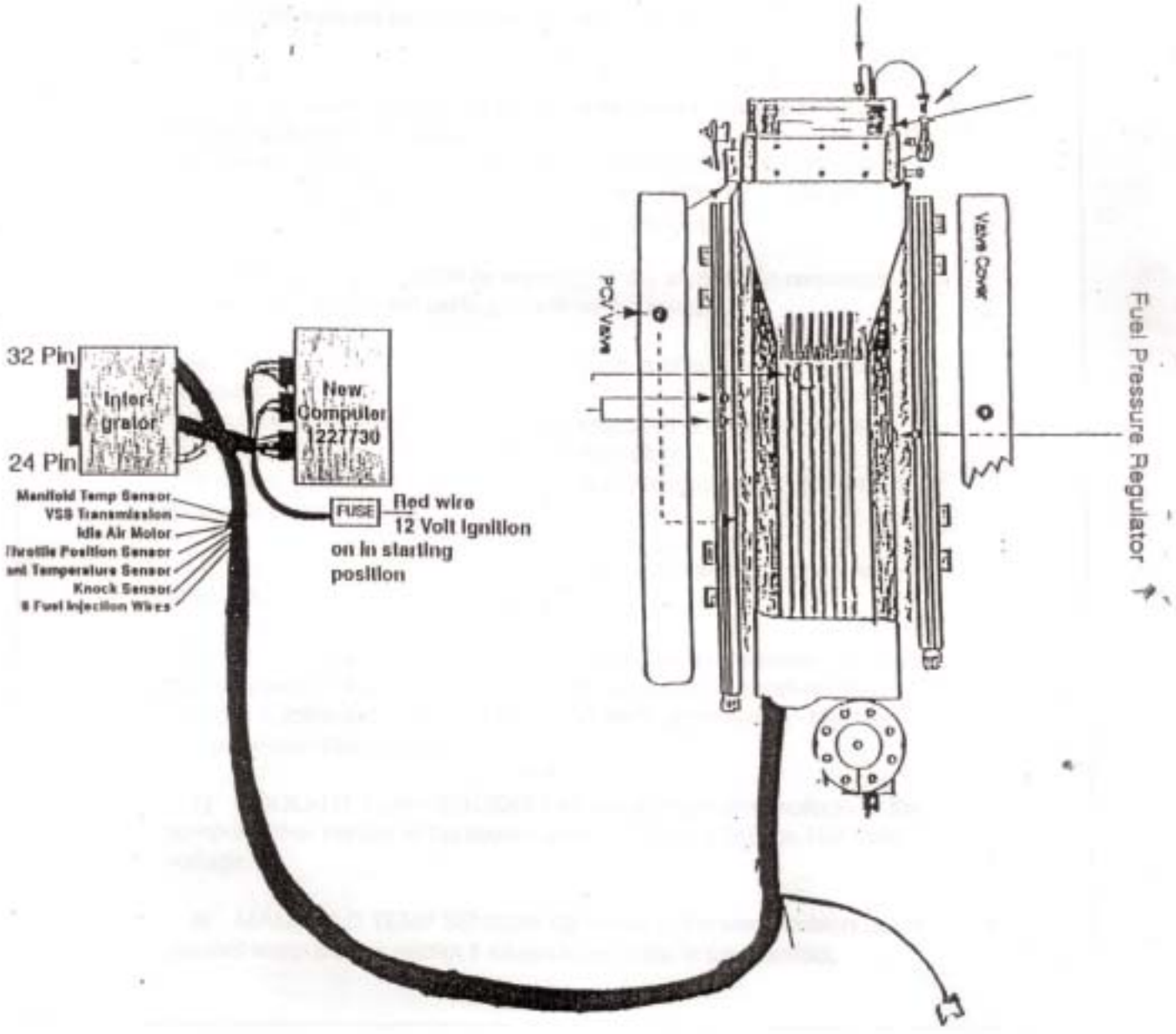
ALUMINUM - RACING & STREET SPECIALTIES

Street & Performance

Rt. 5, #1, Hot Rod Lane - Hwy. 375 South
Mena, Arkansas 71953 1-501-394-5711

INSTRUCTION AND SUPPLEMENTAL INFORMATION

INTEGRATOR WIRING HARNESS



Thank You and Congratulations on your selection of our latest and most up to date wiring harness.

