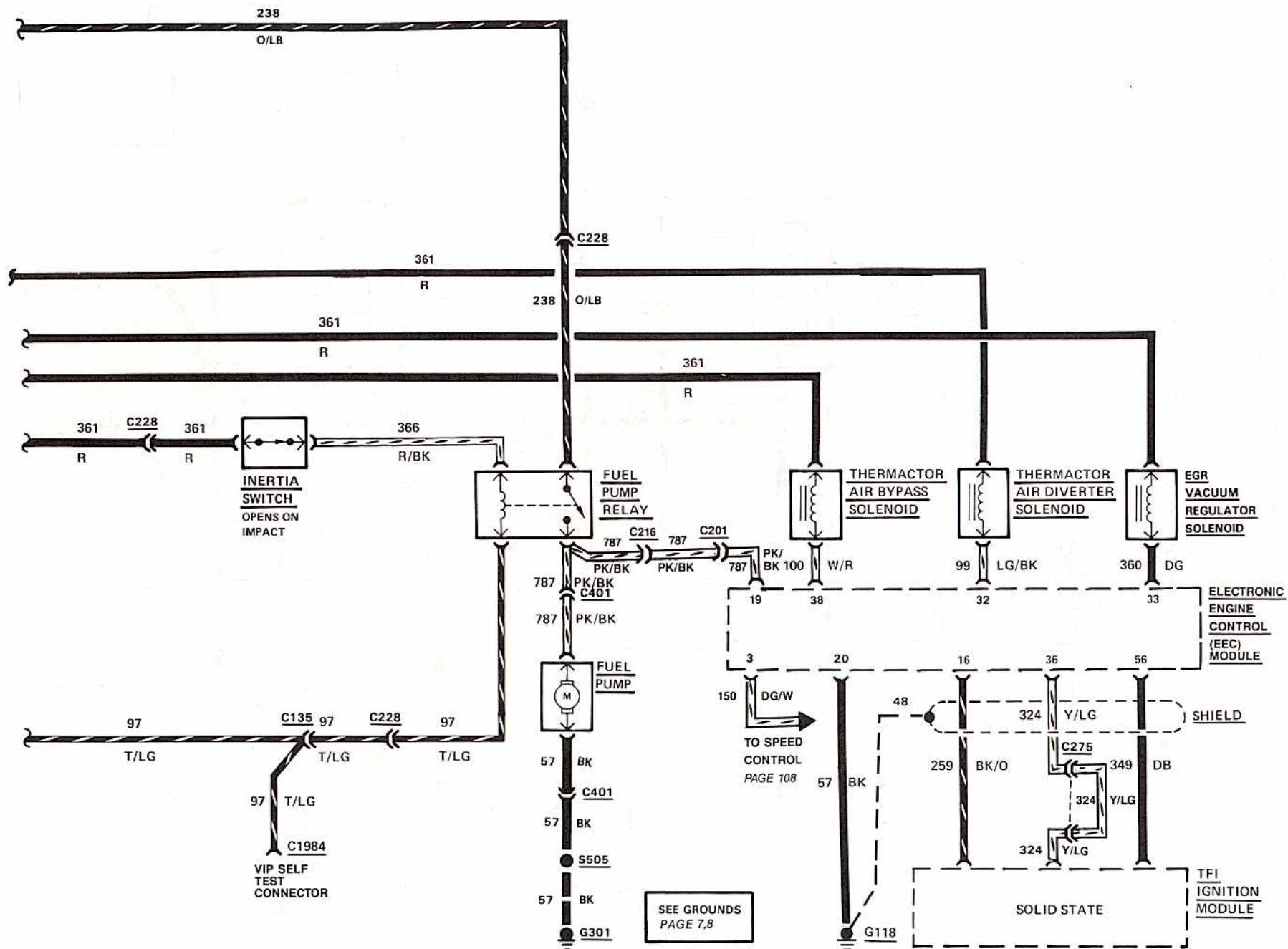
