

Motorcycle Tech Tip
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ONE STEP AT A TIME

You've bought a new or new to you motorcycle and you want to customize it to make it "yours". Most riders turn to a new custom exhaust system which is the most noticeable custom part you can install at a reasonable price. Keeping in mind that the Keyword is system and the exhaust is just part of that system. The engine is just an air pump and before you can have a goes outta, you have to have a goes inta. Many manufacturers recommend an automatic change of the air cleaner assembly to a low restriction type and re-jetting the carburetor or remapping the fuel injection system as part of the exhaust system installation. There are many arguments for and against free flow and backpressure and most are valid. I don't want to debate them here. What I want to address is the expense of the complete system. Consider this: You may not need all of the above at one time. Motorcycle manufacturer "A" builds a motorcycle for an average use area in the United States which is a mean altitude of 1500 feet and average humidity of 60%. Now you buy a motorcycle from this manufacturer in an area that is 3500+ feet. That motorcycle equipped with a carburetor is going to run rich for that area and one with computer controlled fuel injection will make internal adjustments to the air/fuel mixture for that altitude which in most cases will still leave the engine running a little rich. When new low restriction exhaust are installed the engine will tend to lean out somewhat. I suggest running it for a while, then remove the plugs to check the condition of engine combustion by reading the spark plug porcelain.

- White: Lean condition, not enough fuel
- Tan/Brown: Good, proper combustion
- Black: Rich, not enough intake air or too much fuel

All of the changes may be necessary for proper tuning, just take it one step a time, and you'll know which one actually make the difference in performance.