



Start Photo by Art Hooper  
The dome on a better day — Oct. 2, the day it was inflated.

**Dome**

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For that reason, they hope the dome will collapse. The steel cables which the panels are attached provide to support, although they are considered a backup safety feature that would keep the roof, if fully inflated, from falling loose of its mooring and falling completely free.

Poss said last night that several workers were descending from the dome after pushing metal beams from the center of the roof when they heard a pop and flames out what was happening.

In the escaping air gradually allowed the dome to collapse.

When the roof was inflated on Oct. 2, construction officials said that with all doors closed, two of the 29 fans could be enough to keep the roof aloft. They also said the roof could withstand the pressure of more than three feet of very wet snow.

Although the dome's inflation was treated as ceremony, marking the beginning of a major project, construction on time and under its budget of \$55 million. Tom and Cathy said there was a practical concern, too — the roof is much weaker when deflated, and a heavy snow would have done serious damage to it.

Last night's collapse followed a partial collapse the night before, in the midst of a snowstorm, but left the roof of the dome virtually flat, but not sagging, he pointed out. They also said the dome was flat, deflated or better said to normal conditions.

"It caused one of the most adverse loads nature could devise, aside from a killer tsunami," Poss said yesterday afternoon. "It was the ultimate test. It was the last test before work with one hand tied behind its back. Normally it would have been done in a child's play, but it almost got knocked on its back."

In explaining the earlier, partial deflation, the said yesterday afternoon, the dome went down for three reasons: the system did not detect the heat from Central Heating Co. The system that monitors snow on the roof was safely partly completed, and stadium officials did not expect so much snow in Minnesota in the middle of November, and thought the system would be completed before winter struck.

"We felt it was completed (enough) yesterday to handle anything that could come — it wasn't," Poss said. "There was an incident, but it was an emergency situation." He added that 15 people worked through the night to refuel the dome.

Here's how the automatic system is supposed to work: Sensors on the stadium roof detect moisture. If they detect the moisture to mean an electronic signal control system figures out where the snow is. Then a coil system heats up and fans blow hot air (200 degrees Fahrenheit) to melt the snow. The water flows into drains around the edge of the stadium.

And just in case that doesn't work, there's a backup plan. Drains along the edge of the roof are to pump, allowing water to drip downward to eventually be pumped into the stadium's storm drainage system.

But only two of the drains opened Wednesday night, and an water control system began to pull the heater down. It was too slippery for workers to venture onto the dome roof to change the drain manually, as they called the management, which said it had to be done from the ground from the bottom. The water was then pumped from the floor into a truck to be hauled away later.

"It was a great relief to get rid of the water that caused the whole thing to deflate," Poss said. "All the cables gone to my joy." If the pump had not been pulled "gradually the whole roof would have deflated, one of the roof panels might have tore through."

Staff Photo by John Croft  
Snow made a visible bulge in the dome Thursday as light streamed through the translucent material. Water from the melting snow accumulated on the field below.



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When the plug was pulled, some points of the inner fabric layer of the stadium roof tore. Poss said the damage was small and would not be difficult to repair. He added that the priority is finishing the snow-melt system, but could not estimate when that might happen. He also said he was not worried about future storms.

"I would be very surprised if it (the dome's deflation) happened again," Poss said late yesterday, hours before the dome collapsed the second night. "I was sweating bullets last night, but there's always a silver lining to these things. My people and some excellent experience. I can't think of any serious problems with the system we can't handle after last night."

Staff Writer Dean Beutell contributed to this article.

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**'Toro! Toro! Toro!' Clamor of customers delights dealers**

By Joseph Benaszycki

It had all the makings of a busy day for David Moss. The electricity at the Edina home had been off since Wednesday night. The house was getting colder by the minute. It took an hour to clear the driveway of wet, heavy snow. His only warm refuge was his office.

But he described his mood Thursday as great.

John Inatremat, Paul Gustafson and Warren Jensen need little surprise, including realistic, glib and unexcused.

Each is intimately involved with The Toro Co., the beleaguered blower-snow maker. Inatremat, president here, said he had no formal title as he was laid off last year's closed production center in Tororo, Iowa to save Moss's largest client.

A "Toro snow" by his definition, is a lot of snow, not more early in the season.

"People look at their calendars and see it's Nov. 18 and start thinking about December and January and February, and they figure there's no way they're going to shovel their way through to spring," he said.

That attitude was evident at snow-thrower dealerships throughout the metropolitan area.

At Klier's Hardware & Garden Center, a neighborhood yard-equipment store at 3801 Nicollet Av. S., a large sign reading "PRE-GLAZED SNOW-BLOWER SALE" hung over a shed. A "Toro snow" by his definition, is a lot of snow, not more early in the season.

Three managers Paul Muehl was busy handling snowblowers, only the display there to replace the sale he had sold in the previous 24 hours.

"It's slowed down a little from last night," he said yesterday afternoon. "I don't think too many people have gotten out of their parks yet."

Small Engine City, 2611 Lyndale Av. S., the area's largest dealership, had more snowblowers yesterday morning than it did last winter. It had sold more than 100 by 1 p.m.

"Snowblower sales are strong," said the company's manager of Small Engine City. "People know the grass is going to be green again and they're."



Staff Photo by Peter Hahn  
Katie Meier, co-owner of Small Engine City, watched as Katie Meier of Minneapolis tried out a snowblower. She was one of at least 30 people who bought snowblowers Thursday from the dealer.

buy a new snowblower, or they know the word has to be cut somebody so they'll buy a used one.

"But they won't buy a snowblower until they've been out there and handled the shovel and realize it's heavy."

Jensen arrived at his shop 30 minutes early yesterday morning to find three people waiting outside to buy snowblowers. He had five waiting inside — three more than usual — by the four o'clock last evening.

That's quite a contrast with last winter, when Jensen used to have to chase his branch stores in the northern suburbs. Small Engine City is the area's largest retailer of replacement parts for all kinds of snowblowers.

Many of the people who traipsed through Jensen's cluttered store yesterday had already tried snowblowers. They were especially interested in large machines, capable of handling heavy, wet snow — machines that cost from \$300 to \$600, even on sale with a factory retail price of \$700.

"After they've shovelled snow and got hit with wind and a heavy accumulation of snow, they get a little more into no longer a consideration," he said.

One salesman called it "heart-attack snow" but for cropped Toro, and the dealers who handle Toro's machines, it could be a new issue on life.

After rapid growth in the mid-1970s, the company was hit financially early by two consecutive seasons of light snowfall. Toro lost \$1.1 million.

in the final year ended July 31. During that same year the company had 100 percent of 39 percent of its work force, which had at one time numbered 175.

Much of the loss was blamed on buying up snow removal equipment that fell like a Toro workhorse for two winters.

"Honestly" This is miserable stuff," said Paul Gustafson, vice president of Minnesota Toro, Inc., the electric snow distributor in Minneapolis, North Dakota, South Dakota and the western third of Wisconsin.

"When it gets to weigh 30 or 40 pounds a shovel like it does now, you can pick up a snowblower and it'll be lighter than swinging a shovel of snow," Gustafson said. "And that's good for our business."

One of every two snowblowers sold in the United States is a Toro, according to Gustafson, who said an average of heavy snowfall this year could bring the company out of the doldrums.

"And all the weather predictions I've heard say we're going to get dumped on and dumped on and dumped on," he said. "I needed it last year and I haven't melted for a long time."

Toro's marketing vice president, John Sufrenski, agreed that the market here was more like a toy store than a Toro dealership.

"They hope that maybe we'll get lucky again," he said. "Maybe this year will be the year."

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