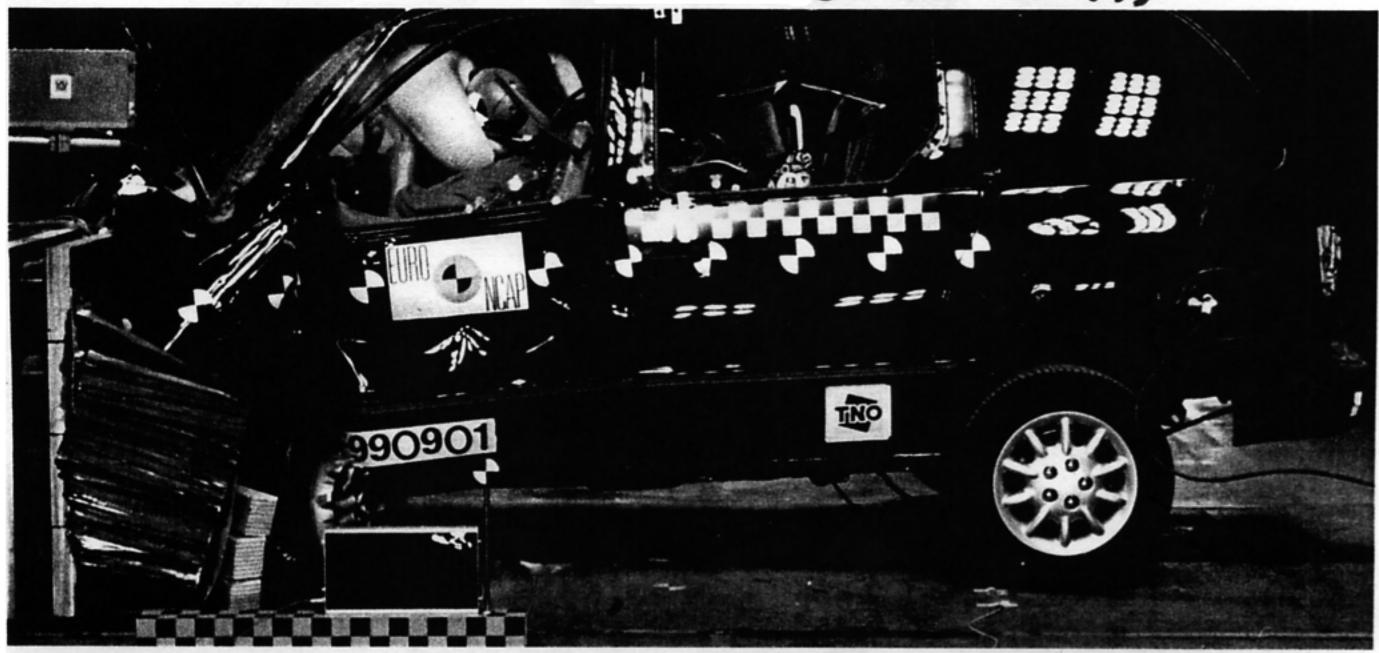
T A B

22

P.14 AUTOCAR MAGAZINE 30 JUNE 1999



Chrysler Voyager singled out for poor performance in latest Euro NCAP crash tests; it fared so badly in frontal impact that it was not awarded a score

Voyager gets zero in crash test

hrysler's Voyager has been given the lowestever score in the latest round of Euro NCAP crash tests.

The Voyager, the UK's second best-selling MPV, was given a 67 per cent rati given a zero rating in a 40mph making it the best in class.

head-on collision – which means that there was virtually no chance of escaping lifethreatening injuries. By contrast, the Renault Espace was given a 67 per cent rating, making it the best in class. Other poor performers included the new Mitsubishi Space Wagon and the discontinued Vauxhall Sintra, which received 24 per cent and 21 per cent respectively. NCAP safety experts said that the



Top-scoring Espace awarded four stars in frontal impact tests; overall score 84 per cent

HOW NCAP'S DUMMY DRIVERS FARED CHRYSLER VOYAGER RENAULT ESPACE Front and side impact rating Front and side impact rating Pedestrian test rating ***** Pedestrian test rating ★★☆☆ **Test scores: Front** 0 per cent Test scores: Front 67 per cent Side 89 per cent Side 100 per cent 45 per cent Overall Overall 84 per cent Weak Poor Good Adequate Marginal

US NEWS HOWARD WALKER

Volkswagen's Beetle plant in Mexico escaped serious damage in last week's earthquake, which measured 6.7 on the Richter scale.

