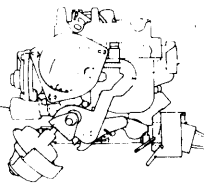
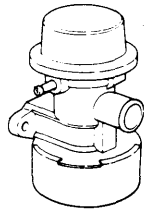
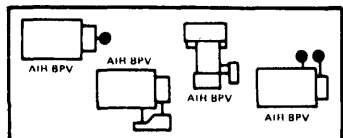
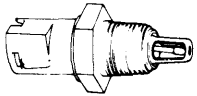
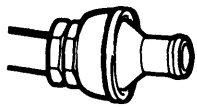
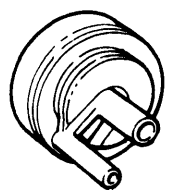
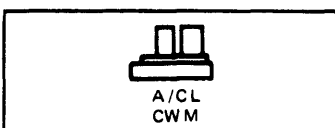


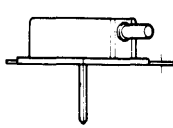
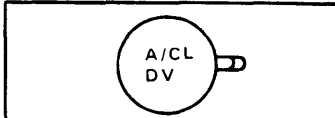


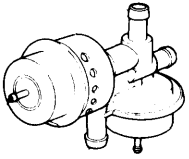
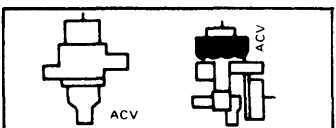
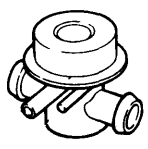
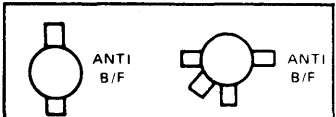
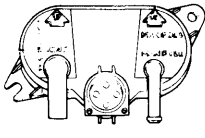
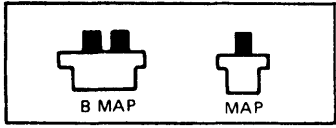
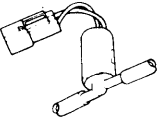
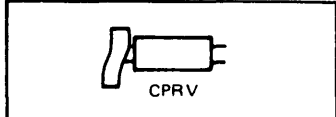
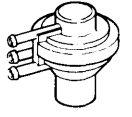
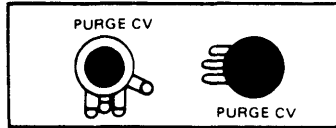
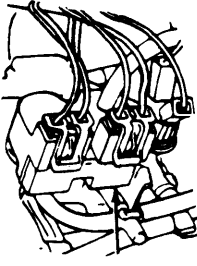
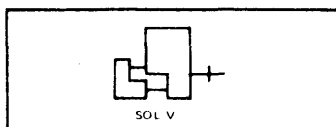
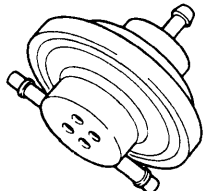

FORD MOTOR CO. EMISSION COMPONENTS

Ford Motor Co. vehicles utilize several types of devices to control emissions. Although originally intended for a specific purpose, many of the devices are now used in various parts of the system. These figures show the physical appearance of typical components and their identification symbols found on Emission Control Diagrams. Operation and method of actuation is provided for most applications. Refer to specific system within this section for testing procedures.

COMPONENT AND SYMBOL		OPERATION
	A/C-WOT MICRO SWITCH	Switch is mounted on the carburetor to sense the wide open throttle (WOT) position. On some applications, an adjusting screw is mounted on a lever that rotates with the throttle lever. As the lever is rotated to the WOT position, it contacts the arm of the micro-switch that opens or closes an electrical circuit. On other applications, the adjusting screw can be set to any predetermined throttle angle before the WOT position. The switch is used on most carburetor models and cuts out the A/C compressor during WOT acceleration.
	AIR BY-PASS VALVE 	Vacuum operated valves may be normally open or closed. Valves direct air flow from thermactor air pump to exhaust system or atmosphere as required. May be mounted on air pump or in line (remote).
	AIR CHARGE TEMPERATURE (ACT) SENSOR	Threaded into left-rear of intake manifold of Electronic Fuel Injection models. Senses air/fuel mixture temperature and provides instant information to EFI system.
	AIR CHECK VALVE AND PULSE AIR VALVE	One way valve allows thermactor air to enter exhaust system. Pulse air valve IS NOT interchangeable with air check valve.
	AIR CLEANER COLD WEATHER MODULATOR 	Bimetal sensor located in air cleaner to control flow of vacuum to air cleaner duct door motor. When air temperature rises sufficiently, cuts off vacuum to duct door motor, allowing outside air to air cleaner. Traps vacuum to prevent duct from going to hot position during cold weather acceleration.
	AIR CLEANER TEMPERATURE CONTROL SENSOR 	Bimetal sensor installed in air cleaner tray. Also controls position of air duct door by bimetal switch action but does not trap vacuum during acceleration.
	AIR CLEANER VACUUM MOTOR 	Regulates position of door within air cleaner duct to allow warm or cold air as signaled by Air Cleaner Temperature Sensor and Cold Weather Modulator.

