

THE STRANGE CASE OF THE 1965-67 110 HP (NON-A.I.R.) CORVAIR ENGINES WITH BOTH POWERGLIDE AND A/C

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The 110 horsepower Corvair engine with both Powerglide and Air Conditioning available in the 1964 Corvairs was apparently an entirely satisfactory combination causing no known problems. In fact your author owned a Corvair of this year and combination in the hot summers of Phoenix and encountered no drivability or overheating problems.

So it was natural that when the 1965 Corvairs were introduced, this engine and option combination would be carried forward unchanged into the new models. And so it apparently was.

But late in the 1965 model year, May to be exact, something happened. There could have been some kind of bad news from internal engine testing or even from the field or dealer feedback. But whatever happened, Chevrolet Engineering made a significant change to the 110 HP engine using this combination of PG and A/C. Why? We still don't know. But significant and strange were the changes. They called this a "second design" engine.

This second design 110 HP non-AIR engine now would use the lower 8:1 compression ratio 95 HP cylinder heads. Apparently, prior engines were encountering some detonation problems or maybe dieseling at shut down.

But here is the strange part of this new design: they increased the initial or static timing setting from 14 degrees to 24 degrees BTDC. In addition they continued the use of the already standard #1110319 distributor. This meant that the whole spark advance curve was increased by 10 degrees, resulting in a maximum advance of 44 degrees compared to a previous 34 degrees (ignoring any VA effect). This seems excessive: way beyond the maximum best torque point. They

even included a 24 degree timing tab to be used for setting the timing and for identification of these engines. Why was such a large timing advance considered necessary or even desirable? It would seem that this increase in timing would encourage preignition and even more detonation with resulting likely engine damage.

What were they thinking? What were they trying to accomplish? Better cooling? Better drivability? Better fuel mileage? Or what? And Why?

Maybe you are suspecting that some of these facts might be in error due to typos or misinterpretations. But this is unlikely since these specs are stated in several Chevrolet documents and locations. In addition, at least two real life example vehicles have been located, and this timing information verified.

Maybe you have even heard that some 1965-75 vehicles used a timing advance at idle speeds to speed-up the engine for better cooling of a hot engine. But if this was Chevrolet's intention, why did they continue to use the standard distributor and not a different one with a reduction in the centrifugal advance? It makes no sense.

So not knowing Chevrolet's intentions, we can only conclude that this second design is a mighty strange engine.