

Technical Session - May, 2001

By Dick Fabrizio

This year's annual tech session was hosted by Don Irving at his home in Westminister, MA.

An early threat of showers didn't prevent 11 members from showing for this informative lesson on the right way to rebuild a head. Attending were Jim Guyot, Bob Freerksen, Bernie Yurt, Mark Lupien, Jack Horner, Don Flye, Dick Fabrizio, Don Tremblay, Ira Cohen, Bob Fitzpatrick, and Jerry Catt.

After a bad experience with a machine shop valve job, Don has very skillfully learned all the little intricacies of performing this procedure so that the head will last for many miles. And all this was done right in his own garage using tools that are in any MG hobbyist's tool chest.

After degreasing the head, removal of the carbon deposits from the combustion chambers was done by use of an electric drill and cup brush. The head was steadied in a bench vise with a piece of flat bar stock bolted to the head enabling the head to stand on end to remove the valves. Using a clamp type spring compressor, the valve springs were compressed to a point where the circlip and cotters could be removed and the tension of the springs released so that the valve could be removed. This was performed on each of the eight valves. Next, using a digital micrometer the inside diameter of each valve guide was evaluated, measured and recorded, as well as, the diameter of each valve stem. The valve faces and valve seats on the head were also examined to determine the extent of repairability. By calculation of the differences between nominal, minimum and maximum measurements of the valve stems and guides it can be determined if you should replace them. He then checked the head for warpage using a straight edge. Next, using a 2 lb. sledge hammer and a long bolt and nut, Don drove the valve guides from the head. In this case all new valves and guides were purchased. The new valve guides were pressed in using a 1 ton press (bench top type), using a brass washer to protect the top of the guide and a piece of brass rod stock 5/8" long to use as a stop guide. The new valve guides were then hand reamed to the correct diameter to give the correct clearance for the valve stems. The valve seats were first sanded using a 220 grit, sticky backed sand paper cut into a ring to fit on the valve face. The valve was placed in the guide and the end placed in the chuck of a portable electric drill. Finger pressure was applied to the valve and as the drill turned, it removed all traces of carbon and gave a nice fresh cut for the next step. This was performed on each valve seat. Lapping the new valves in came next by first applying a course grit valve grinding paste, then a fine grit paste until each valve was mated to it's seat. This procedure was also done in the same manner using the electric drill and finger pressure. Finally, using the valve compressor again, each valve, bottom collar, two valve springs, shroud, stem seal, and cap was installed and kept in place by the cotters and circlip.

Simple wasn't it !! This was just a quick overview of what Don covered in several hours. He gave each of us the opportunity to do each step after he demonstrated it. While some of us were performing the different steps, losing and looking for that elusive dropped cotter, etc., Don slipped off to the barbie and did some great burgers and hot dogs with all the fixin's. Then he went back to the garage for his encore presentation of how to drill and install new rocker arm bushings! What a guy! Thanks Don !