1982 Exhaust Emission Systems


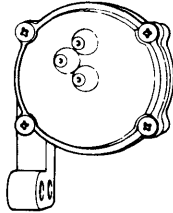
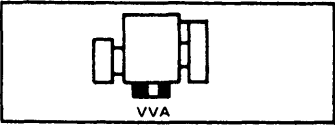
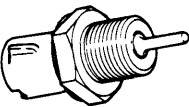

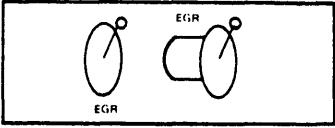
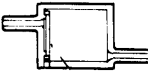
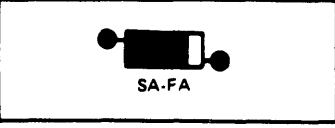
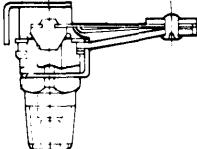
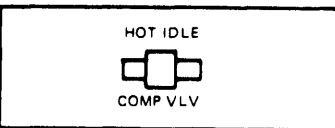
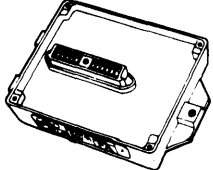
FORD MOTOR CO. EMISSION COMPONENTS (Cont.)

COMPONENT AND SYMBOL		OPERATION
	AIR SUPPLY CONTROL VALVES 	Operated by vacuum to direct air pump output to exhaust manifold or downstream to catalyst system depending on system requirements.
	ANTI-BACKFIRE (GULP) VALVE 	Vacuum operated valve downstream from air by-pass valve used to divert partial thermactor air to intake manifold when triggered by intake manifold vacuum during sudden deceleration.
	BAROMETRIC/MANIFOLD ABSOLUTE PRESSURE (B/MAP) SENSOR 	Mounted on right inner fender, senses barometric pressure of atmosphere and manifold absolute pressure of air/fuel mixture in intake manifold.
	CANISTER PURGE SOLENOID AND FUEL BOWL VENT VALVE 	Normally closed solenoid valve controls vapors from canister to intake manifold. Opened or closed by signal from electronic control assembly during various engine operating modes.
	CANISTER PURGE VALVE 	Vacuum operated purge valve controls flow of vapors from carbon canister to engine.
	EGR AND THERMACTOR SOLENOID VALVES 	Operate as signaled from EEC to control EGR valve. May be similar in appearance to thermactor air control solenoid valves.
	EGR VACUUM LOAD CONTROL (WOT) VALVE 	Operated by vacuum signal from carburetor venturi port. At or near wide open throttle (WOT), interrupts vacuum to EGR valve.

1982 Exhaust Emission Systems

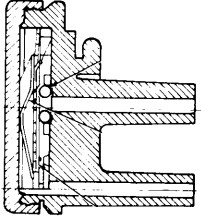
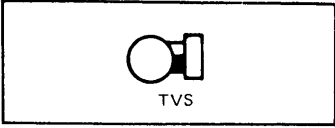
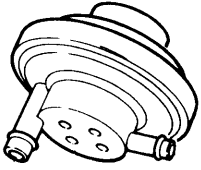
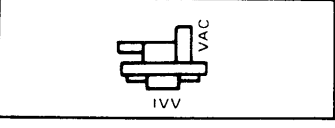
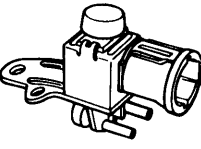
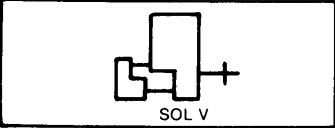
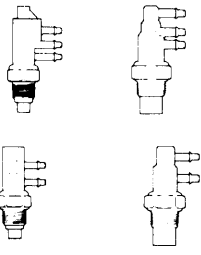
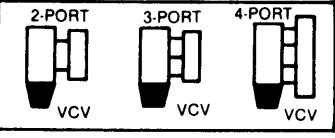
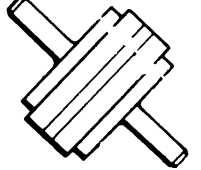

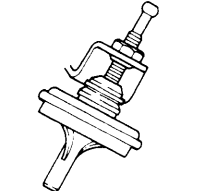
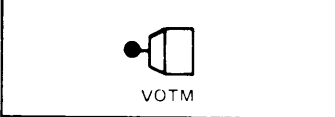
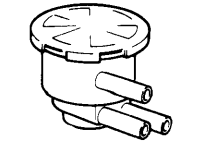

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FORD MOTOR CO. EMISSION COMPONENTS (Cont.)

