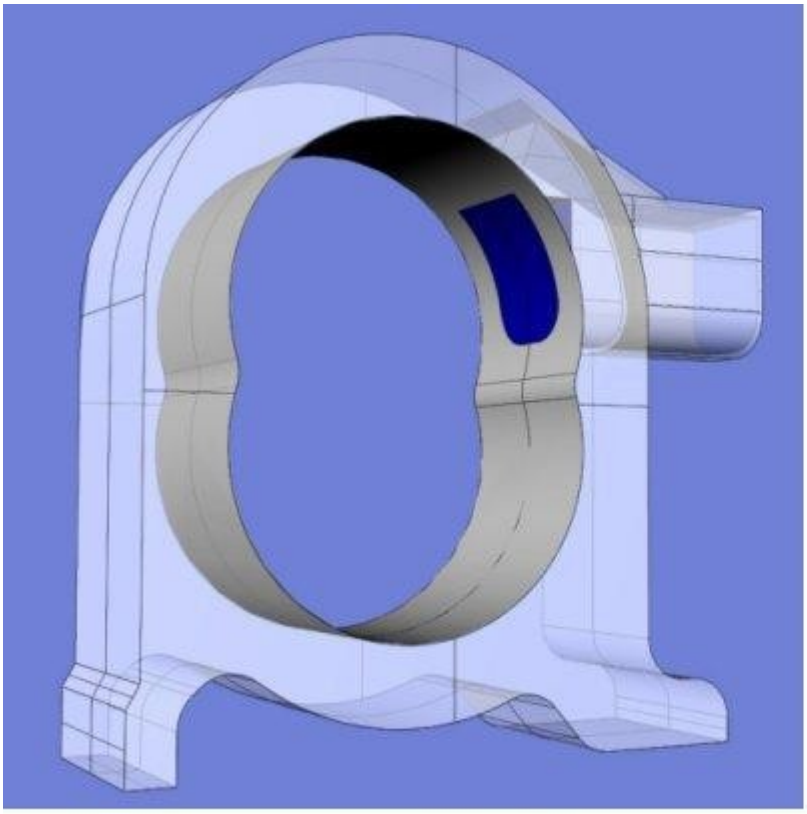


Fig. 1 P-port closed.

