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Specialist tools are required – don't use an angle grinder

promotes a broader power band, while one that opens and closes rapidly has higher peak power. The corners are where you can alter lift without affecting port timing. With all the variables, where does one even start? First, there are the boundaries.

Boundaries

Side intake port size, shape, and location are in part determined by physical properties and in part by practical aspects. In other words, there are limits to how big the ports can be made before you run into physical problems, such as compromising the water jacket or failing to support the rotor's corner seals and oil seals, but as long as you stay 'within the lines' (see illustration), you are fairly free to play.

On the leading edge, the major obstacle is the need to support the rotor's corner seal, near the

apex. If you grind away too much, the corner seal will fall out of the rotor and get sucked into the intake port. On the trailing side, in addition to worrying about the underlying water jacket, there is a limit to how far you go before the chamber is so far into compression that the intake charge will reverse direction. The inside edge has no margin for porting, as it's location is too close in proximity to the rotor's oil seals. The nose and shoulder of the port are basically limited to being squared off with their adjacent edges, but the tail can conceivably be extended quite a bit. However, the water jacket comes perilously close to the tail in many (especially early) side housings and there is no way to tell when you are getting too close.