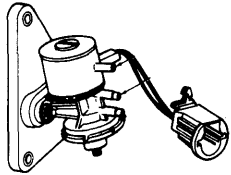
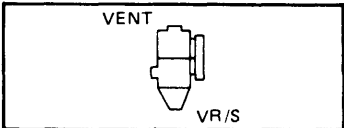
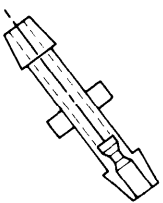
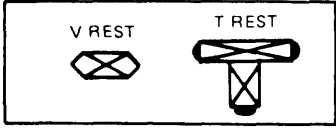
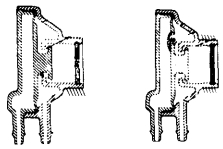
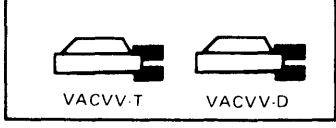
COMPONENT AND SYMBOL		OPERATION
	EGR VALVE POSITION (EVP) SENSOR	Attached to EGR valve assembly, indicates position of EGR valve to EEC.
	EGR VENTURI VACUUM AMPLIFIER (VVA) 	Uses relatively weak vacuum signal from venturi to control EGR valve. Contains a check valve and a relief valve that opens whenever venturi vacuum signal is equal to or greater than manifold vacuum.
	ENGINE COOLANT TEMPERATURE (ECT) SENSOR	Threaded into tube at right front of intake manifold. Detects coolant temperature and supplies information to Electronic Control Assembly (ECA).
	EXHAUST GAS RECIRCULATION (EGR) VALVE 	Operated by engine vacuum directly or as signaled by EGR vacuum solenoids. Admits exhaust gas to the combustion cycle, lowering combustion temperature and reducing generation of nitrous oxide (NOx). In addition, EEC models use an EGR cooler to reduce EGR gas temperatures.
	FUEL VACUUM SEPARATOR 	Used in vacuum system to prevent migration of fuel to distributor vacuum motor.
	HOT IDLE COMPENSATOR 	Bimetal spring causes air to be bled into intake manifold during extreme hot engine and idle operation. Engine idle speed also increases and results in engine cooling.
	MICROPROCESSOR CONTROL UNIT (MCU)	Microprocessor-based module is programmed to interface with various types of sensors, switches and actuators to perform engine control functions.

1982 Exhaust Emission Systems

FORD MOTOR CO. EMISSION COMPONENTS (Cont.)

COMPONENT AND SYMBOL		OPERATION
	<p>TEMPERATURE VACUUM SWITCH (TVS)</p>  <p>TVS</p>	<p>Incorporates a bimetal disc to open or close vacuum ports. May be used with distributor, purge or EGR systems.</p>
	<p>THERMACTOR IDLE VACUUM VALVE (TIV)</p>  <p>IVV</p>	<p>Prevents excessive underbody temperature of exhaust system by diverting secondary air pump output during extended engine idling.</p>
	<p>THROTTLE KICKER SOLENOID VALVE</p>  <p>SOL V</p>	<p>Valve is normally closed and consists of 2 vacuum ports with an atmospheric vent and control bleed (optional). Outlet port is opened to atmospheric vent and closed to inlet port when de-energized. When energized, outlet port is opened to inlet port and closed to atmospheric vent. The optional control bleed is used to keep dirt and other materials out of the solenoid valve.</p>
	<p>VACUUM CONTROL VALVES (VCV)</p>  <p>VCV</p>	<p>Temperature operated vacuum switches of 2 or more ports. Utilize wax pellet or bimetal to either open or close vacuum ports. Normally mounted in some part of cooling system so that base is immersed in coolant. May be normally open or normally closed. One version includes an electrical vacuum switch at top end.</p>
	<p>VACUUM DELAY VALVES</p>  <p>VDV DV-TW</p>	<p>Inserted in vacuum lines to provide for gradual application or release of vacuum to engine or emission control devices. May be 1- or 2-way valves, depending on function and part of system affected.</p>
	<p>VACUUM OPERATED THROTTLE MODULATOR (VOTM)</p>  <p>VOTM</p>	<p>When vacuum is applied, plunger extends to vary throttle stop position.</p>
	<p>VACUUM REGULATOR</p>  <p>VRV</p>	<p>May be 3- or 4-port, used to control vacuum advance to distributor.</p>

FORD MOTOR CO. EMISSION COMPONENTS (Cont.)

COMPONENT AND SYMBOL		OPERATION
	<p>VACUUM REGULATOR AND SOLENOID ASSEMBLY</p> 	<p>Controls vacuum to the 6500 feedback carburetor on 2.3L engines. This assembly converts manifold vacuum to a variable vacuum output signal. The vacuum output signal is controlled by an electrical signal from the MCU module. It is used to vary the air/fuel ratio in the carburetor.</p>
	<p>VACUUM RESTRICTOR</p> 	<p>Orifice-type flow restrictor used in vacuum lines of various systems to control flow rate and/or timing to components.</p>
	<p>VACUUM VENT VALVES</p> 	<p>Control induction of fresh air into system to prevent accumulation of fuel vapors which could cause decay of vacuum diaphragms. May be vent valve only or combined vent valve and delay valve. Valves should be mounted with ports pointing downward.</p>