

## Reducing Valve Noise

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I did a tune-up and it is now running great--except for a slight valve noise...

This is a fairly common complaint. Could be from a couple of sources:

- There may be excessive up and down play in the rocker arm assembly. Especially on the /5s and /6s where they don't have any self-centering rocker arm mounting posts. With time, they can get loose and noisy. When you torque the heads, prior to setting the valves, loosen one set of nuts that secure a rocker arm to the mounting posts. Use a large set of channel lock (water pump pliers) or a C-clamp with two sockets and firmly but not REAL tightly squeeze the assembly together whilst tightening the two nuts. Torque those two nuts to the recommended torque. Repeat with the other side and torque the two nuts at 6 o'clock and 12 o'clock as well. Set valves on that side, go to the other side and repeat. Still have the noise?

- After valves are carefully and properly set, occasionally you get MORE noise! This is usually noted on older but well running bikes. What is going on is that the face of the valve seat is worn. The face is the part of the valve that contacts the valve seat. When the bike is new (or has a good valve job done) the seat face is fairly narrow. There are three angles on the standard BMW set up: a inner cut at 75 degrees, an outer cut at 15 degrees and the middle facing cut at 45 degrees. This latter middle cut is what contacts the valve face. As things wear, this middle cut gets wider. On bikes with lots of miles, this middle cut has worn quite wide. It still seals the combustion chamber well, compression is good or near-good. But, it makes a clattering, smacking noise because of the wide area of contact. When the valves are set, there is enough clearance to allow resonance (noise). Not much to do except do a valve job, or live with it until a top end is really needed. It's basically harmless, I'd live with it until you need to go into the engine for a top end or some other reason.