AT CHEVROLET IT'S THE:

The year of the diesel

The diesel, long a favorite powerplant for farm tractors and over - the - road trucks, comes into its own at Chevrolet in 1982.

One out of every two '82 Caprice and Malibu station wagons may be diesel - powered; one out of every eight Chevettes; one out of every six new front wheel drive Celebrities.

Twenty - five percent of the half - million - plus conventional pickups, Blazers and Suburbans Chevy expects to sell in 1982 could be diesel, and perhaps 50 percent of all LUVs.

Of 14 engine displacements Chevrolet offers in its 1982 cars and light - duty trucks, five are diesels. (Two more diesels are available in medium - duty Chevy trucks.)

"All together, more than 300,000 Chevrolets could be diesel - powered in 1982," said Robert D. Lund, Chevrolet's general manager and a General Motors vice president.

"That would make Chevy one of the largest suppliers of diesel - powered cars and light trucks in the world.

"But more importantly, it affords those Chevrolet owners a tremendous opportunity for fuel savings. Assuming a diesel's inherent fuel economy, those new Chevrolet diesels could save their owners more than 250 million gallons of fuel in their first year of operation."

Chevrolet's light - duty diesel lineup has expanded from a single 5.7 - liter V8 engine offering in 1979 to three car engines and two light truck engines in 1982.

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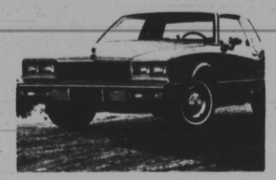
Newest among the Chevy diesels, the 6.2 - liter, V8 130 - HP truck engine, puts conventional pickups, Blazers and Suburbans into the 20 mile - per - gallon fuel economy class.

The engine is optional in all '82 one - half, three - quarter and one - ton pickups and Suburbans, in chasis - cabs and in four - wheel drive Blazers.

It is being produced at a new Chevrolet plant in Moraine, Ohio.

The engine makes use of premium components like forged rods and four - bolt crankshaft bearing caps, a Stanadyne pump, Ricardo combustion chambers and Bosch fuel injection.

It's the world's first diesel to be factory - timed by microwave. The procedure assures unprecedented precision and consistency of combustion and helps assure stringent emissions control.



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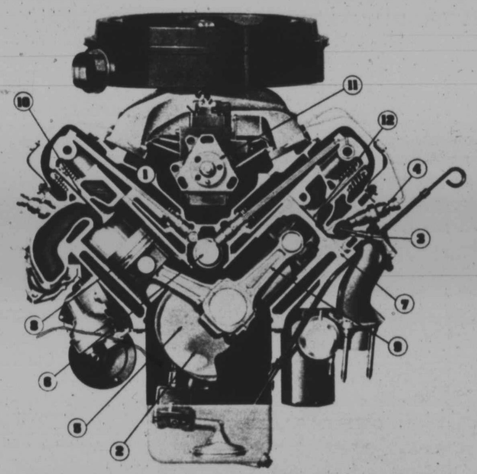
The 2.2 - liter four - cylinder diesel made its debut in Chevrolet's small LUV truck in May, 1981, and becomes the sole available powerplant in two - wheel drive LUVs. The two - wheel - drive LUV is expected to deliver an EPA - estimated 32 mpg in the city; 44 highway. The four - wheel - drive is expected to carry an EPA estimate of 28 city; 35 highway.



1. **SEVENTEEN-BOLT HEAD DESIGN.** For a tight gasket seal all around.
2. **FOUR-BOLT MAIN BEARING CAPS.** Provide rigid support for the crankshaft.
3. **RICARDO COMET V PRE-COMBUSTION CHAMBERS.** For high efficiency and low noise levels.
4. **PINTLE-TYPE INJECTOR NOZZLES.** With fuel lines made of high-pressure steel tubing.
5. **NODULAR IRON CRANKSHAFT.** With external torsional damper for reduced vibration.
6. **FORGED-STEEL CAMSHAFT.** For strength and durability.
7. **CAST ALLOY IRON CYLINDER BLOCK.** For overall strength. Cylinder walls are reborable.
8. **CAST ALUMINUM PISTONS.** Combine light weight and strength.
9. **FORGED HEAT-TREATED STEEL CONNECTING RODS.** For strength and rigidity.
10. **SILCHROME® STEEL INTAKE VALVES.** With full-chrome stems.
11. **STANADYNE® MECHANICAL DISTRIBUTOR FUEL SYSTEM.** Which feature a full mechanical governor with friction damper ring.
12. **STELLITE-FACED EXHAUST VALVES.** With full-chrome stems and positive valve rotators.

Chevrolet's first passenger car diesel, the 5.7 - liter V8 produced by GM's Oldsmobile Division, is now available in Malibu and Monte Carlo models. (This engine will continue to be available in all Caprice and Impala models.)

Rated 105 horsepower at 3,200 rpm, the engine is expected to deliver an EPA - estimated 22 mpg in the city, 32 highway.

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Chevrolet's first V6 diesel, the 4.3 is also produced by GM's Oldsmobile Division. It is expected to deliver an EPA - estimated 28 mpg in the city, 42 highway, when it is added later in the model year to the engine lineup for Chevrolet's new front - wheel drive family car — the celebrity.