All harness plug-ins and hook-ups have been tagged and should be self-explanatory. The injectors are pulsed simultaneously, so any injector plug can connect to any injector. However, the injector plug lengths will indicate which injector to connect and will result in a neat and professional installation.

The integrator harness was designed to simplify installation by utilizing parts of the factory existing harness. Such as 12V ignition, battery wires o-z, transmission lock up smog pump canister, purge fuel pump, etc.

1) All grounds on factory harness mounted to engine and must be reused.

2) Remove wiring harness from box and identify tags shown and compare to instruction sheet.
Harness should be installed from inside of vehicle first - by utilizing existing hold on right passenger side of firewall where air conditioner morter wires are presently run - push out rubber plug.

3) Remove existing ECM by unplugging the 24 & 32 pin connector. The old ECM can be set aside as it will not be reused.

4) Plug factory 24 & 32 blank ECM plugs in Integrator box marked Integrator.
Plug new ECM - 1227730 into plug coming out of Integrator marked New ECM, 24 black, 32 black and 32 yellow plugs.
Red wire with inland fuse marked Ignition. Need to run to 12V hot key on and in crank position.

5) IDLE AIR CONTROL VALVE: Computer controlled stepper motor which adjusts idle at different loads.

6) THROTTLE POSITION SENSOR: Returns a proportional voltage to the computer that relates to the angular position of the throttle plates. Relaxed throttle-low voltage (approx .5V) Wide open throttle - High voltage (approximately 4.5V).

7) COOLANT TEMP SENSOR: Returns a proportional voltage to the computer that relates to the coolant temp. Cold-High voltage. Hot-Low voltage.

8) MANIFOLD TEMP SENSOR: Operates in the same fashion as the coolant temp sensor except it relates to air temp in the manifold.

These codes are provided as an aid to generally localize the problem if any exists. If a particular trouble code is called out do not immediately assume the sensor or end piece is bad. For example, a CODE 44 (oxygen sensor-lean) could be caused by a faulty MAP sensor, lean or dirty injectors, fuel contamination, low fuel pressure, or exhaust leaks near the oxygen sensor. A faulty computer (ECM) would also cause most codes to set. Extensive and in depth troubleshooting requires equipment not normally in the possession of backyard mechanics, but most GM service centers and auto repair shops are set up to maintain and repair todays computer controlled, fuel injected automobiles.

This system is designed to operate in two major modes: Closed Loop, and Open Loop. Upon starting the engine and until the exhaust temp reaches 600 degrees F, the system is in open loop. The oxygen sensor places the system in closed loop operation and will maintain a 14.7 to 1 air fuel ratio except during periods of wide open throttle, at which time the computer ignores the oxygen sensor input and pulses the injectors for maximum fuel delivery. To verify closed loop operation install the ALDL jumper, start the engine and observe the check engine light. If the exhaust temperature is below 600 degrees F, the light will blink continuously at the rate of twice per second. When the exhaust reaches the correct temperature (less than 2 minutes on cold engine) the light will immediately begin to blink at one half the open loop rate. When this occurs the system is in closed loop. To clear any stored codes in the ECM, momentarily disconnect the negative battery lead.

THE ALDL MUST BE MODIFIED TO WORK WITH NEW ECM

NOTE: The identifying markings are on both top and bottom of ALDL plug located under the dash.

TOP F E D C B A
BOTTOM G H J K L M

FRONT VIEW OF PLUG

1) With the supplied wire and clamp, push brass plug into the "M" slot ECM from the rear of the ECM plug. Be sure and push all the way in so it will make a good connection with diagnositc machine

2) Take the end of wire and splice into the "E" wire already on the vehicle.