

GASRESEARCH C.T.I. VAPOUR INJECTION FUEL PROCESSOR

BEFORE ALL ELSE FAILS - READ THE INSTRUCTIONS!

Operation

1. Cold Start Primer.

With ignition on, any rapid movement of the accelerator will operate the vapour injector, priming the engine. A pulsing of the injector should be audible.

2. Idle (Open Loop).

The C.T.I must be set to idle in an open loop condition, otherwise engine hunting may occur and deceleration mode will not operate correctly.

3. Cruise (Closed Loop).

The C.T.I. enables correct fuel/air ratios to be achieved and maintained by the injection of fuel vapour into the throttle body.

4. Vapour Injection.

The C.T.I. features a vapour injector to enhance throttle response and driveability by giving a short burst of fuel when a rapid increase in throttle position is detected.

5. Deceleration.

The C.T.I senses when the throttle is returned to the idle position and turns off the fuel injector. This eliminates high HC's on engine overrun.

Mounting

C.T.I. Module.

The C.T.I Module should be mounted inside the passenger compartment where possible. If it is necessary to mount the C.T.I. Module under the bonnet, it must be positioned away from any heat source.

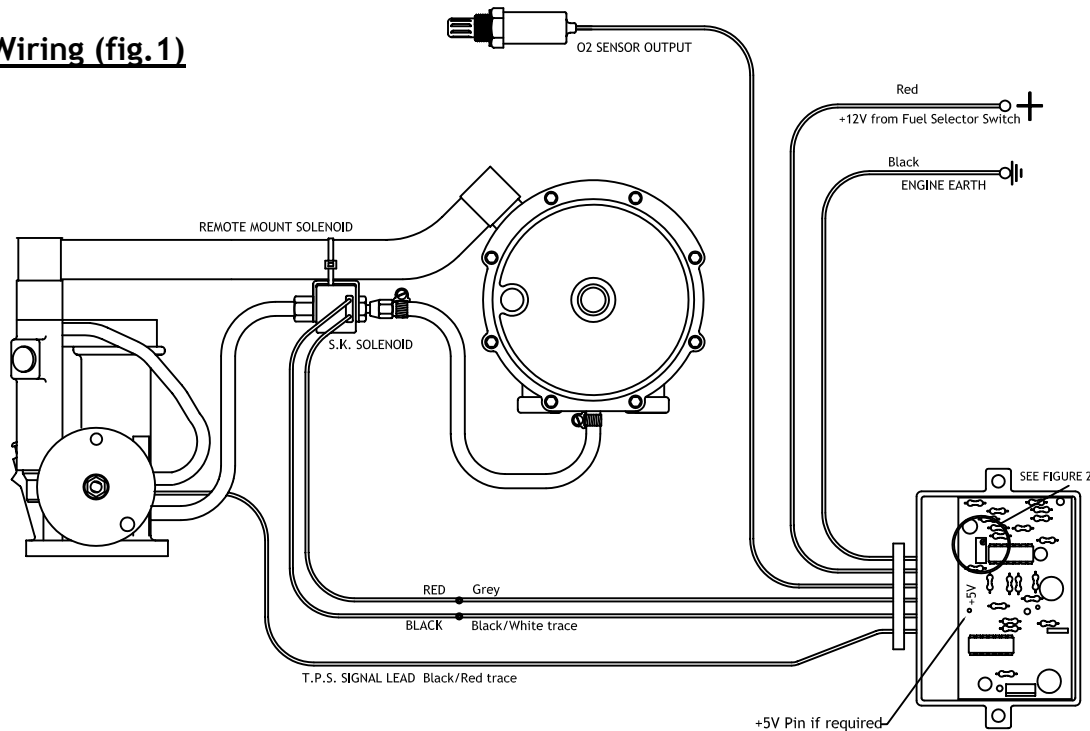
Avoid running cables in close proximity to spark plug leads or ignition components.

The solenoids may be fitted inside the plastic airbox on later model vehicles, in order to reduce the audible injector noise.

N.B.

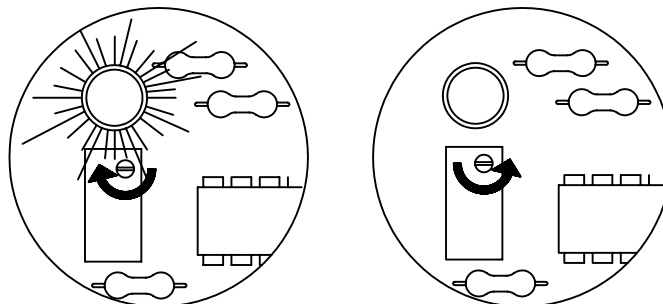
1. Record T.P.S. values before removing T.P.S. from original throttle body. Original T.P.S. can be fitted to the GASRESEARCH throttle body using screws and spacers provided in the kit (aftermarket T.P.S.'s are available).
2. Finish drilling the required ports in the GASRESEARCH throttle body before installation (refer to port drilling sheet).
3. GASRESEARCH B2 converters/regulators have 4-5psi primary pressure.
4. If the C.T.I. is to be fitted to other LPG systems, the LPG vapour should be introduced into the air stream on the engine side of the butterfly, as close to the butterfly as possible.
5. A 5 volt (+ve) supply may be sourced from the C.T.I. Module if required to power an aftermarket T.P.S. sensor.

Wiring (fig.1)



- RED 12 volt (+ve) ignition power (from safety switch or fuel select switch).
- BLACK earth wire must be connected to a good earth point on the engine.
- BLACK/RED wire connects to the throttle position sensor signal wire.
- PURPLE wire connects to the output wire of the O2 sensor.
- GREY wire connects to the C.T.I. solenoid +ve terminal.
- BLACK/WHITE wire connects to the C.T.I. solenoid black wire.

Tuning (fig.2)



1. Disconnect the grey wire from the C.T.I. solenoid. This allows the *GASRESEARCH* carburettor to be tuned in standard form without enrichment (refer tuning guide).
2. Start and warm the engine (manual priming will be required).
3. Insert a progression jet (refer tuning guide) to suitably *lean* out the cruise mixtures on the vehicle. Set idle mixture and and RPM (refer tuning guide).
4. Reconnect the grey wire to the C.T.I. solenoid.
5. Lever the back cover off the C.T.I. Module to expose the circuit board.
6. With the ignition on or vehicle idling, turn the trim pot screw clockwise until the LED illuminates indicating Closed-Loop mode. Then turn the trim screw anticlockwise until the LED goes out (approximately two full turns) indicating the unit is in Open-Loop mode.
7. Open the throttle slightly and ensure the LED turns on as the throttle is opened and off when the throttle is closed (idle position).
8. Wide open throttle mixtures are controlled by the metering rod (refer tuning guide).