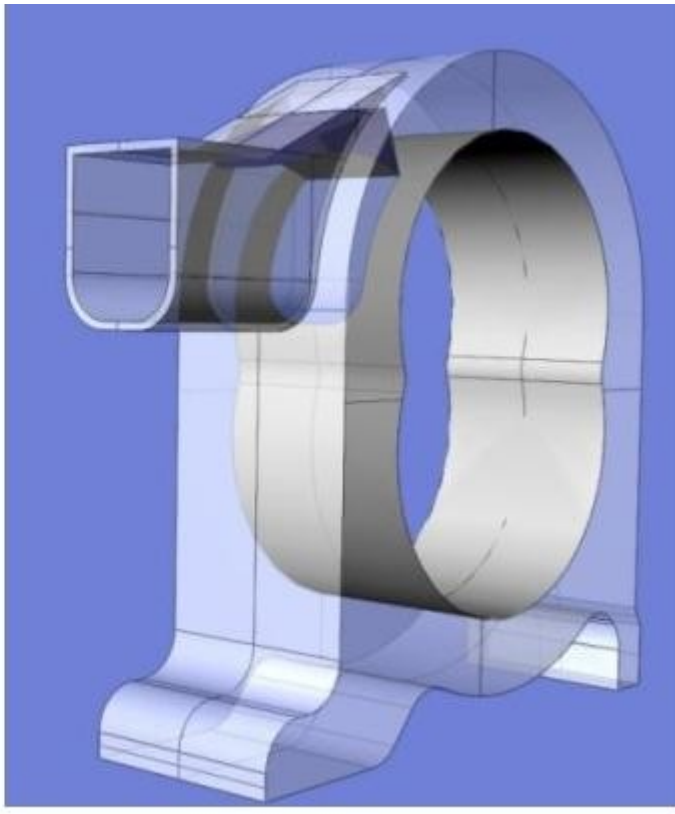
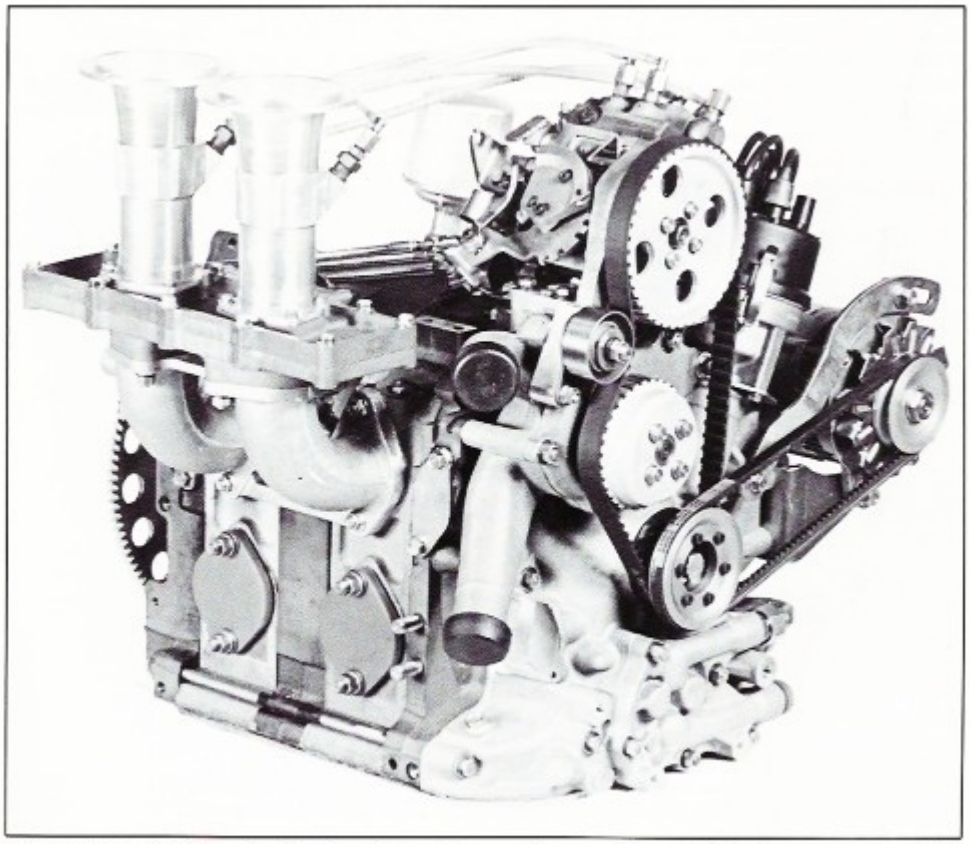


Fig. 2 P-port open.

This is in addition to the RX8 engine side ports. Basically what we are doing here is pivoting a section of the rotor housing trochoid wear surface up while opening a large P-port. It only opens at full throttle and high RPM. Over 6000 RPM. The rest of the time it seals the exhaust gas from the intake ports for smooth low RPM running and low HC emissions. Just like the current RX8 engine. No port overlap at low RPM. On the upcoming 16B this would be spectacular. My guess is somewhere close to 400 HP. A real Corvette eater for half the price and no increase in RX8 weight. This will work on an RX8 engine as well. My guess is 300 HP while still meeting all EPA regulations. I call it the Trap Door P-port. This is a 300 HP 13B P-port engine from the 1980's.



The workhorse 13B two-rotor Mazda engine with peripheral porting produced approximately 300hp and powered the early Mazda prototypes as well as many RX-7s. *BFGoodrich*

It does not need to be sealed as the pressure differences inside the rotor housing are minimal in this area. As the apex seal passes the top of the trap door that is when the compression chamber starts to work and the pressure builds up. Since the pressure is so low in that area fewer tension bolts need to be used. The trap door pivot could be concentric with one tension bolt.

It will never fly nor should it. It is something Mazda should do for car engines. Also it has nothing to do with throttling the air going into the P-port. It snaps fully open at say 6000 RPM and stays open until red line. It snaps closed when the RPM drops below 6000 RPM. All throttling of air is done by the stock fly by wire throttle body. It is intended to improve the VE and add p-port power to an engine that is saddled with all side ports due to emissions regulations. It may be necessary for the computer to shut off the air supply to the side ports while the p-port is open to prevent undesirable turbulence in the compression chamber.

Paul Lamar December 2006