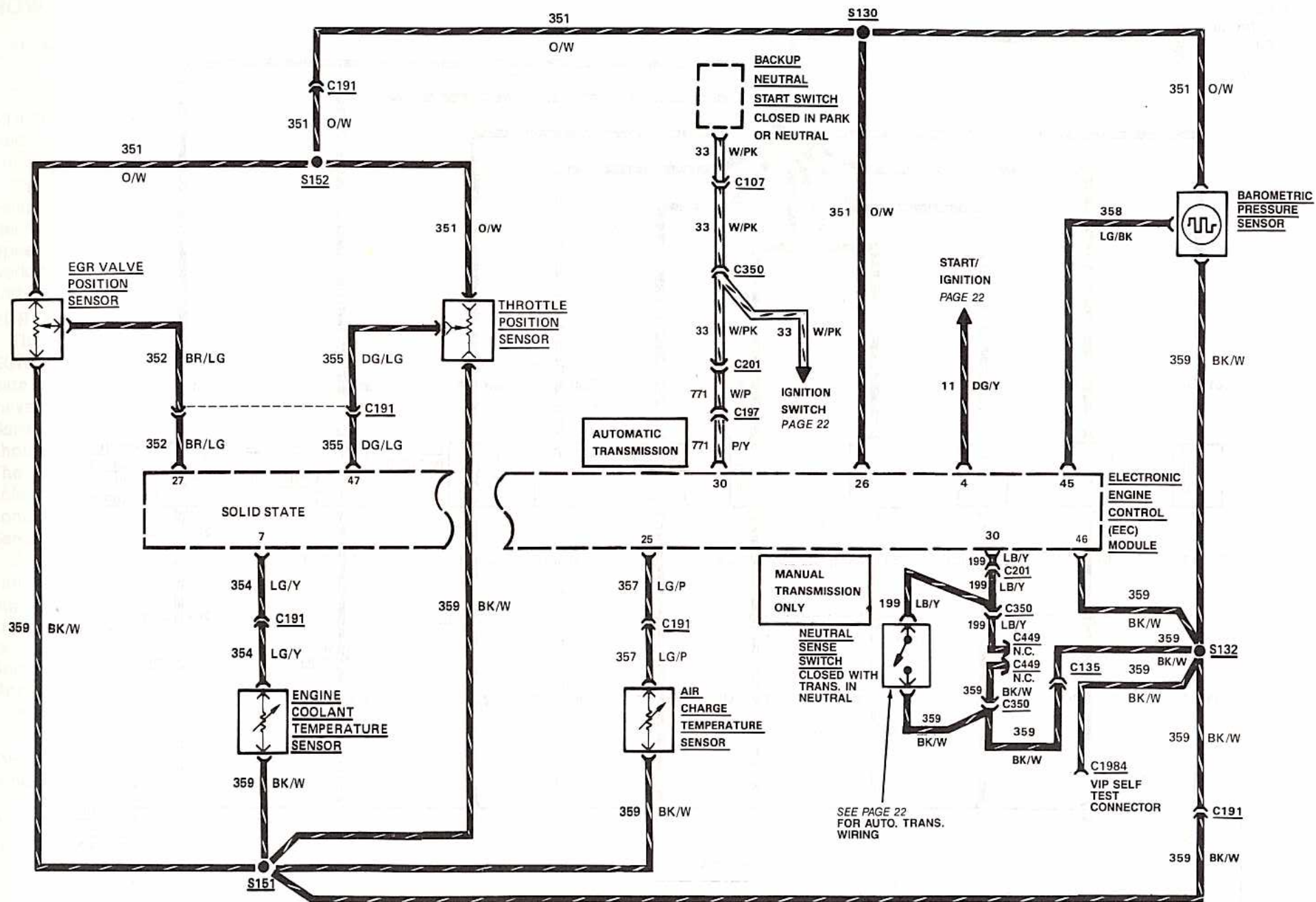


