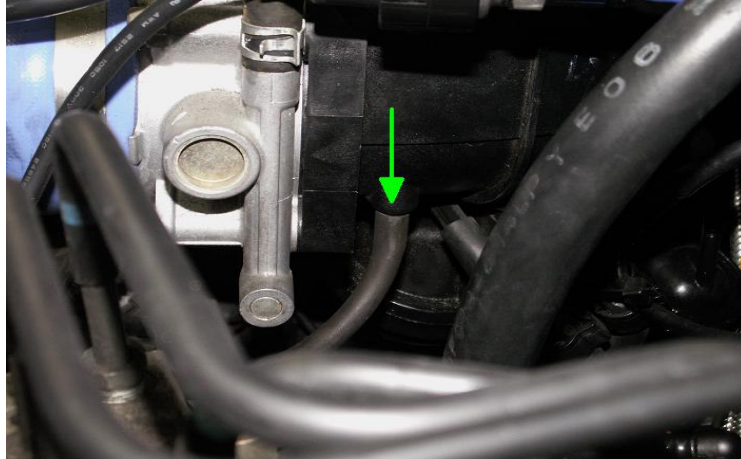


### Other RX8 Specific notes:

Diagram on the right shows the MAP sensor hose location, when looking from the left hand side of the car towards the plastic plenum:



### Injector staging:

From the factory, the RX8 series 1 has 3 levels of staging: Primary 1, Primary 2, and Secondary. Primary 1 and Primary 2 injectors are both 290cc/minute, and Secondary is 380cc/minute. The Select RX8 ECU will recognise that it is configured for an RX8, and deliver the first amount of fuel to the primary 1 injectors, sequentially. Any remainder of fuel quantity required which can not be delivered by the primary 1 injectors (due to lack of available on-time) will be at first delivered to the primary 2 injectors, which are fired together, once every 360 degrees. Any remaining fuel requirement not fulfilled by Primary 1 and Primary 2 injectors will be met by the Secondary injectors, which are also fired every together every 360 degrees. The flow rates of the 3 levels of injector staging can be set in the Tuning Modes tabsheet in WARI, allowing you to change injector sizes.

Note that you MUST configure the SSV (aux output 4) to open whenever the secondary injectors will be open. The SSV can be open at other times as well (when the additional airflow generates more torque), but if the secondary injectors are firing and the SSV is closed, the fuel will not get into the engine.

### Valves and flaps:

There are 4 valves on the RX8 engine, controlled by various aux outputs on the ECU:

The SSV is controlled by aux output 4, and is typically an AND result of RPM and MAP, for example so that it opens above 4000 RPM and above 80 kPa MAP. The solenoid activates a vacuum valve which opens the secondary port valves. These runners hold the secondary injectors so it is imperative that this output is activated whenever the secondary injectors are in use.

The VFAD is controlled by aux output 2, and is typically activated above a certain RPM. It operates a vacuum valve which opens a flap in the airbox to allow fresh air (at the expense of greater acoustic noise). This is often removed if the airbox is modified, and the output can be redeployed (eg for boost control).

The VDI is a flap between the two main intake runners, and is controlled by aux output 3. On a naturally aspirated engine it assists with torque above about 7900 RPM. On a turbocharged engine it seems not to help with torque production (ie, better to leave it off).

The APV, auxiliary port valve, is controlled by a DC motor which can drive backwards and forwards. Closing the valves assists with torque production at low and medium RPM (up to about 6000 RPM), and above 6500 RPM the APV needs to be fully open. The setting for the open and closing is done by setting the RPM based switchpoint to change the idle position, where 100 = fully closed and 0 = fully open. The output is controlled by idle up/down functions. The default behaviour is against RPM only but can be changed to be dependent on RPM and load.