

# Street Performance Enhancements Explained

This issue of Engine Professional features a number of articles aimed at enhancing engine performance. Our definition of enhanced performance is those engine changes that improve performance without giving up street drivability. Too often, street engine modifications are made that too closely resemble race engines and do not fare well for around town driving. We offer a detailed article from Jim Miller of Mid-Lift, Inc. on valve train efficiencies lost because of inattention paid to fundamental setup. Jim gives extensive historical background to support his views on a more effective way to set up your valve train either for a race engine or street performance application.

Dave Hughes, an AERA member specializing in Chrysler high performance engines, talks to us about aluminum versus cast iron heads. Dave gives us a laundry list of benefits for each and sound advice for best application of both materials. Flow numbers are included with Dave's article and links to important flow data.

One of the more unusual articles in this issue has to do with converting GM LS engines from EFI to carburetor(s). In this age of electronic controls, one would think EFI would get the nod over carbs but Mike Mavrigian tells us differently. Carburetors have come a long way over the decades and with contributions from an intelligent and active aftermarket, carburetors have more utility now than ever before.

The balance of editorial content covers valuable information for the engine machinist and builder about how a great deal of performance can be had by paying attention to seemingly small or overlooked areas of

combustion chamber, intake and exhaust port tracts. Joe Mondello shares decades of experience with us and how to achieve these modifications within the grasp of nearly every engine machine shop.

Finally, a section on chassis dyno use by Harold Bettes. Chassis dynamometers are the best way to see how all the street modifications work together to produce horse power. I can attest from personal experience with a Mitsubishi Evolution just how much additional power and drivability can be gained by spending a few more dollars on chassis dyno tuning.

Each article in this issue was chosen to give the reader valuable insight into machining and building tips often not found in the literature. This information comes directly from professionals and leaders of our industry that do this kind of work for their daily bread. AERA is proud to have such depth of experience available to us and offer it to you. This issue is no exception and will remain in my personal archives for future reference. ■



Prior to becoming president of AERA, John Goodman was director of the Advanced Technology Center (ATC) for Micromatic-Extron. The ATC focused on manufacturing honing solutions and studies for OEM engine manufacturers. Testing of traditional and unique honing abrasive systems, coolants, fixtures, tools and software were primary responsibilities of the ATC lab.