



BOLTS AND NUTS

Minis are in a very lucky period of history. Most bolts and nuts are BSF, British Standard Fine. So as Mini owners we may gloat a bit. However if we as Mini owners also have other cars we may not be so lucky and as goes history so goes the future.

In 1841 a Brit came up with "A UNIFORM SYSTEM OF SCREW THREADS" and it seems the Whitworth was born. As wrencher's we are primarily concerned with the wrench that will take of the offending fastener. The logical Brits came up with a, for the time, correct size head for each bolt diameter.

A bolt that was 1/4" dia. had a bolt head that was deemed correct and they labeled the wrench a 1/4". The 1/2" dia bolt was fitted with a wrench labeled 1/2" that matched the correctly engineered head for a 1/2" dia bolt. If one only was dealing with this logic everything would be clear. A problem arises latter when we try to fit the American SAE wrench sizes to the Whitworth wrenches.

SAE wrenches as we all know measure the opening ie. a 1/2" wrench is 1/2" wide. We don't really know how wide a 1/2" Whitworth wrench opening is. But now we find that Whitworth wrenches have two sizes on them. Seems in 1841 when a horse only developed one horse power and the motor cars didn't really develop much more, weight of the vehicle wasn't a really big thing. But when the horse power race began, weight became a thing to watch, so said Brits made the bolt heads smaller by one size. Therefore, on the new BSF bolts a 1/2" bolt had a head that was previously on a 7/16" Whitworth bolt. They then labeled a wrench 1/2W 9/16BS. Clear?

But somehow the BSF heads came to matched the SAE sizes as on Minis therefore lets see, a 1/2" SAE wrench should fit a Whitworth bolt of some size or other but if I remember my MGTD days no SAE wrench fit any Whitworth bolts. So what am I missing?

Not to worry Minis don't have Whitworth. But what are the other surprises out there. How about the new Torx, or the old notched ring nut that seemed to only be able to be removed with the hammer and screw driver method. Which by the way the only thing that I feel a slot type screw driver is good for unless removing a goodly portion of skin from the left hand is appropriate use for a tool. 12 point heads are becoming the rage. Do you know the difference between Phillips, a Reed and Prince, and a Pozidriv. They don't really interchange. How about a tamper prof torx or a clutch head fastener. What about a tri-wing or a Scrulox. My Japanese cars and Italian ones were heavy on 12mm, and 14mm, but my German cars like 13mm wrenches that is unless they are internal wrenching fasteners.

On other jobs I have had to resort to bastard files, and hermaphrodite calipers. I have wondered why a two legged angled tool is called a square. I am right handed, can I use a left handed drill bit. Why would anyone want a rubber hammer. I some times think that

they design a wrench and then build a car to fit it. I remember the small rubber heater hose up under the dash of my Z that had the hose clamp put on the hose while the heater box was on a bench. Once it was in the car the only way to get at the screw slot in the clamp was to remove the windshield and drill a hole in the top of the dash. But the only thing that is critical to remember is which end of the screwdriver to hit with the hammer.

But don't use the rubber one. The hammer that is, I don't think they have come up with a rubber screwdriver yet. Well maybe they have. I have seen a rubber screw.

Frank Cunningham 1985