Chrysler's first museum opens in Detroit in October. The Walter P Chrysler Museum will have 75 cars and trucks from the company's past.

Fender-bending drivers should avoid the Mitsubishi Shogun. In US

insurance tests in which 4x4s were crashed at 5mph, the Shogun suffered \$6242 (£3950) in damage, the Merc ML320 just \$2918 (£1845).

Hummer has released a list of its celebrity owners. Boxer Mike Tyson has six, while movie star Arnold Schwarzenegger owns five. Others include tennis champ Andre Agassi, writer Tom Clancy and actor James Earl Jones.

Parts threat from BMW

BMW chairman Joachim Milberg has warned that Rovers will use more imported parts if the pound stays at its current high level.

Milberg, speaking after

BMW secured a £152 million Government grant to save Longbridge, said the Rover 75 had only 75 per cent British parts against the 600's 85 per cent.

RMW will invest £3 billion

BMW will invest £3 billion in Rover in the next five years, starting with the 200 and 400 replacements.

Milberg: sterling too strong



MINIVANI.SCR
7/Ort/Triay/Goldman/Shaffir
Chrysler Air Bag Deaths
Evening News 5/17/99

VO: THIS IS THE CRASH TEST THAT STUNNED FEDERAL REGULATORS. THE PASSENGER DUMMY IN THIS 1997 CHRYSLER MINIVAN SUSTAINED LIFE-THREATENING INJURIES -- INJURIES CAUSED BY THE VEHICLE'S AIR BAG.

NOW, CBS NEWS HAS LEARNED, THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, HAS COMPLETED 11 ADDITIONAL TESTS OF CHRYSLER MINIVAN AIR BAGS. AND IN MORE THAN HALF OF THOSE TESTS, THE PASSENGER SIDE AIR BAG CAUSED WHAT WOULD BE CATASTROPHIC INJURIES.

CHRYSLER CHALLENGES THE GOVERNMENT'S TESTING METHOD, CLAIMING THE SMALL DUMMY USED ISN'T YET PERFECTED...AND CHRYSLER CLAIMS ITS OWN TESTS SHOW THE AIR BAG IS SAFE.

(GRAPHIC #1)

SUSAN CISCHKE, CHRYSLER'S VICE PRESIDENT OF SAFETY, SAYS "WE DON'T BELIEVE THERE IS ANYTHING WRONG WITH THE AIRBAG SYSTEM."

(GRAPHIC #2)

BUT, ALSO TROUBLING TO REGULATORS... IS WHAT THEY FOUND WHEN THEY TOOK A SECOND LOOK AT ACTUAL ACCIDENTS. THE GOVERNMENT'S SPECIAL CRASH INVESTIGATION HAS FOUND OF THE 22 AIR BAG RELATED DEATHS AND SERIOUS INJURIES OF PASSENGERS IN MINIVANS....20 OF THEM HAVE BEEN IN CHRYSLER MODELS, BUILT BETWEEN 1994 AND 1996.

Ditlow walk: NATS

"THE BAG IS TOO AGRESSIVE...."

VO: TWO AND A HALF YEARS AGO CLARENCE DITLOW, AN AUTO SAFETY ADVOCATE....

(GRAPHIC #2)

ASKED THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION TO INVESTIGATE THE CHRYSLER AIR BAG. AT THE TIME THERE HAD BEEN NINE PASSENGER FATALITIES. THE REQUEST WAS TURNED DOWN.

SOT/DITLOW 28-10 THE GOVERNMENT NOW HAS THE DEATHS IT WANTS. THE GOVERNMENT SHOULD NOW ORDER CHRYSLER TO DO A RECALL IF CHRYSLER WON'T DO IT ITSELF

NATS: ORR AND SANDERS WALKING

VO: ROB SANDERS ALSO WANTS CHRYSLER TO MAKE CHANGES. HIS DAUGHTER ALLISON WAS KILLED IN 1995 IN A LOW SPEED COLLISION INVOLVING THE FAMILY'S CHRYSLER MINIVAN.

