

# The factory (GTS) breather design

The breather design has (3) calibrated orifices they are restrictions placed into the system of pipes to set the flow rate.

- Two way flow depending on throttle position
- At idle or minimal throttle fresh air from the air filter flows through the Maf and via the "Y" connector located before the throttle valve in to the rear PS cam cover vent and loops via the crankcase to the vents in the oil filler neck.
- At half-WOT the negative pressure in the PS cam cover is changed to positive pressure, flow is reversed and via the same hose and "Y" connection a mixture of air, oil and oil vapors can find it's way back to the TB via the throttle valve.

6 mm orifice inside

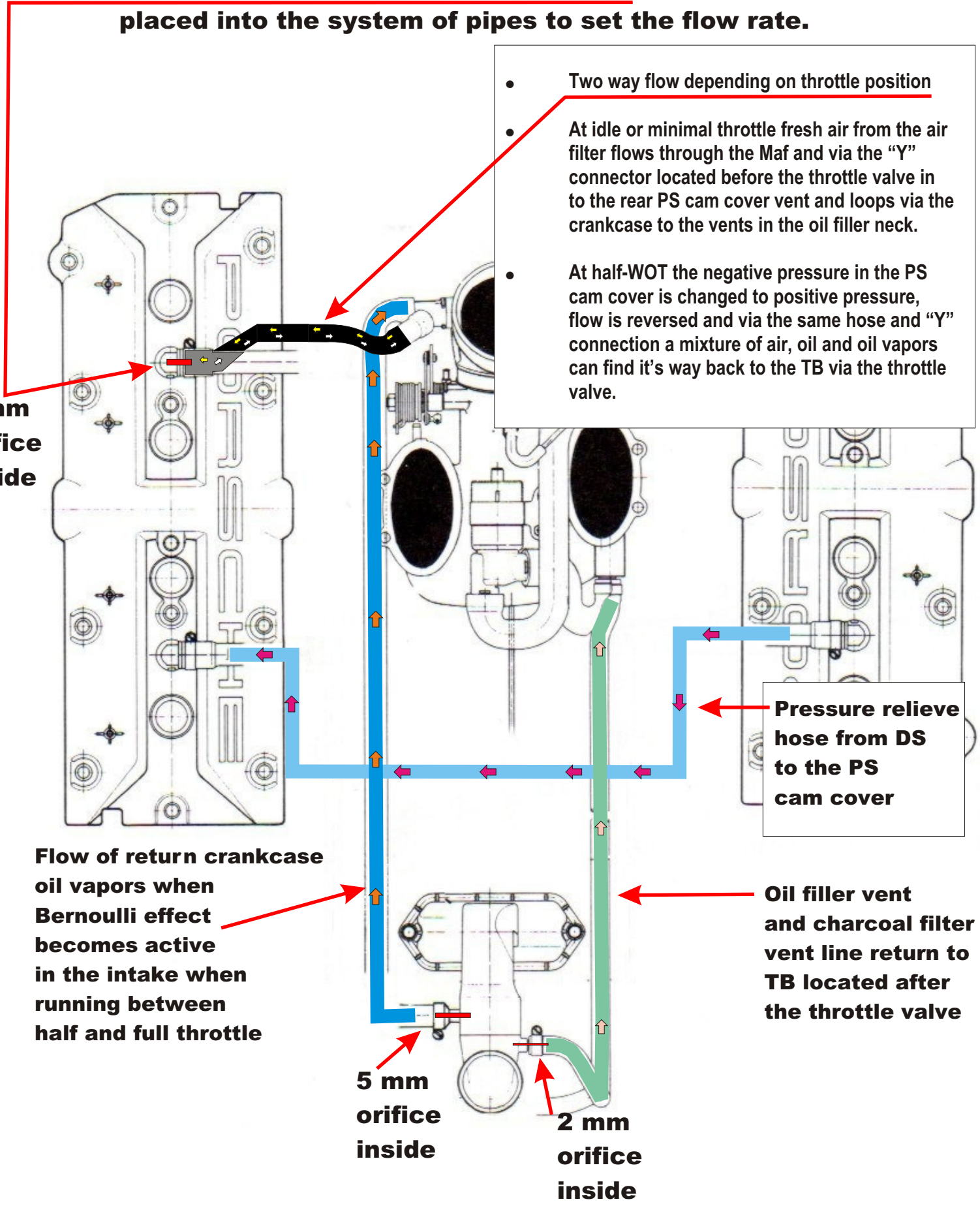
Pressure relieve hose from DS to the PS cam cover

Flow of return crankcase oil vapors when Bernoulli effect becomes active in the intake when running between half and full throttle

Oil filler vent and charcoal filter vent line return to TB located after the throttle valve

