

Just like this one here.

The markings are a little harder to see because of its age and the layers of paint, but they are there so you know what it is.



Here is a bolt supplied with headers to bolt them to the head of your motor. In this case they are a grade 5 UNC bolt.





This is a grade 5 UNC bolt that is used to hold an inlet manifold to a Ford Cleveland engine.



This is a grade 8 bolt. It is a standard Cleveland engine bolt that holds the cylinder head to the engine block.

Another strong bolt here, this is one of the grade 8 bolts used to hold the drive plate to the end of a Ford Cleveland crank shaft.



If you want some really strong bolts [I am going to give ARP a free plug here] go and buy these.



Yes they might seem expensive but you put them in places in your engine where you do not need any failures. You know the ones, the type of failures that lead to a complete and expensive stuff up that make the cost of the bolts likened to chucking out old milk that has gone off in the refrigerator.

The packet shown here is a head stud kit that I purchased for use in my street 302 Cleveland engine.

I use them because a stud with a nut gives better hold down characteristics on your head gasket when you torque them up and ARP state they have good yield characteristics, meaning they are less likely to stretch as much as a standard grade 8 bolt. A fella where I used to get my heads machined recommended to me to use them, some 20 years ago now. He found that it stops the water from the

water jacket pass through holes in the head seeping toward the cylinder [typical blown head gasket]. If you are inclined on the next engine you pull apart have a really close look at space between these holes and cylinder on both the head and the block, you can usually identify the problem by the rusty water marks etched into the cast iron. I have seen this on most engines I have pulled apart since being told this, not that it is really that many but hey if I can prevent a problem, I just do it.

You might have guessed I do not want any head gasket problems in my engines, especially since the heads and block have been machined on this one to give me a 10:1 compression ratio as opposed to the sluggish standard 8:1 original. The only problem with a head stud kitted engine is that if it is a full fender car the engine has to come out to do any work on the heads. I figure if I do my best to build it right in the first place the engine does not need to come out.

The reason I have chosen to tell you this little story is because it clearly showed me the differences in the types of bolts you can choose. It was this snip bit of information that I took in and retained that made me take notice of the different bolts types, from then on.



Shown here is the part of the front beam axle suspension from my hot rod project. All the components are aftermarket all supplied from 'Rod City Repros'. Look at the main bolts that hold the front radius rods to the batwing. Oversized for their application 5/8 grade 8 UNF bolts



Here is the steering box – held in by grade 8 UNF bolts



Here is the disc brake caliper bracket held in place by grade 8 UNF bolts.

I have used these pictures to illustrate a point here, you can see I have mixed and matched second hand and new parts but I don't skimp on the bolts. They are a relatively low cost item.

Next time you hit a pot hole at speed on the highway give a thought to the job the high strength bolts you built the car with just did and thank them for not breaking and allowing you to crash back there.

Here is a perfect example of a good use in your workshop for standard grade 4 bolts. You will find them typically in the assembly of some of your workshop machinery.



The example above is on a finisher, while the example below is a pedestal grinder. There are no head markings on these bolts and they are installed in a relatively low stress applications.



This picture below shows a hand operated bar bender with the handle fixed to it using two metric 4.8 low grade bolts.



I think I have covered enough for now, which leads me to the last couple of photos that show you a decorative polished stainless steel bolt to replace the standard fender bolts typically found in 60s and 70s GM and Ford cars.

All of the above information will allow you select the size and type of decorative bolt you need to allow you to order them on line. However we do have to be careful of where we place our stainless steel bolts because the strongest stainless steel high strength bolt is just shy of a grade 5 bolt.



About the Author



My name is Ron Smith, that's me in photo. Yes it's probably not my best photo, but hey that's what I look like when I am working in the shed on a cold Melbourne winter's weekend, 'what can ya do?' When I was in my late teens and started hot rodding my first car, I made a lot of mistakes, so I thought I could give something back to our hobby by offering up some information like this, that I have learnt along the way to help others. I am still learning so I consider any information here as work in progress that can be refined, so if any one has any input they think could be included here please send me an email to ron@kustombitz.com.au .

One of my favorite sayings is that "*the more I learn, the more I realize how little I know*". This is opposed to my dad who always says "*he has forgotten more than I know*".

You know the good thing about a document for download on the internet is that the photos don't cost you anything to produce and you don't have to worry about printing costs. I have tried to include as many photos as I can because a photo can illustrate things much better than my poor writing can ever describe it. You might have also guessed after reading this I am not a literacy genius..... hell you got for free what more do you want? ☺

So what's holding ya' back, get down ye old shed and get that there project goin'.
Happy Trails

Ron Smith