THE SEVEN YEAR OLD HAD SLIPPED OFF HER SHOULDER HARNESS TO REACH FOR THE RADIO WHEN THE CRASH HAPPENED. THE AIR BAG EXPLODED IN ALLISON'S FACE.

SOT/ROB SANDERS

2105 AND THEN I TURNED OVER AND LOOKED AT ALLISON AND SAW THAT SHE WAS UNCONSCIOUS AND I WAS JUST SHOCKED AND HORRIFIED. I COULDN'T UNDERSTAND WHY SHE WOULD BE IN THAT KIND OF CONDITION IN SUCH A MINOR FENDER BENDER ACCIDENT.

VO: SANDERS IS NOW SUING CHRYSLER, ALLEGING THAT A DEFECTIVE AIR BAG SYSTEM CAUSED HIS DAUGHTER'S DEATH.

BUT, CHRYSLER SAYS, LIKE ALLISION SANDERS, NEARLY ALL OF THOSE KILLED WERE UNBELTED OR IMPROPERLY BELTED. CHRYSLER ALSO POINTS OUT IT HAS TWO THIRDS OF ALL MINIVANS ON AMERICA'S HIGHWAYS AND THEREFORE FACES A STATISTICALLY HIGHER PROBABILITY OF ACCIDENTAL DEATHS.

ALSO, CHRYSLER SWITCHED TO A LESS FORCEFUL PASSENGER SIDE AIR BAG DURING THE 1997 MODEL YEAR. AND WITH OTHER AUTOMAKERS, IN 1998, BEGAN USING AN EVEN LOWER-POWERED AIR BAG.

ORR CLOSE:

BUT, NEARLY TWO MILLION OLDER CHRYSLER MINIVANS, WITH THE ORIGINAL, MORE POWERFUL, AIR BAGS REMAIN ON THE ROAD. AT THIS POINT, CHRYSLER SAYS THERE IS NO NEED FOR A VOLUNTARY RECALL. BUT SOURCES SAY THE GOVERNMENT IS CLOSE TO DECIDING WHETHER TO LAUNCH A FORMAL "DEFECTS" INVESTIGATION THAT MAY ULTIMATELY FORCE THE ISSUE. BOB ORR, CBS NEWS, WASHINGTON.

VIA SATELLITE



FRIDAY, DECEMBER 15, 1995

Business Trave

By Rhonda Richard

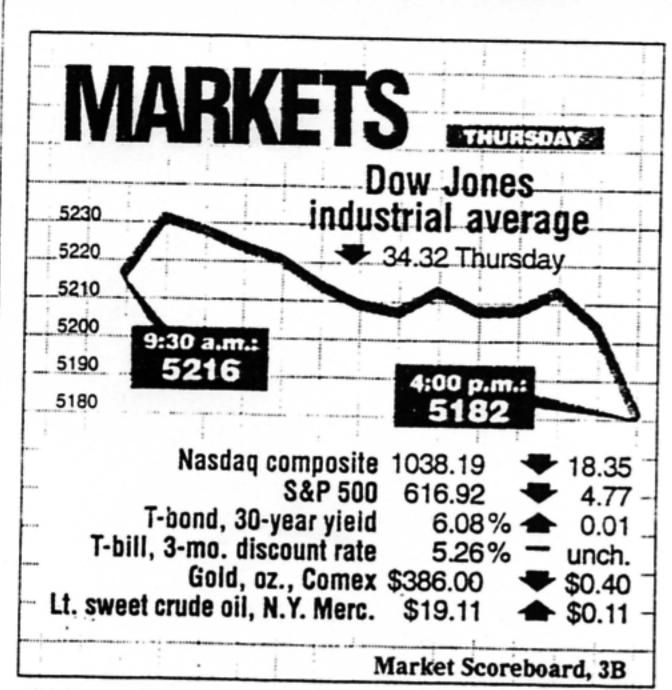
'Round the Wor'
resumes Pan Am's o
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India; London; and N

Weather watch: ice are expected todaparts of the Northeas

Holiday rates: H rates ranging from \$ a night on some room

MONEYLINE

A QUICK READ ON THE TOP MONEY NEWS OF THE DAY



CHIP TRADE: Foreign companies' share of the Japanese market for computer chips hit an all-time high of 26.2% the third quarter, the Clinton administration said Thursday. The White House said that is proof a controversial 1986 U.S.-Japan semiconductor trade agreement is working and should be renewed. The old record: 23.7% in fourth-quarter 1994. Japan says the pact is unnecessary and amounts to managed trade.

