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Subject: Re: Power Compression and Heat sinks

Posted by [Wayne Parham](#) on Wed, 28 Dec 2005 15:26:06 GMT

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Power compression is like heat soaking your engine. When the intake charge is hot, the air becomes less dense and you lose power. On an endurance run, the metals shift, expanding from heat and the pistons can scald the cylinders and the clearance between bearings and races can drop to zero. Then parts aren't riding on an oil film anymore, they're metal to metal. In the case of loudspeakers, the voice coil resistance increases and you lose voltage sensitivity. You also waste energy through heat loss and the system parameters change. A condition of thermal runaway sets up just before failure, where the voice coil radiates heat into the magnet which then re-radiates it into the voice coil and it gets hotter and hotter. Anything you can do to get heat out of the motor helps prevent this.

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