

The Healey Werks

Maserati Rinato

1960 Maserati 3500 Vignale Spyder

We welcome you back to the Maserati Rinato 'Reborn' as the restoration process continues. In the last issue we started the initial inspection process and discoveries of problem areas of the car.

In our initial investigation of the history of this specific car, we found that it was sold to the first owner on June 13, 1960 with body number: 30. This vehicle was originally painted Rosso Alfa with nero leather interior. We are continuing to investigate the full history of 923 and hope to update this information in the next issue of *Viale Ciro Menotti*.



For each update of the restoration of 923 we will select a topic that is of popular discussion and question.

We are often approached with questions, opinions and discussion regarding engine fasteners.

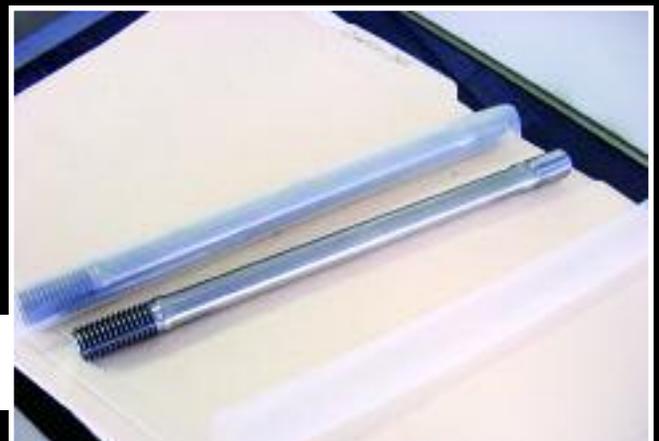
Let's discuss a few points:

A 'true' full engine rebuild means exactly that. It indicates that during the rebuild process the goal is to bring the engine and all components back to or better than original tolerance and specification.

In the course of a full rebuild common components for replacement include (but not limited to) pistons, rings, all bearings, timing components, valves, springs, and guides, etc.

However it is rare when fasteners are replaced. Let's be clear, I do not feel it is necessary to replace all fasteners, but a few critical groups do exist and at the minimum these should be strongly considered for replacement.

Picture showing new and available head stud.





Chassis after assessment and light coat of etch prime to keep from flash rusting.



Chassis after sandblast.

They include:

- 1) head studs
- 2) connecting rod bolts and nuts
- 3) main studs and nuts
- 4) flywheel bolts and nuts

The reasons these parts must be replaced include age, stress, and specification.

All fasteners have what is called torque yield limit. Simply, this means that a fastener will yield a given amount of stretch and repetition before it has become over-stretched, leading to the fastener failing. Age and stress also play a critical part in the life of a fastener, as our engines age, so do the fasteners that hold them together. Add the constant load and stress given to the cylinder head studs, connecting rod bolts, crankshaft, and main cap studs and it is a recipe for catastrophic engine failure.



So when faced with an engine rebuild that can cost in excess of \$20,000, representing parts and meticulously careful assembly, why would anyone shortchange such an important and key element of any comprehensive rebuild?

Send us your comments and ideas for a future topic of discussion. ■

Severe pitting and corrosion coupled with age will surely lead to head stud and engine failure of reused.



Showing excellent condition of engine compartment and front structure.

As the restoration of 923 has progressed we have completely disassembled, cataloged, and assessed the entire project. The body sections have carefully been removed from the chassis structure. Following this removal, all body parts were chemically stripped and the chassis bead blasted.

The chassis and body sections were then thoroughly inspected for rust, corrosion and structural damage. Following this process, jigging and replacement panels and parts can be produced and fabricated.

The body was also straightened and metal etched, then etch primed, then put away until the chassis work is completed.



Newly fabricated rocker panel assembly.



Front nose section with all metal work and straightening completed.



Nose assembly after primer coat ready for re-installation.

Also during these processes the suspension, steering, brakes and various other components have been stripped, blasted, inspected, rebuilt, and refinished. These parts and components are then cataloged and stored until the time when their installation occurs.

The engine was also completely disassembled, inspected, and assessed for rebuild.

Once this was completed, the machine work to the block, head, crank, cams, rods, and various other components was carried out.



Beginning of engine reassembly.



Showing prepared engine block.



Various parts safely stored on designated shelving, awaiting final fitting.



Original Marelli Dynamo after full rebuild, including field coil and armature rewind.

Follow the progress of the restoration in the next issue of VCM. You can also visit the Healey Werks website for additional photos under the gallery of current restorations at: www.healeywerks.com. ■