CRASH TESTS: Chrysler's Dodge Grand Caravan received the lowest score for driver protection among six 1996 minivans tested in 35-mph frontal crashes by the National Highway Traffic Safety Administration. The safety agency rates crash protection from one to five stars, with five the best head-and-chest protection. In results released Thursday, the Chrysler minivan scored three stars for driver protection and four for passenger. Top minivans: Ford Windstar, with five stars for drivers and passengers in an earlier test. The Ford Taurus sedan and Dodge Neon each received four stars both for driver- and-passenger protection. Lowest: the Toyota Tacoma pickup, at two stars for drivers and three for passengers. Vehicles are required to pass 30-mph crash tests. NHTSA conducts the higher-speed tests to help consumers compare vehicles.

News

Microsoft and Gen and an interactive will begin operation for a 50% stake in and MSNBC Online

NBC News

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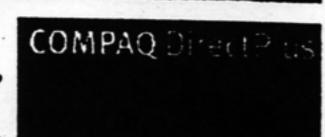
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March 2, 1999

Regulators Raise Questions on Air Bags As Minivan Study Has Surprise Result

By ANNA WILDE MATHEWS and JEFFREY BALL
Staff Reporters of THE WALL STREET JOURNAL

Federal auto-safety regulators who set out to determine whether trucks pose an outsized hazard on the road scored another hit on air bags instead.

U.S. regulators said Monday that during crash tests involving several different types and makes of vehicles, staged last summer to gather data about the hazards light trucks pose to cars in collisions, a 1997 Dodge minivan air bag deployed with such force that a small female dummy seated on the passenger side showed far-worse-than-expected results for neck injury.

Safety experts said the outcome could well be equivalent to a broken neck in a real woman.

The disclosure -- which surprised officials of <u>DaimlerChrysler</u> AG, maker of the Dodge miniva -- partly overshadowed the National Highway Traffic Safety Administration's findings about car-truck crash safety. The government said its tests confirmed that light trucks tend to do more damage in accidents, but concluded that more study is needed before any regulatory action. A separate study from researchers at the University of Michigan concluded that 2,000 people died in 1996 because their cars were hit by a truck instead of a car with more forgiving crash performance.

Interest in the issue was spurred by the increasing numbers of light trucks and sport utility vehicles on the road.

But agency officials said the surprising data from the air-bag incident have caused them to take immediate actions, launching new research into **Chrysler** minivan air bags. The agency said it expects to wind up the probe this summer. One question is whether the result was caused by a quirk in the design of the dummy.

The passenger air-bag system used in the 1997 model was also used in 1996, DaimlerChrysler said, but not in 1998 or 1999, when federal regulations changed to allow less-powerful air bags. The company

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Corrections

sold about a million of the 1996 and 1997 minivans.

Order in Philadelphia

The announcement comes at a bad time for DaimlerChrysler, which has long emphasized the safety of its minivans to families. Earlier last month, a Philadelphia jury ordered the company to pay an estimated \$63.6 million to Pennsylvania owners of Chrysler cars from the late 1988, 1989 and 1990 model years whose driver-side air bags could burn a driver's hands when the bags deployed. The company plans to appeal.

The NHTSA announcement, made at the Society of Automotive Engineers conference in Detroit, also comes as DaimlerChrysler and its competitors are pushing harder than ever to develop more-sophisticated technology to alleviate public concerns about air bags.

Air bags deploy in a collision when an explosive charge inflates a fabric bag, and they have saved thousands of lives. But high-powered air bags also have killed 125 people, mostly children and small adults, since 1990. Both Ford Motor Co. and General Motors Corp. have announced plans to introduce so-called smart air-bag systems that would pose less threat to children and small adults. Federal regulators are moving to mandate such systems for all light vehicles.

But in the meantime, auto makers face risks of litigation and potentially costly recalls related to previous-generation airbag technology, which was effectively mandated by the government.

A spokesman for DaimlerChrysler, which was only informed of the test outcomes Monday, said the company was "outraged that NHTSA would wait almost eight months to release these results." The spokesman said the company is "taking NHTSA's concerns very seriously, and we share their concerns." He said it would be "speculative" to gauge the test's effects on the company's liability.