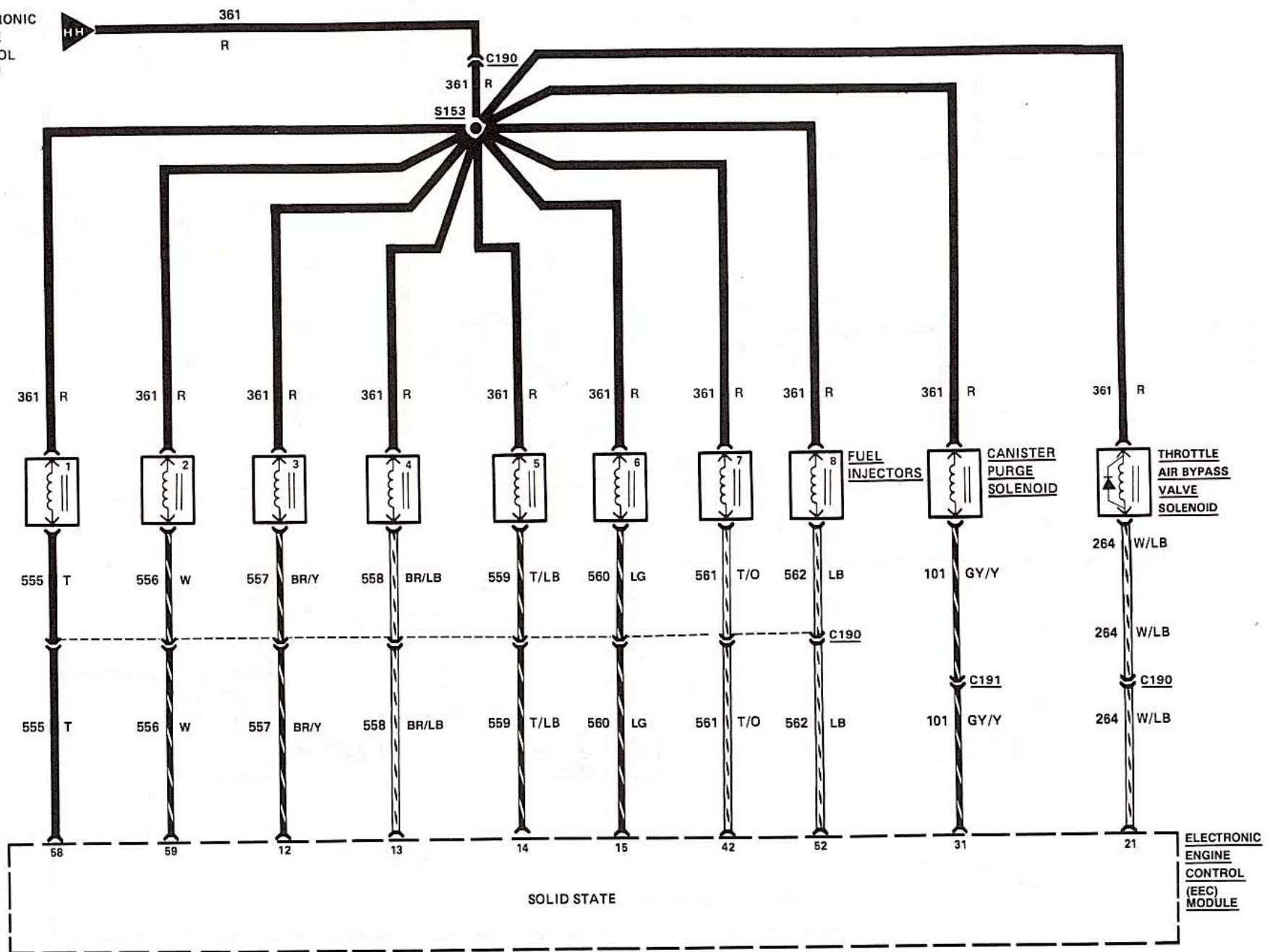
# 30 ELECTRONIC ENGINE CONTROL (5.0L SEFI)





