Ford's 'quest for quality' is project of $200 million

By DELL McCLOY

Ford Motor Company has embarked on a massive quest for quality, committing upward of $200 million to the project over the next four years.

Much of the expenditure is earmarked for expansion and technological updating at the company's massive research and engineering center in Dearborn.

The commitment appears to be more than cosmetic.

That much was made certain at a recent news conference by none other than John McDougall, the firm's newly-appointed executive vice president for North American operations.

The deadline for the expansion of facilities and equipment to be operational is 1982, McDougall said.

Ford has already nearly doubled its volume of vehicle testing over the past five years, according to the executive, a program which has resulted in a 25 per cent increase in the number of test center employees and a 32 per cent hike in total cost.

Test volume will be considerably increased under the new expansion program, he said.

McDougall and other Ford executives admitted that the quality crisis has been spurred by headlines about recalls and by encroachment by foreign manufacturers into the domestic sales market.

Citing the earlier recall program involving Ford's Pintos because of exploding gasoline tanks in vehicles which were hit from behind, McDougall and other executives said expanded testing and information-gathering systems might have helped avoid the disastrous publicity.

McDougall admitted that some Japanese and German imports are superior to domestic offerings, "in certain areas." But he refused to be led into a discussion of the relative merits of United States employees versus foreign employees.

He said "advances in employe motivation and an increase in employe participation" are "the keys to the Japanese and German levels of product excellence that we are determined to match and eventually exceed."

One example of Ford's commitment to what he called "durability, quality and reliability" will be in evidence at the company's Livonia transmission plant where an abrasive machining process will take the place of the conventional milling process on a portion of the job of building the component.

"From a quality standpoint, this process will eliminate any chipping problem on wall surfaces and provide better flatness control for improved sealing--two 'historic repair' areas with transmissions," he said.

A tour of the tunnel-connected buildings on the sprawling research complex indicated that many of the proposed testing innovations are already being initiated.

Virtually thousands of component tests are being conducted on an around-the-clock basis as technicians search for metal fatigue, ill-fitting parts, methods of improving structural integrity, etc.

For example:

Various power door lock designs are opened and closed 80,000 times to test reliability of mechanisms and components.

Truck frames, with simulated loads, are subjected to shakes and bumps of a nature they wouldn't receive in two projected life times to test metals, welds and other components.

Machines subject doors of cars to thousands of pounds of pressure to test metal panels, glass and body strength.

Vehicles are backed into solid objects in order to test the reliability of bumper systems and body components.

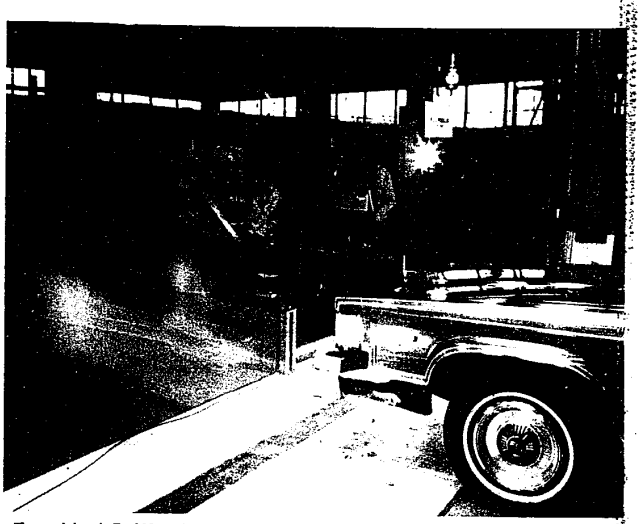
Levers, switches, cables and gears are subjected to controlled movement by machinery designed to simulate a variety of actual use conditions.

And so on.

The key to the improved testing techniques, according to Ford executives, is the growing use of computerization. There are a variety of tests that cannot be simulated over the actual lifetime of a car by huma"? beings.

Computers, however, can take the information sent out by the tests and compile it in a form that can be readily studied to determine if alterations in design or material are necessary.

To meet that demand, a new building--the sole purpose of which is to house the growing number of computers being used in the research and reliability program--is being erected on Rotunda Drive in the Ford complex.



The pendulum in Ford Motor Company's body-testing laboratory, seen here as a blur, never misses the mark. The five-miles-per-hour impact test is used to evaluate the integrity of bumper systems in low-speed collisions.

A microcomputer-based mobile system is being used by Ford to collect data in durability testing. Engineer James Grupczynski can order the self-contained instrument to measure, process and store road test data. The 'brains' of the system, the microprocessor, rests on Grupczynski's middle finger in the lower picture, while one of its many computer programs is in the memory chip on his ring finger.