Petition in 1996

Safety advocates filed a petition in 1996 for a safety investigation of the air bags in Chrysler minivans, along with two models from other companies. The NHTSA turned down the request by the Center for Auto Safety, which centered on the air bags' tendency to deploy in low-speed crashes.

If a systematic problem were eventually found with the passenger-side air bags, a recall and replacement would likely be very costly, because of the complexity of the air-bag system.

In the test that caused the recent result, the NHTSA was ramming the minivan into the left front of a midsize sedan. Both vehicles were moving at 35 miles per hour, and the dummies in the front seat were wearing seat belts. Federal regulators have proposed that auto makers be required to score 1.4 or lower on the neck-injury criteria; the minivan scored 4.4 on the test.

DaimlerChrysler's competitors cautioned against reading too much

into the NHTSA announcement. "That could just be a bad test," said a Ford spokeswoman, who added that Ford is "very comfortable" with the safety of its own air-bag systems. At GM, Bob Lange, director of safety engineering, assailed the way NHTSA released the results. "It's difficult to be blindsided by a test result that, on its face, appears to be pretty negative."

The studies on crashes involving cars and trucks confirmed earlier NHTSA findings that the weight and design of a light truck affect how much damage it does to a car. Heavier trucks, with front ends that are less likely to crush in a crash, do more harm. Moreover, the location of the crash has an effect: A front-to-side impact does more damage than a front-to-front accident.

In a separate study released Monday at the Detroit conference, researchers found that three-point seat belts provided the best protection for pregnant women, while a powerful air bag could pose risk to the fetus. The researchers, from the University of Michigan, estimated that 1,500 to 5,000 fetal losses occur each year in the U.S. because of all auto crashes.



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Article 7

Return to Headlines

NEWS

'Both Air Bags Exploded' / Man says he turned van's key, and in a flash he was hurt Merle English. STAFF WRITER

04/03/99 Newsday QUEENS Page A21 (Copyright Newsday Inc., 1999)

A Flushing resident who says dual-side air bags exploded simultaneously Thursday when he turned the key in his minivan's ignition, forcing him from the vehicle and causing injuries, is planning to sue the carmaker.

Mohinder Singh, 21, said Friday he will file a \$5-million lawsuit in State Supreme Court on Monday against DaimlerChrysler Corp., alleging negligent manufacture of his 1996 Dodge Caravan and product liability.

"It's obscene to think that something that's supposed to protect you does harm," said Mason-Blake Pimsler, Singh's attorney. "Air bags are to be deployed only in a total impact, never when you turn a car on."

According to Singh, the minivan was parked in front of a courier business at 125 E. 23rd St. in Manhattan, where he works. "I got into the car, turned the ignition to heat up the car, and both air bags exploded," he said in a telephone interview.

The explosion knocked him through the driver's-side door, Singh said, and he became unconscious for a few minutes. Emergency Medical Service technicians were called and he was given an ice pack, he said, but he told them he wished to see a private doctor.

Singh, who went to the doctor Friday, said he suffered injuries to his neck, head, back and right wrist.

"I cannot even sleep at night," he said. "I hurt now. My fingers are tingling." He said "the whole dashboard exploded" and pieces of plastic hit him.

"I'm so scared to drive my car," Singh said.

DaimlerChrysler was closed Friday in observance of Passover and Good Friday; no one there could be reached for comment.

Singh said he has had the vehicle regularly serviced by Dodge dealers, most recently about three months ago. The bags never deployed before, he said.

The National Highway Traffic Safety Administration has been investigating more than 800,000 Dodge Caravans from model years 1994 and 1995. There were 28 consumer complaints, most involving driver air bags that blew open just after the driver turned the ignition key.

The status of the investigation could not be determined Friday.

Newsday Photo / Ken Sawchuk - Mohinder Singh, left, and his attorney, Mason-Blake Pimsler, with one of the Dodge Caravan air bags that Singh says exploded Thursday as he turned the key in the minivan's ignition. Singh, who says he was injured, is planning to sue the carmaker.



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Automotive News.

DECEMBER 12, 1994

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\$80/YEAR; \$2/COPY

news

Japan importer reports loss

TOKYO — Yanase & Co.
Ltd., Japan's largest auto
importer, reported that it has
lost money for the second
straight year as it goes
through a painful
restructuring.