# 32 ELECTRONIC ENGINE CONTROL (5.0L SEFI)

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ENGINE  
CONTROL  
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## 5.0L SEFI

The 5.0L SEFI engine uses **EEC IV Sequential Fuel Injection (SEFI)**. Fuel is injected directly into each cylinder through the **Fuel Injectors** in a sequential manner. Fuel is supplied up by an **Electric Fuel Pump**. With the **Ignition Switch** in START or RUN, the **EEC Power Relay** applies voltage to the circuit. When controlled by the **EEC Module**, and with the **Inertia Switch** closed, the **Fuel Pump Relay** operates, applying power to the **Fuel Pump**.

The **Idle Speed Actuator** controls air flow to adjust speed. It also adjusts for load when the **A/C** is operated.

### Exhaust Gas Recirculation (EGR)

The **EGR Vacuum Regulator Solenoid** controls **EGR** valve movement. The **EEC Module** receives data from various sensors. It also checks existing valve position through the **EGR** valve position sensor, and calculates if the present **EGR** flow should be increased, maintained or decreased. The **EEC Module** then determines a proper duty cycle for the **EGR Vacuum Regulator Solenoid** on time to control the **EGR** valve position.

The **Canister Purge Solenoid** controls the flow of fuel vapors from the canister to the intake manifold during various engine operating modes.

### Thermactor Air

The efficiency of the catalytic converter is dependent upon the temperature and chemical make-up of the exhaust gases. To meet these requirements an air supply system called **Thermactor Air** is provided.

## COMPONENT LOCATION *(continued from previous page)*

Page-  
Figure

Mass Airflow		
Sensor (5.0L only) . . . . .	Above intake manifold - on air inlet . . . . .	—
Neutral Drive Switch . . . . .	On LH side of transmission . . . . .	—
Neutral Sensing Switch . . . . .	Attached to clutch pedal . . . . .	—
Power Steering Pressure		
Switch . . . . .	On steering gear . . . . .	18-1
Thermactor Air Bypass		
and Diverter Solenoids . . . . .	RH front fender apron . . . . .	36-1
TFI Ignition Module . . . . .	Connected to side of distributor . . . . .	37-2
Throttle Position Sensor . . . . .	Attached to side of throttle body . . . . .	37-2

Refer to the **Location Index** in the back of the manual for connector, ground, diode and splice descriptions and locations.

**Thermactor Air** is provided. Depending on engine conditions sensed by the **EEC Module**, thermactor air is sent to one of three places.

When the **Thermactor Air Bypass Solenoid** is off (de-energized), thermactor air is dumped to the atmosphere rather than to the catalytic converter or exhaust manifold.

With the **Thermactor Air Bypass Solenoid** on (energized) and the **Thermactor Air Diverter Solenoid** is off (de-energized), thermactor air is downstream (to the catalytic converter).

When the **Thermactor Air Bypass Solenoid** and the **Thermactor Air Diverter Solenoid** are on (energized), thermactor air is diverted to the exhaust manifold (upstream).

### Sensing Devices

Various sensing devices are used to determine engine operating conditions. They provide the **EEC Module** with throttle, pressure, temperature, and exhaust gas information. The **Throttle Position Sensor** sends one of three signals to the **EEC Module** to indicate closed, partially open, or wide open throttle.

The **Air Manifold Charge Temperature Sensor** measures the air temperature in the intake manifold and sends the signal to the **EEC Module**.

The **Barometric Pressure Sensor** measures atmospheric pressure when the Ignition Switch is turned to RUN or the throttle is at wide open.

The **Mass Airflow Sensor** measures the mass of the air going into the engine through the intake manifold.

The **Heated Ego Sensors** provides a voltage to the **EEC Module** for regulating the air/fuel ratio by sensing the oxygen content of the exhaust gases. Oxygen shows a lean exhaust gas

mixture while no oxygen shows a rich mixture. The heated EGO sensors provide better emission control during cold weather operation.

**Refer to the Engine/Emissions Diagnosis Manual, Volume H, and technical service bulletins for complete EEC-IV test procedures using special Rotunda test equipment.**

## TROUBLESHOOTING HINTS

CONDITION	POSSIBLE CAUSE	ACTION
• Intermittent Trouble Codes	• Loose EEC connector	• Clean/Tighten and check wiring
<p><b>NOTE:</b> The EEC-IV system retains any intermittent trouble codes stored within the last 40 engine starts. With this system, the memory is not erased when the key is turned to OFF. However, memory will be lost if the Battery is disconnected.</p>		