

## from the Morgan Oasis Garage

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In many articles written over the years I have often mentioned GRADE 8 fasteners, and I see that I was giving strength figures that were way off. Now I am going to write a few words to clarify the phobia I have about "hardware store" fasteners, and I will add the correct numbers for GRADED fasteners.

This past fall ('01) I had to move a valve guide up into the cylinder head of a Triumph TR4 engine, because the valve wasn't closing completely. It was hitting the bottom of the valve guide before it could seal the combustion chamber. Since I wasn't sure of the exact length needed, I bought a 4 inch bolt ( at a hardware store) that had the threads all the way up to the bolt's head. The head of this bolt was smooth. The hardware store had GRADE 8 and GRADE 5 fasteners, but none with thread all the way up to the head, so I had to go with the ungraded bolt. Then I made a rig to move the valve guide up into the exhaust port, using this bolt, washers and a 3/4" socket on top of the cylinder head to pull against. Just as the guide began to move up, the bolt stretched "right half in two" and came away in my hands. Then I found a GRADE 5 and it was that bolt, much stronger than the smooth head "hardware store" quality bolt, that did the job. The GRADE 5 bolt did the task, that the NO GRADE couldn't. This was "the moment of TRUTH" for me, proof that smooth head bolts will let you down when you need strength, not excuses.

For a car that is going to be used on the road, the fasteners that attach the front sub-frame to the chassis, the rear shock mounts, the rear springs, anything on the front sub-frame that is bolted should be GRADE 8. One could say anything that's fastened to the chassis ought to be GRADE 8. If you think we're talking big money, that is NOT the case. There are probably less than 40 fasteners here, and you just know there is no way these fasteners are going to fail. That's worth twenty or thirty bucks.

Racing builders use fasteners that are one step higher than my beloved GRADE 8s. These are aircraft quality, or A.N.s, sometimes called Air Force-Navy 'cuz of the A.N. designation. These are probably another 25 percent stronger than the 8s, and 10 times harder to find. A bunch more spendy too.

I don't believe it's possible to determine what kind of fasteners are on a particular Mog. Lots of them have had rebuilds or partial rebuilds. It would literally frighten me to wonder what was holding that chassis together after a few at-home, shade-tree repairs. I had a Morgan here once that had been hit hard on the left front. The body shop that repaired the fender and cowl did nothing to the front sub-frame which was bent back at least a couple inches. The paint job was just dandy, but that front end might kill a guy.

Here is a list of GRADED fasteners if you think re-fastening your front end might save your rear end some dark and stormy night.

SAE Grade Code Markings				
SAE 0-1-2	SAE 5	SAE 6	SAE 7	SAE 8
				
DESCRIPTION	GRADE	MATERIAL	STRENGTH	
No lines, unmarked Unknown quality	0, 1, 2	Low carbon steel	65,000 psi	
Three lines, automotive grade	5	Medium carbon steel	120,000 psi	
Four lines, automotive grade	6	Heat treated carbon steel	140,000 psi	
Five lines, rarely used	7	Medium carbon alloy steel	140,000 psi	
Six lines, best commercial grade	8	Heat treated alloy steel	150,000 psi	

## still more from the Morgan Oasis Garage

Friends

The distributor I didn't get with my original Morgan pile was replaced with a \$25.00 swap meet distributor. When it was finally time to start the engine, I cranked it perhaps six times for thirty seconds or so. Nothing at all was happening. I pulled a spark plug and cranked some more. No spark. I suppose this is what I've been waiting for, 'cuz I really wanted to install an electronic ignition. I just didn't want to spend the hundred scoots.

I called Tom Eller, a Triumph collector, professional wrench, and brother of an old time Seattle Morgan Guru, Pat Eller. Tom says "No question, get an Ignitor". Fred Sisson, in his "Notes From a Morgan Garage" recommends them as well. I called Pertronix at 800-827-3758. They won't sell me the "Ignitor", but give me a number for Blanchard Auto Electric in Seattle. Blanchard's catalogs have nothing older than '78, and can't look anything up, although they're friendly.

Victoria British has an "Ignitor" for a Lucas 25 D 4 distributor, positive ground or negative ground and they want \$ 99.95 , and \$15.75 to ship. I order one. It takes 9 days. Lenexa, Kansas to Hoodspott, Washington. UPS needs fresh horses.

It is easier to install than a point set, 'cuz there's no point gap to set, and no worrying about "grounding the points". Remove the old point set, condenser and the terminal bush and lead. Then install an adapter plate where the point set used to go. The "Ignitor" module goes onto the adapter with two small nuts. Next the magnetic sleeve slips over the distributor shaft. Now a black wire and a red wire go on the coil and its a done deal, Neil.

The Ignitor's instructions say that a four cylinder engine requires a coil resistance of at least THREE Ohms. Measuring across the coil's terminals I got a bit over ONE and A HALF Ohms. This means a ballast resistor must be added to the system. I call around and find one only seventeen miles away, then I found one in a box I was clearing. When this "found" ballast resistor is connected to my new chrome Accel coil the Ohms measurement is exactly the required - THREE Ohms. Home free, on the nose of the correct amount. I did have to make a simple bracket for the ballast resistor, and there is a drawing of that on the illustration.

The Ignitor's part number is LU-142 A. And that number is for a NEGATIVE ground Triumph TR 3-4 engined Morgan Plus 4. With that number even Blanchard Auto Electric could find one. I'd be willing to bet the positive ground version is numbered LU-142 B, or something close enough for a polite counterman to find, when he has the time.

Now here's the rest of this adventure. I had to call the manufacturer to confirm the electrical connections, and now that I know the correct part number would they please give me a retailer's 'phone number so I can see how much I overpaid at Victoria British. Summit in Akron, Ohio (800-230-3030) has Ignitors for \$ 71.69 plus \$12.00 to pack and ship. Blanchard Auto Electric in Seattle, WA (206-682-2981) has them as well, at \$ 67.10 plus shipping. Cuthbert may be getting long winded but I think I just saved you fifty scoots on the hot set-up for your Moggie's ignition.

## The Alaskan Highway Experience - August 2003

from Ken Miles

One of our objectives in life for several years now has been to drive the Alaskan Highway (the 'Alcan') in a Morgan. Preliminary planning is now done.

Leave Vancouver in early August, 2003 and drive to Prince Rupert through the BC interior. Catch a ferry from Prince Rupert for two days and one night of cruising through the interior waterways of south east Alaska and arrive in Haines, Alaska. From Haines, head to Anchorage and then Fairbanks. Leave Fairbanks and pick up the Alcan Hwy through Whitehorse, Watson Lake, Fort Nelson, Fort St. John and end up in Dawson Creek. Turn southwest and proceed through Chetwynd and end up in Prince Rupert. Head west to Jasper and Banff. From Banff, head south to pick up Hwy 3, head west and proceed along the southern route back to Vancouver.

The trip as presently planned is 5,000 miles of very good Morgan driving roads and lots of spectacular scenery. It will take at least 21 days including the ferry ride. And it will be expensive – a long ferry ride, lots of food, lodging and fuel, and of course the inevitable souvenirs and incidentals.

If enough people are interested, we could turn this into a great event. There is reason to believe that three separate countries and two continents could be represented on this drive. If you are interested in joining us, please email me, Ken Miles, at [kengmiles@shaw.ca](mailto:kengmiles@shaw.ca) or write me at 15410 Kildare Dr., Surrey, B.C., Canada, V3S 6B9. (home phone 604 576-8036)