Yanase, which imports and distributes vehicles from Mercedes, GM North America and Opel, said it had a net loss of 6.27 billion yen, or \$63 million, in the fiscal year through September. Revenue dropped 9.7 percent from a year earlier to \$3.8 billion.

The importer slipped into the red for the first time in 61 see LATE NEWS, 2

Chrysler races minivan fixes

Crash-test woes stall prototypes

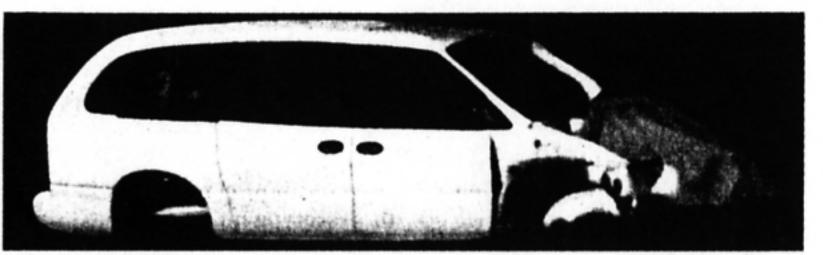
JOSEPH BOHN

Truck Editor

Chrysler Corp. is racing to put together a production-viable prototype of its new 1996-model minivans, after crash tests in mid-October and in early November showed the new minivans did not meet Federal Motor Vehicle Safety Standard 208.

FMVSS 208, a major standard, requires that an unbelted test dummy withstand a 30 mph front impact without serious injury.

Any substantial production delays could prove costly as Chrysler prepares its 1996 minivans to compete with the Ford Windstar in defense of Chrysler's minipular sales crown.



KPG PHOTOGRAPHY

This computer-enhanced shot of a body shell gives a good indication of the overall styling of Chrysler's 1996 minioan.

With only nine weeks til the planned Feb. 13 production launch at St. Louis, Chrysler is on a tight schedule to comply with the standard using new componentry. In late November, the company moved back Job 1 dates by 1½ months at its two other minivan plants.

Since Nov. 4 Chrysler has put together engineering prototypes that passed FMVSS 208 in three crash tests. Another test was slated for Chrysler's Chelsea, Mich., proving grounds last Friday. But the modified vehicles require new componentry, some of which must be tested and tooled.

Chris Theodore, general manager of Minivan Platform Engineering, says development of the new minivan, code-named NS, is running ahead of some of Chrysler's previous new-model

programs. But a hot topic among minivan engineers at a Dec. 6 Minivan Platform meeting was whether engineers will need to work Christmas Day.

Theodore says he doubts the engineers will work Christmas Day. But he says he has told his engineering team not to plan any extended vacations over the holidays for the next year.

12 AREAS EFFECTED

According to an internal status report, as of Dec. 1, Chrysler engineers recommended changes to design and components in 12 major frontal areas of the NS to enable it to pass FMVSS 208.

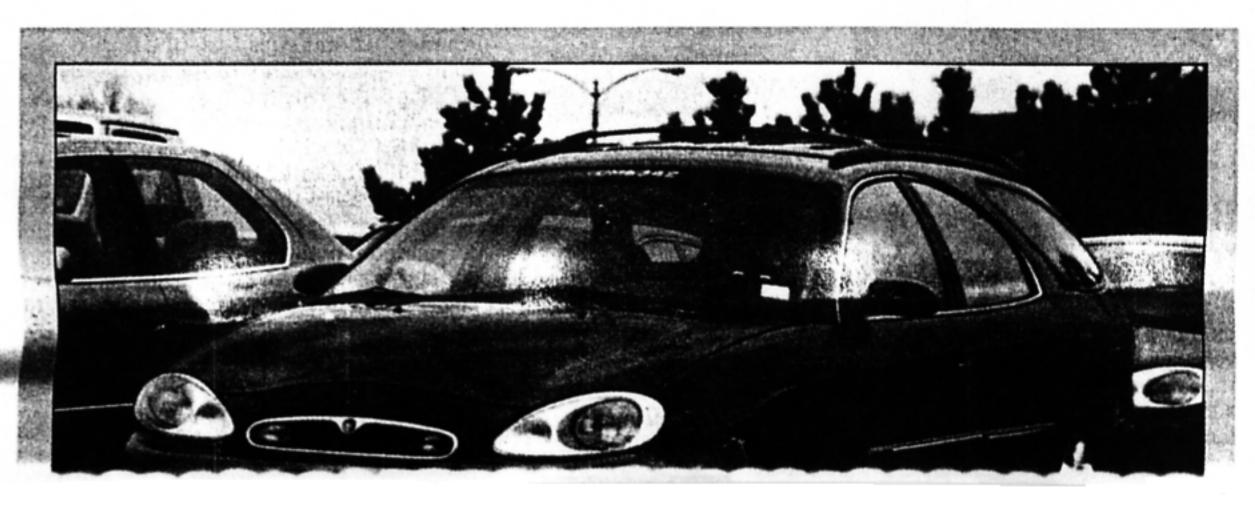
But Theodore says, "Everything we are doing is known and timed out and will be verified before production."

