

# Scans Unveils New Test System

By W. W. EDGAR  
And TIM RICHARD

Several dozen automotive engineers from all over the world trooped through the plant of Scans Associates, Inc., at 1000 Farmington Rd., Lavonia, and were impressed with what they saw.

Scans chose last week, when engineers were holding a national convention in Detroit, to unveil its new "short test engine evaluation system" — a plan and the equipment to identify engine abnormalities in three minutes at the end of the production line.

That would mean cutting in half the time it now takes to test engine carburetors, ignitions and combustions.

Presiding over the tour and dinner afterwards was Vernon Converse, president, and Lee Seymour, sales vice president, the two remaining owners of the original five founders of Scans.

"WE'RE WITH you fellas at the end of the production line," they told the visitors as they displayed their built-order equipment.

Many salesmen and engineers from among Scans' 105 employees helped demonstrate

that their equipment is not only easy to operate but tells builders precisely what's wrong with a malfunctioning engine.

The method was developed by Clayton Manufacturing Co. of El Monte, Calif., a firm that's in the service market. What Scans did was adapt the equipment to the new engine manufacturing market.

Clayton, according to that firm's E. L. Cline, found that carbon monoxide and hydrocarbon emissions were the best indicators of engine malfunctions — far better than vibrations, pressures, temperatures and noise levels.

Under the "short test," an engine is warmed up for about two minutes, under a "load" that is supplied automatically, and then run at three speeds: Low cruise, high cruise and idle.

If the readings on the dials fall within tolerable limits, the engine is accepted. If not, it is pulled off the manufacturing line in an operation that requires only a brief minute.

TO DEMONSTRATE the testing machines, Scans engineers introduced six per cent and 12 per cent malfunctions in the test engines. The latter

malfunction is equal to one sparking misfiring on a six cylinder engine. Other induced malfunctions were a bad carburetor and an exhaust valve leak.

With each malfunction, hands leaped across dials on the test equipment, indicating intolerable levels of carbon monoxide, hydrocarbons or both.

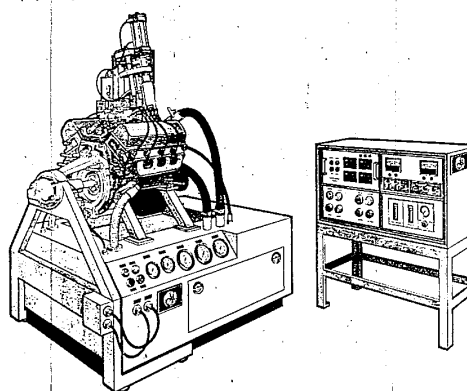
Scans is presently constructing a test mechanism for Ford's plant at Lima, Ohio, where 300 Pinto engines a minute will be tested.

Of Scans' own employees, Converse said: "We look for good mechanics and engineers. They don't have to be specialists. We train our own."

Fully a third of the local employees are in the engineering department.

Because of the testing equipment company's success over the past five years, it has branched out to Europe and maintains a subsidiary, Scans International, S.A., in Leige, Belgium.

"We are doing business in almost every country in Europe," said Converse, "and also have several outlets in Japan."



ARTIST'S CONCEPTION shows a manually operated test stand using the Scans "short test" engine evaluation system. Console at the right displays readings of carbon monoxide, hydrocarbons and revolutions per minute.

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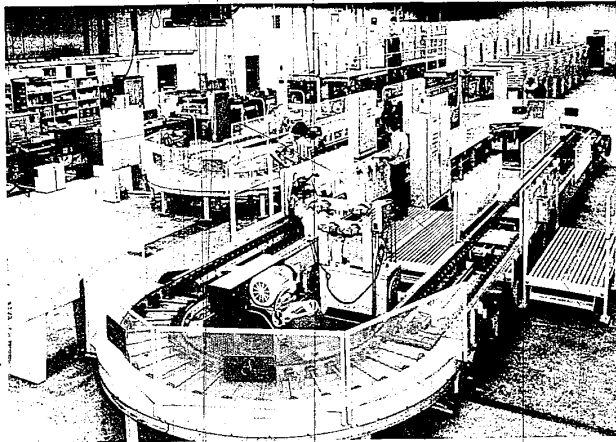
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THIS IS A PORTION of Scans' transfer line for testing four-cylinder engines automatically. Larger loop at the rear does the initial testing of engines for acceptability. Smaller conveyor in foreground is a feeder loop for loading and unloading; it can serve two such lines in an automobile engine manufacturing plant.

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