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## **CP401 – Microprocessor Controlled Emission Air/Fuel Ratio Controller for American Systems (To suit Air Valve type systems)**

-The CP401 Fuel Processor offers extremely accurate mixture control under all engine load conditions; this is done via the CP201-V Vacuum Valve which controls the operating pressure of the Converter in turn controlling fuel mixtures.

-The processor requires the connection of both the O<sub>2</sub>(Oxygen Sensor) and TPS(Throttle Position Sensor).

-This unit has unique 'software modes' for different driving applications, sensed via the TPS Signal. The 'modes' are for **idle, acceleration from idle, cruise, acceleration from cruise and deceleration**. These software modes enable the vehicles engine to hold an ideal AIR/FUEL Ratio very efficiently. This in turn increases mixture control for drivability, power, fuel efficiency and most of all **Clean Burning Emissions** (\*\*see notes below\*\*)

-The unit has a specific idle software mode. This is adjustable via the trimpot located inside the case ('TPS ADJ.')

 and indicated by the Yellow Led ('TPS On at idle'), when on Idle mode is activated. Adjust trimpot so as the yellow led turns off when accelerator is slightly de-pressed.

-The engines air/fuel mixture is indicated with the Red Led, a Rich mixture is indicated when the Led is on and a Lean mixture when the Led is off.

-The unit recognizes rapid acceleration/high load conditions via the TPS and instantly enriches the engine mixtures eliminating any 'Lean' running condition. This is indicated via the Green Led ('Accel. On').

-The unit is water resistant, however it is recommended to mount the case inside the vehicle cabin.

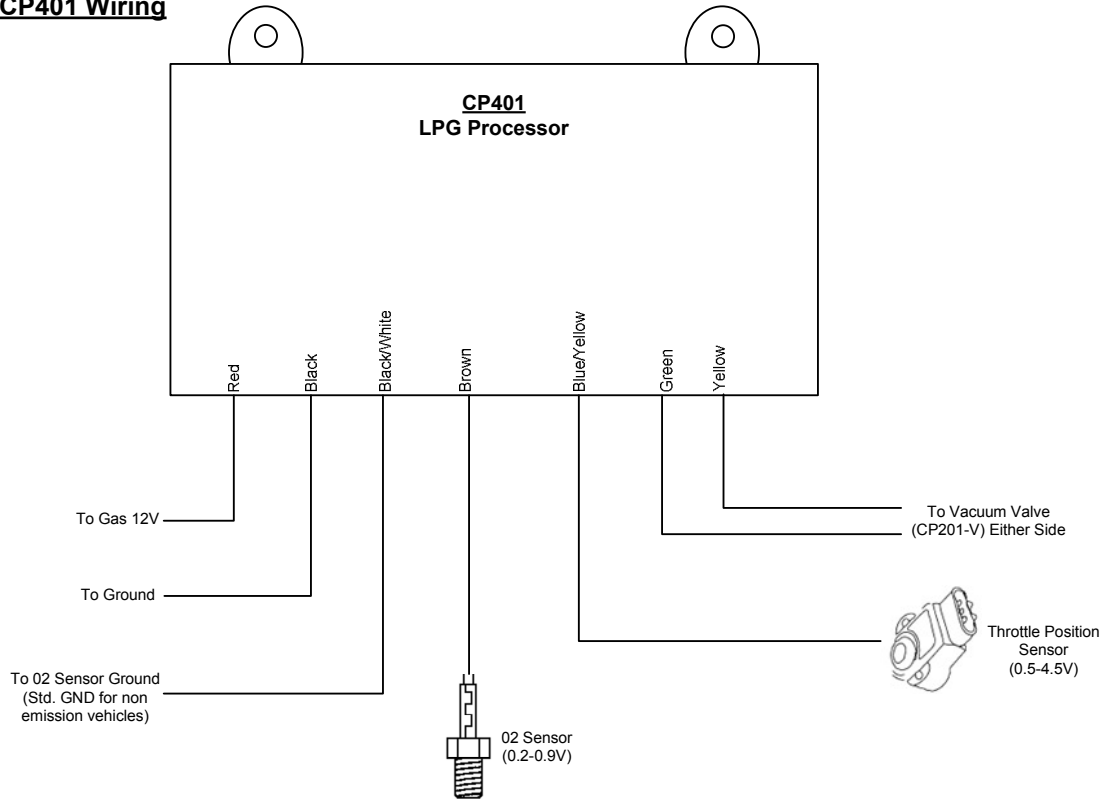
-The separate Black Wire with white trace is for direct hookup to the O<sub>2</sub> Sensor Earth for Emission approved applications (\*\*see below\*\*), however in other instances can be connected to the Black wire for a normal ground hookup.

-The processor incorporates a diagnostic function where if a problem is sensed eg. O<sub>2</sub> sensor failure, wiring fault, air leak etc. the processor will go into a diagnostic mode and give a set duty cycle. This function activates after the processor sees a constant 'Rich' or 'Lean' signal for approx. 1 minute. Once the vehicle is turned off, the function is reset. The diagnostic mode will be indicated by the Red/Rich Led 'blinking' at a constant rate.

**\*\*Notes – This Fuel Processor has been labeled with 'Emission Controller' as it has passed Euro 2 standards on a variety of vehicles with different types of Air Valve Systems or Negative Feed Systems, also a limited number of vehicles have obtained a Euro 3 pass. However, the pass comes down to a number of specific factors such as - How the OEM Systems petrol system operates, the quality of the equipment used, the base 'mechanical' settings of the mixer, type of vehicle and type of emulation required etc. Hence, this processor is highly efficient in holding 'ideal' (Stoichometric) Air/Fuel Ratio but requires all other factors to be operating efficiently.\*\***

**See Overleaf for Wiring and Plumbing Diagrams**

**CP401 Wiring**



**Plumbing**

