



ENGINE ASSEMBLY: An automated guided vehicle from BT Industries is easily adjusted by a Saab worker for ergonomic assembly.

—Photos by PHILIP BURGERT

New High-Tech Engine Plant Failing to Pay Off for Saab

By PHILIP BURGERT

SODERTALJE, Sweden—The financially troubled Saab Automobile AB joint venture of Saab-Scania AB and General Motors Corp. is falling far short of profitability in its high-tech, year-old engine plant here because sales volumes have failed to match projections for the expansion.

Company officials acknowledged in interviews that the decision made in the mid-1980s to build a facility dedicated to one size range of engines may have been a mistake in light of lower than expected market demand and increasing need for more flexibility in production.

The joint venture, which said earlier this month it had lost 995 million krona (\$162.8 million) in the first four months of 1990, was formed at the first of the year in part to give both Saab and GM flexibility in production and marketing in both the U.S. and Europe.

Lars Wrebo, manager of manufacturing for engine production, told a press group touring Swedish manufacturing operations under Swedish Trade Council sponsorship that the plant was meeting the company's goals for reducing the high absenteeism found in many Swedish factories but was still below productivity goals because of low volumes.

The company's car sales volume peaked at 134,100 in 1987 before dropping to 109,500 last year, 31,300 of which were to U.S. buyers. Wrebo noted that sales of between 160,000 and 170,000 had been forecast for last year at the time the plant was being planned.

The Sodertalje plant is designed to assemble 50,000 2.3-liter engines annually with two shifts but is currently producing at a rate of about 30,000 engines a year. At current production volumes, Wrebo said, the company's 700 million krona (\$114.5 million) investment brings the capital equipment cost per engine block to about 1,000 krona (\$164).

Another 130 million krona (\$21.3 million) is currently being spent for a new crankshaft workshop, which is scheduled for completion late this year.

Saab Automobile, headquartered in Trollhattan, Sweden, has more than 1,000 employees in this Stockholm suburb, less than 200 of which work in the new engine plant. Because of automation in the new plant, the facility has been able to operate

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with about 25 percent fewer employees than an older engine manufacturing facility where the company continues to make 2.0-liter engines, Wrebo said.

The new plant is currently gearing up for introduction this fall of a turbocharged version of the 2.3-liter engine. "Saab very much believes in turbocharging," Per Gillbrand, manager of drive line concepts and automotive electronics, said.

The plant's assembly operations make heavy use of the off-line, automated guided vehicle-based assembly techniques pioneered 20 years ago by Sweden's other car builder, AB Volvo, as part of its effort to improve the working environment and provide workers with ergonomic work positions.

The new plant has thus far been successful in cutting the chronically high absenteeism of Swedish industry, which averages close to 30 percent. Compared with Saab's old facility, the new engine plant has seen a 50 percent reduction in absenteeism in the first year.

Wrebo noted that since work-related injuries show up over time the full effect of the ergonomic systems developed for the plant could not yet be measured.

Cleanliness and low noise levels are emphasized with a maximum of 50 decibels of noise being well below Sweden's 80-decibel factory noise regulation. The plant was designed so daylight enters the

tests of all engines.

The plant also makes use of a work group concept in which the employees of each of the plant's areas, including machining operations and assembly, are responsible for their own production

scheduling, quality control and material handling.

"We think this is the way to achieve more motivated personnel," Wrebo said.

Suppliers to the plant's 140 million krona (\$22.9 million) aluminum cylinder head machining facility included Italy's

Comau SpA, a unit of Fiat SpA; West Germany's Cross Europa-Werk GmbH, a unit of Cross & Trecker Corp.; West Germany's Krauss-Maffei AG; Sweden's ABB Robotics AB; and West Germany's Ex-Cell-O GmbH.

Among suppliers to the 320 million

krona (52.4 million) cast-iron cylinder block facilities were Comau and Cross, while suppliers to the 195 million krona (\$31.9 million) material-handling equipment, engine assembly and engine testing hall included Sweden's BT Industries AB, Eijvan Wahren AB and AB MTH Systems.