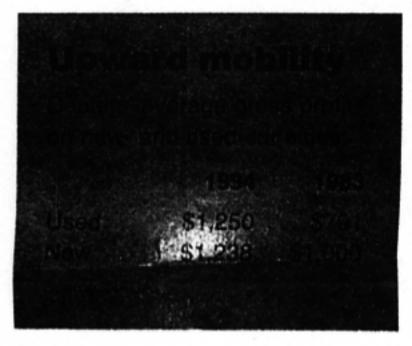
He won't say if the production see MINIVAN, 33

Ford cuts Mark VIII price tag in Calif.

\$4.475 jump start may go national

MARY CONNELLY





Dealers reap more profits

ers sell roughly 1.2 million program venicles annuall

According NADA, the rise in used-vehicle profits sults from dealers retailing more late-model used cars and selling at wholesale more older, less-profitable vehi-

profit in November on low-mileage, used vehicles was \$1,418, compared to \$987 ir gross profit for the same models new.

The \$400 difference is due to the growing consumer demand for used cars because the

shed, so buyers know how much they can eat up a dealer," said Jacobs. "But used-car prices aren't published, so dealers have a better chance of making higher grosses."

Two- and three-year leases of more than a million vehicles will expire year; up to 700,000 of these vehicles will be available for dealers to sell.

MINIVAN

Testing woes delay Chrysler

continued from PAGE 1

startup at St. Louis will be set back for a second time. St. Louis had originally been slated to start regular dealer production in January, but earlier this year the date was moved back to Feb. 13.

"We don't confirm dates," says Theodore. But according to Chrysler's internal report, the company will delay startup of NS production at Windsor until next July and at the Graz, Austria, plant until September in order to give the St. Louis launch team more time to get the NS rolling.

TESTING HISTORY

Chrysler has done 17 prototype crash tests for various federal safety standards, according to an internal report. But in a crucial eight-month period between January and mid October this year, it did not do any NS prototype crash testing for FMVSS 208. The failure of its two planned production prototypes caught engineers by surprise and set off the scramble to make the minivans comply.

The company first crash-tested two very early versions of the NS last December and January, but they were not intended as production models. Both passed FMVSS 208 requirements. In a Jan. 21, 1994 test of an NS equipped with a 2.4-liter four-cylinder engine and three-speed automatic transmission, the test dummy hit the airbag with a force of 41 G's, well within the government's limit of 60 G's and Chrysler's standard of 48 G's for impact deceleration without injury.

But, on Oct. 14, in its first crash test of a production-planned prototype — four months before Job 1 — the test dummy hit the steering wheel with a force of 69 G's, enough to crush its chest.

To double-check, Chrysler ran another crash test at Chelsea Nov. 4. This time, the dummy fared even worse, smashing the wheel with a force of 75 G's, according to an internal report.

Since then, the company has sharply stepped up its FMVSS 208 testing. It conducted three crashes from prototypes put together by its engineers that passed FMVSS 208. A fourth was planned last Friday.

Chrysler has made considerable progress in the last four weeks.

In tests Nov. 21 and Nov. 29, for example, dummies in the modified NS models crashed into a wall at Chelsea with a force of 44.6 G's and 47.8 G's, respectively.

Even so, Chrysler's crash testing for FMVSS 208 so far has been limited to long wheelbase models, equipped with a V-6 engine and four-speed automatic transmission. It still has to prove the crashworthiness of short-wheelbase NS models, equipped with the four-cylinder and three-speed automatic and models equipped with Mitsubishi's 3.0-liter in meeting FMVSS 208.

