10 mm. They also “mate” differently. ISO have a “bubble,” DIN has a “mushroom” and metric (even some imperial fittings) have double flares. Just to make matters worse, lines with metric threads on one end and imperial on the other are not uncommon. Unless you are stuck in the bush with a broken brake line and have no option, do NOT experiment – get the vehicle to a brake specialist immediately.

Spark plug threads: The poms actually got this right by sticking with one standard across all Land Rover petrol engine models. Smile, because there are actually approximately seven variants like 6X1, 8X 1.25, 10X1.25, 12X1.25, 14X1.25 and 14X1.25 and all have the same nominal diameter. Therefore, unless some genius had swapped your old Land Rover engine for a fire-breathing Yank V8, you should be OK with a “standard” plug size.

Pneumatic and hydraulic threads: Now let’s look at pneumatic and hydraulic threads – the kind found in air conditioning, power steering and so forth. All are equipped with specific port threads that may be BSP, NPT, PT or G port threads. Also, a thread may be tapered or parallel. NPT/NPTF, BSPT, and Metric Tapered are tapered threads and seal by metal-to-metal contact. Parallel threads usually need an o-ring or thread tape to seal.

The moral of the story is (as usual) do your homework first by identifying the model, year and VIN of your vehicle before contacting a specialist Land Rover shop to obtain the correct part you need..