



WHEELS-ALIVE!

www.wheels-alive.co.uk

Festive Reflections... on Gallons and Litres

Published: December 26, 2019

Author: Dave Moss

Online version: <https://www.wheels-alive.co.uk/festive-reflections-on-gallons-and-litres/>



Kim thinks in gallons when refuelling and driving his old Austin – although fuel has been



[sold in litres in the UK for nearly four decades...](#)

A festive Noggin and Natter – by Dave Moss.

If you're seeking to exercise the mind a little after days spent eating drinking and being suitably merry... what better festive feature could there be than liquid measures?

In the 21st century, most of us encounter gallons only as a measure on a trip computer's fuel consumption readout – but next time you press that mpg button, pause and reflect: There is a very lengthy history indeed behind the British gallon. In the 17th century, it was already a very convenient – if informal, and definitely variable – liquid measure, having existed for at least 300 years. As a result it had become inextricably intertwined with the transport of alcoholic beverages, where, until the 1800s, a gallon of ale was usually accepted as about 282 cubic inches of liquid, with 32 such gallons contained in a barrel. However a barrel of beer (definitely not the same thing) would at that time contain 36 gallons. If you think that sounds confusing, best sit down before reading on..

Alongside the liquid gallon, for hundreds of years certain dry goods were also customarily measured in gallons, interpreted differently depending on exactly what was being measured, and regional custom. Such goods might include anything from cider apples to carrots, so perhaps the phrase “miles per gallon” originated to describe how far horses could travel – if they received a gallon sack of feed per day...

An early attempt to standardise some commonly used British measures came in 1696, when it was formally decreed that a gallon of beer or ale would henceforth comprise 282 cubic inches of liquid, with 34 gallons of either in a barrel. This ruling, however, excluded wine: Having had its own rules for at least as long as ale and beer, the ‘Queen Anne’ gallon became the first official wine standard, set at 231 cubic inches in 1707 – incidentally the year the Queen's kingdoms of England and Scotland were combined, forming the sovereign state of Great Britain.

The eighteenth century saw things getting, well, complicated. The first mathematical



definition of a British liquid gallon (and many other inter-related volume and weight measurements) emerged in a vast, nowadays near-unfathomable catalogue of “Imperial” standards introduced by an 1826 Act of Parliament. This set the first calibrated British gallon volume at 277.274 cubic inches of liquid, being the space occupied by 10 avoirdupois pounds of distilled water, weighed at 62 degrees Fahrenheit, with barometric pressure at 30 inches of Mercury. This definition has been changed at least twice since 1826 – to improve accuracy.

With a gallon originally representing varying amounts depending on the goods involved, and its “official” liquid volume having changed even before 1826, evidence suggests that, in the nineteenth century, citizens suffered from weights and measures fatigue. Their preferred way of dealing with the resulting confusion appears to have been to ignore official diktats, as indicated by time-honoured traditional measures remaining in wide use. This certainly applied to the 1707 wine gallon, and the tradition of measuring certain dry goods in what we recognise today only as liquid measurements also continued. For instance, as late as 1872, Gulch’s “Literary and Scientific Almanack,” asserted that: “In Devon, a sack contains 40 gallons, and a bag 16 gallons – in some parts 32 gallons.”

From 1826, various existing traditional liquid quantities were standardised, which brings us to the Firkin and Hogshead, still somehow colloquially – even comically – familiar today, despite effectively falling into disuse long ago. From 1803 until 1826 there were officially 8 gallons in a firkin of ale – but 9 gallons in a firkin of beer. After 1826, probably with sighs of relief in ale-house cellars everywhere, the firkin’s volume was set at 9 gallons irrespective of the contents, being one quarter of the newly standardised 36 gallon barrel. At the same time half a barrel was named a kilderkin. Don’t even ask...

After 1826 dealers in bulk quantities of spirits, cider, vinegar or honey grappled with various new standards, seemingly designed solely to cause them mathematical grief. There were now $26\frac{1}{4}$ Imperial gallons of any of these commodities in a barrel, and 35 gallons in a tierce... while 15 gallons comprised a rundlet, $3\frac{1}{2}$ of which (or 2 barrels) filled a $52\frac{1}{2}$ gallon hogshead... a quantity unrelated to a 54 gallon – or barrel and a half – hogshead of ale, beer



or wine.

In closing I should point out that 1826, in theory at least, brought the introduction of Imperial spirit measures, some of which formed the basis of pub measures until the 1960s. The smallest of these was the minim, twenty of which made up a fluid scruple – with 3 scruples to a dram (or drachm). Eight drams, 60 Minims or 480 scruples comprised one fluid ounce, five of which amounted to a gill, noggin, or quarter of a pint.

Though Imperial standards were set for both liquids and dry goods above a pint, as we've seen custom and tradition prevailed until the late 1800s, after which dry products were increasingly measured by weight. Imperial liquid measures endured well into the 20th century – notably 2 pints making a quart, with 4 quarts and 8 pints in a gallon. These being the only suitable smaller quantities available to Britain's embryo motor industry in the 1880s, they became established as water and oil capacity measures in British-built cars until the late 1960s, when legislation unceremoniously abolished most Imperial measures as metrication loomed large.

But the gallon – and the mile, with its own complex history – live on, occupying a special place in British history – and British *motoring* history. Fuel hasn't been sold in gallons for nearly 40 years, while the mile eschews any direct relationship with the upstart kilometre... Though today's trip computers switch effortlessly between mpg and l/km, somehow, even in today's metric world, for most Britons on their daily drives, only the miles per gallon figure really makes sense...

References:

<https://www.nottingham.ac.uk/manuscriptsandspecialcollections/researchguidance/weightsandmeasures/measurements.aspx>

<https://www.museumsassociation.org/download?id=77607>

Wine gallon history <https://sha.org/assets/documents/Metrology.pdf>



Books:

Measure for Measure – R. A. Young and T. J. Glover, (Blue Willow, 1996).

The Schoolboy's Pocket Book – Ed. Carlton Wallace, (Evans Brothers) pub 1951.

Gulch's "Literary and Scientific Register and Almanack" Published 1872.