The long-wheelbase models are slated to be built first. They present the biggest problem because they are the heaviest. Having the flexibility to build a variety of short- and long-wheelbase models at all plants is a key part of the NS production strategy.

SAFETY CHANGES

Engineers have recommended changes to the front body, chassis, engine mounts, steering column, wheels, front seats and front bumper of the NS models to bring them into compliance with FM-VSS 208. Some of the component changes require new tooling.

In Chrysler's production prototype crash tests, the steering column tilted up, causing the test dummy to slide under the airbag, hit the steering wheel and break its chest. The company has re-engineered the tilt mechanism in the steering column to restrict its movement. It also changed the front seat tracks and is switching to a more secure, dual-tethered airbag for better deployment.

Originally, Chrysler planned a less expensive, untethered "E-fold" airbag that could be folded up by a machine. But now, supplier Morton International Inc.'s Automotive Safety Products Group in Ogden, Utah, will have to hand fold the dual-tethered bags before shipping them.

Chrysler also is adding double knee blockers, with a higher gauge strength, after tests showed the original knee blockers crumbling and the dummy's knees sliding underneath them.

Chrysler also will use a higher gauge steel in front bumpers than originally planned and cut holes in front bumper rails to reducing bending stiffness. It is adding multiple holes and slots to its lower radiator crossmember and longitudinal rails, and bevelling the left rail tip to provide more crush clearance for the transmission end cover.

Engineers are moving the driver closer to the restraint system and putting the driver in a more upright posture by inclining front seats to a full upright position. They also eliminated some down travel from the power seat adjusters. There are new engine mounts and other planned changes.

Chrysler will delay Job 1 for regular dealer output at Windsor by seven weeks to July 5, 1995, allowing its launch support team to get St. Louis up to full line speed, according to a memo.

| Start date for | A PROPERTY OF THE PARTY OF THE | Windsor | 一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个 |
|--|---|------------|---|
| LWB dealer production | Feb. 13 | - | |
| SWB prevolume production | March 1 | - | |
| SWB dealer production | March 27 | | |
| SWB/LWB dealer production | 11000 41 | July 5 | |
| SWB/LWB dealer production | 20 | 100 | Sept. 25 |
| Notes: LWB=long wheelbase models; SWI Source: Chrysler Minivan Status Review re | B=short wheelba | se models. | |

Minivan crown vulnerable

Changeovers and production delays in Chrysler Corp.'s new 1996 model minivans could well cost it minivan sales leadership next year.

Chrysler will headily take the minivan sales crown this year, as it has ever since it pioneered the segment in 1983. Production began Nov. 1, 1983.

In 11 months of calendar 1994, Chrysler retailed 488,378 minivans in the United States, giving it a 149,903 lead over Ford Motor Co.'s combined minivan sales.

But, recently, Ford Motor has closed the gap. The automaker offers the Aerostar, Windstar and Mercury Villager.

Chrysler Corp.'s models include the Chrysler Town & Country; Dodge Caravan, Caravan C/V and Grand Caravan; and Plymouth Voyager and Grand Voyager.

In November, combined Ford Motor Co. minivan sales totaled 30,207 units, within 3,169 units of Chrysler's 33,376.

Before the most recent delays, Thomas Pappert, Chrysler vice president of sales and marketing, already estimated Chrysler would lose about 60,000 minivan sales due to changeover. The delay at Windsor could cut an additional 4,741 units from Chrysler's total.

It now seems like model changeover downtime will cost Chrysler close to 65,000 minivans next year, an average of more than 5,000 a month, which puts Chrysler's minivan sales crown within striking range of Ford.

— Joseph Bohn

Extra '95 minivans boost bottom line

Chrysler needs to bring the 1996 minivans to market to compete with the Ford Windstar, but the automaker is trying to build carryover inventory.

On Dec. 1, there was a 93-day supply.

Although Chrysler will lose more production, internal calculations show that Chrysler will earn an extra \$5.5 million profit from the changes.

The company expects to earn \$6,200 to \$6,600 a unit from extra 1995 models built in Ontario during the first and second quarters and \$5,500 to \$5,800 per unit from 1996 models produced there in the second half.

- Joseph Bohn