5 mm orifice inside

2 mm orifice inside

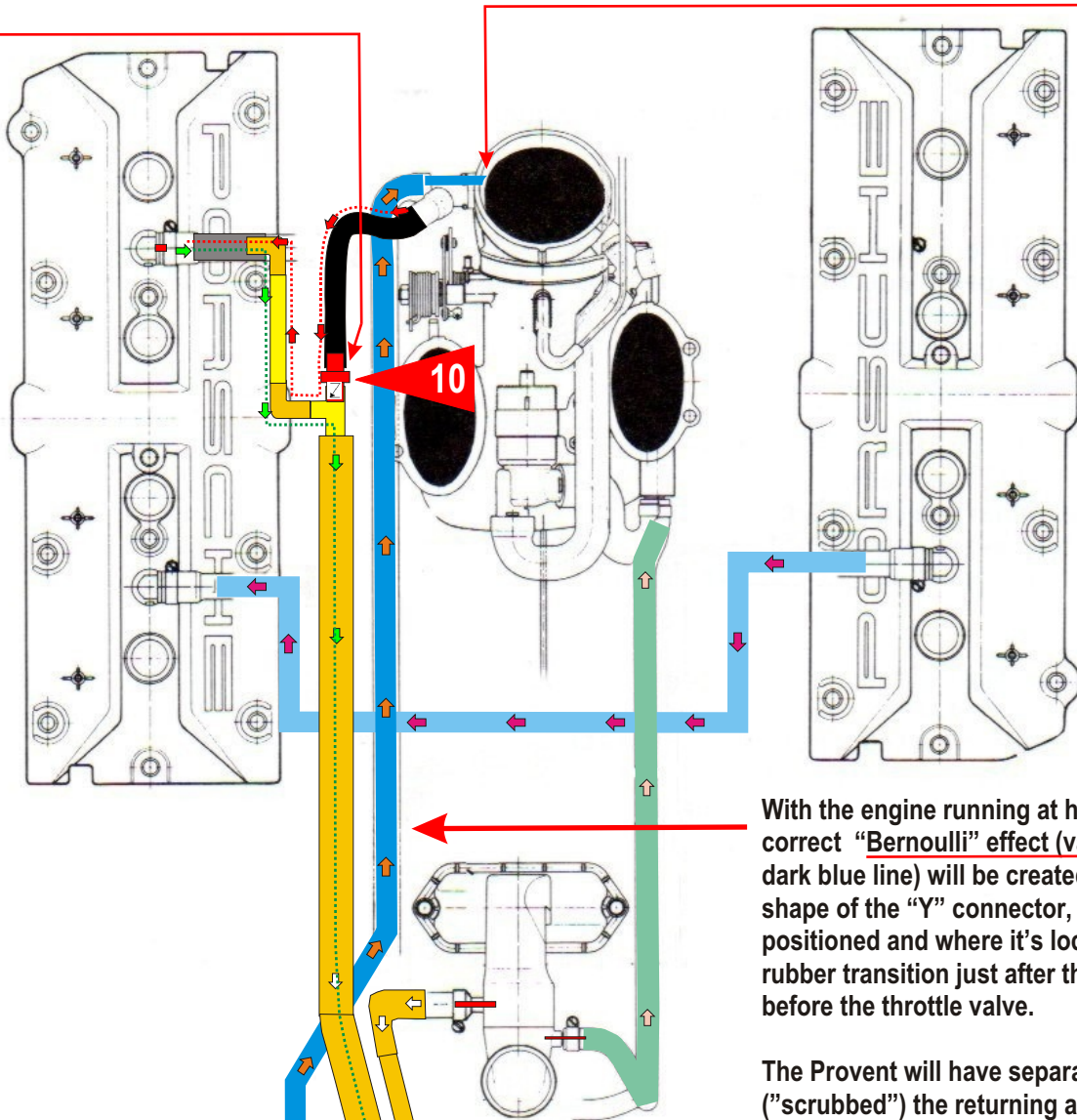


# “HKR3”

## The modified 928 GTS breather design schematic #2

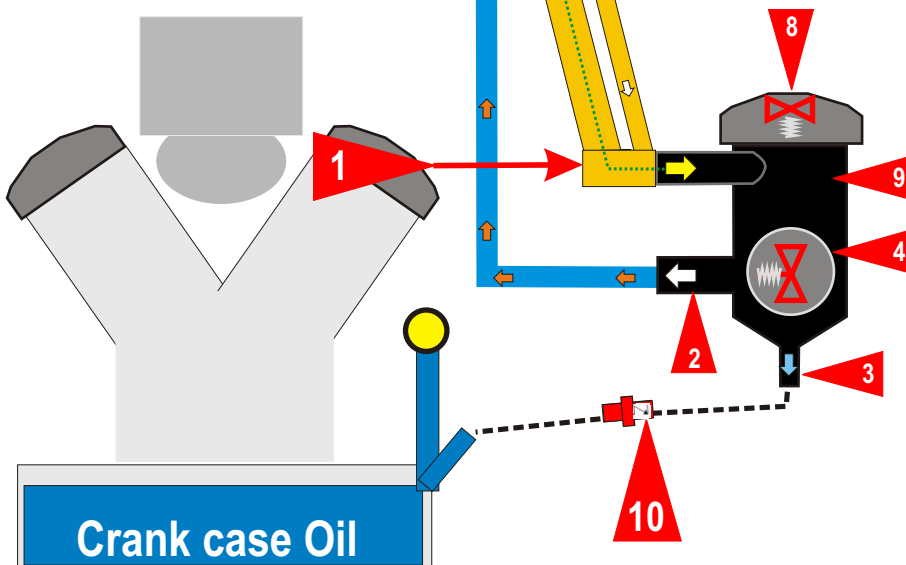
One way (check valve) directional flow valve lets air into PS cam cover only (red dotted line - when the engine runs at idle or minimal throttle).

By increased throttle (half - WOT ) flow reverses from the PS cam cover the check valve will close and oil and vapors are coming (green dotted line) out of the PS cam cover vent and flow to the Provent oil separator



With the engine running at half - WOT the correct “Bernoulli” effect (vacuum in the dark blue line) will be created based on the shape of the “Y” connector, the way it’s positioned and where it’s located in the rubber transition just after the MAF and before the throttle valve.

The Provent will have separated (“scrubbed”) the returning air coming from the PS cam cover vent



- 1 = Tangential input ports
- 2 = output port
- 3 = Oil return pipe
- 4 = Pressure regulator  
(Only closed systems)
- 8 = Safety valve
- 9 = Oil separator
- 10 = Check valve

Crank case Oil