Featuring roller hydraulic valve lifters, a serpentine belt system, a venturi - shaped prechamber and a torque - pulse compensator which helps smooth the power flow, the V6 also employs an aluminum oil pump body plus aluminum water outlet, intake manifold and cylinder heads.

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Sparsely available in late 1981, the 1.8 - liter four - cylinder is offered in the Chevettes everywhere this fall except California, where it will be available later in the model year.

The 51 - horsepower engine is manufactured by Isuzu. Coupled with a five - speed manual transmission, it is expected to deliver an EPA - estimated 40 miles per gallon in the city, 55 highway.

A single overhead cam design, it features a cross - flow cylinder head and an advanced light-weight Bosh distributor - type fuel pump and injection system.

Buick Motor Division introduced the electronic touch climate control system on its 1980 Electra and LeSabre, and 1981 Riviera models, and has expanded its usage to the Regal for 1982. This system electronically regulates in-car temperature, regardless of outside temperature and conditions.

The electronic touch climate control unit features a smooth face control panel. All buttons, dials, switches, and levers have been eliminated. In their place are temperature and operation mode markings which are simply touched to activate the unit.

Mode choices are economy (vented outside air), low and high automatic air conditioning and heating, bi-level, defroster, and off.

Light emitting diodes (L.E.D.s) illuminate the positions selected to indicate the mode and temperature.

Small electric motor-driven actuators are electronically signaled from the control panel. They move the mode valves and the temperature valve inside the air conditioner to the correct position in order to release and direct the properly heated or cooled air.

The temperature selections on electronic touch climate control range from 65 degrees to 85 degrees fahrenheit. When either extreme temperature is chosen, the temperature valve is positioned for either maximum cooling or heating.

Electronic touch climate control replaces all vacuum harnesses with electrical wiring which is both durable and capable of providing system diagnosis through feedback circuits.

If for any reason, a valve cannot move to its proper position, the control senses the condition and the affected L.E.D. will begin flashing. Touching the flashing L.E.D. will cause the control to try again to position the valve. If this cannot be achieved within 20-30 seconds, the L.E.D. will resume flashing, indicating that service is required, and the control will shut off power to the affected motor to prevent damage.

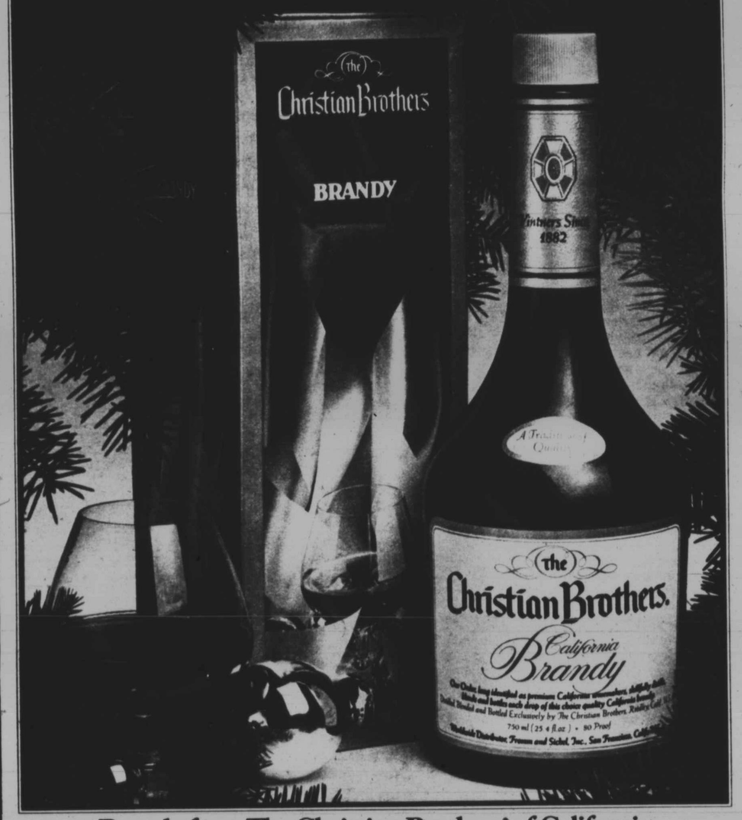
The mechanical and vacuum controls currently found in automatic temperature control systems are replaced in the electronic touch climate control unit by low current switches, power transistors and a microprocessor.

The control head sends electric current to all control components in the system, analyzes data from in-car and ambient air sensors, and uses mode and temperature preference data supplied by the operator. The microprocessor precisely positions all air mode valves and the temperature valve as called for by stored preprogrammed instructions.

The Regal system is very similar to that offered on the full size cars except the mode valves are vacuum rather than electrically actuated and the diagnostics are limited to the temperature controls. The vacuum actuators are controlled through electric vacuum solenoids. An electric motor moves the temperature valve inside the air conditioner to the correct position and vacuum actuators release and direct the properly heated or cooled air.

Another feature is the variable blower. This feature eliminates the instant rush of air when the blower initially turns on. Blower speeds start slowly and gradually build up to the desired level. After that, blower speed changes are barely noticeable as the system maintains the selected comfort level.

Give a great tradition.



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