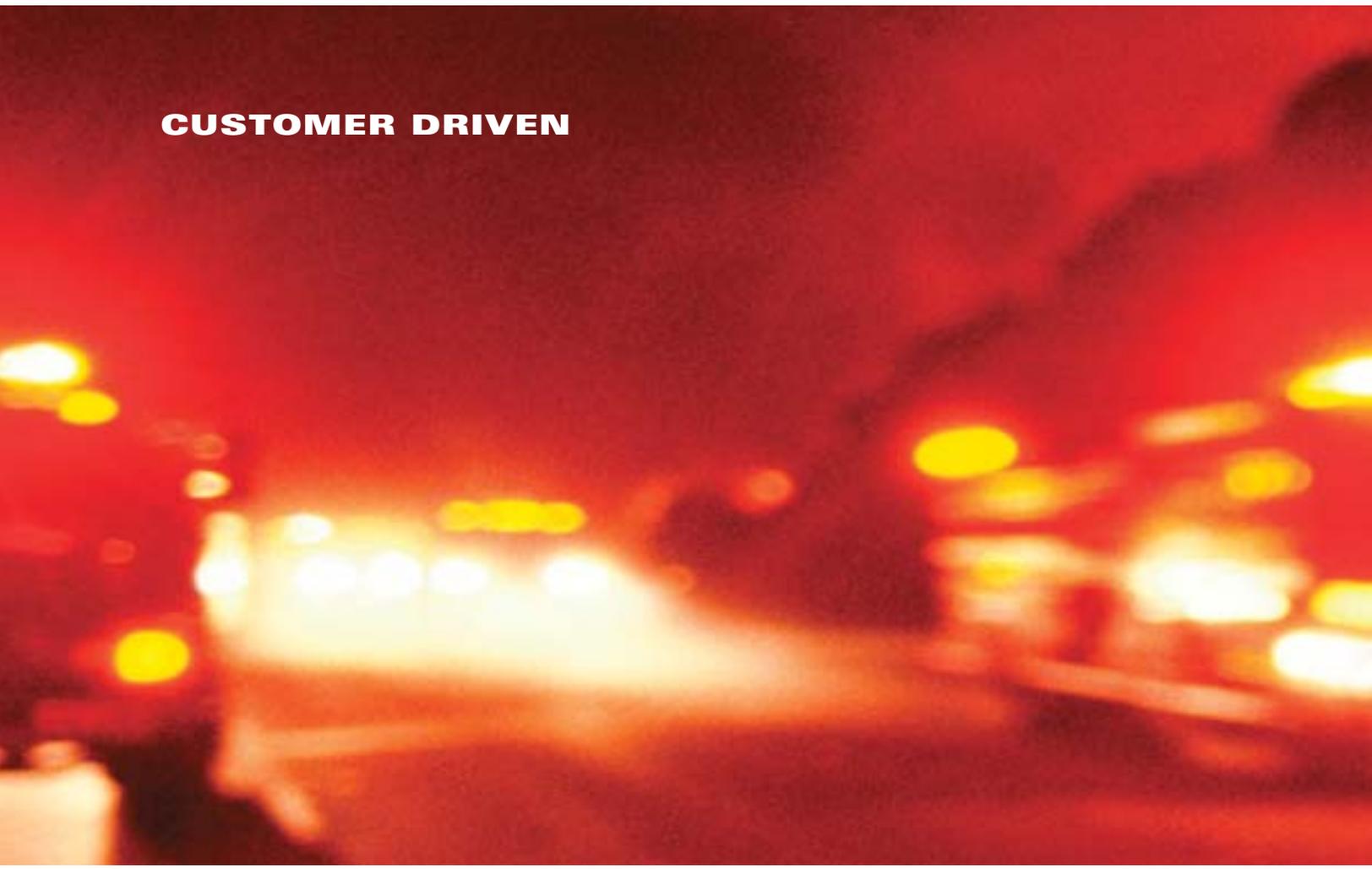


FEDERAL SIGNAL CORPORATION

CUSTOMER DRIVEN



2002 ANNUAL REPORT

Federal Signal Corporation is a manufacturer and worldwide supplier of safety, signaling and communications equipment, fire rescue products, street sweeping and vacuum loader vehicles, refuse truck bodies, high-performance water blasting equipment, parking control equipment, carbide and superhard tipped cutting tools, precision metal stamping punches and components for plastic injection molds. The company is managed on a decentralized basis and comprises the following four major operating groups: Safety Products, Environmental Products, Fire Rescue and Tool.

**FOR 102 YEARS, CUSTOMERS HAVE DEPENDED ON FEDERAL SIGNAL'S
ABILITY TO PRODUCE THE FINEST PRODUCTS**

Federal Signal's key strategies are:

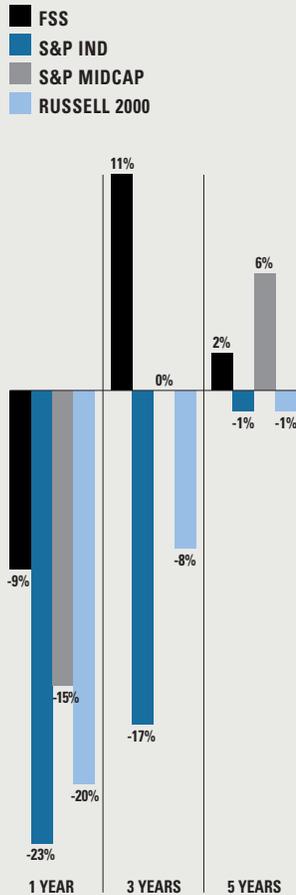
- **Continually and rapidly improve our businesses**
- **Operate businesses with leadership positions in select market niches**
- **Acquire, or partner with, companies in related businesses**
- **Maintain our diversification with lower-technology businesses**
- **Increase penetration of non-U.S. markets**
- **Develop a superior work force within a decentralized management framework**

CONTENTS

Financial Highlights	1	Strength Through Diversity	9	Financial Section	25
Corporate Profile	2	Safety Products Group	10	Shareholder Information	58
To Our Shareholders and Employees	4	Environmental Products Group	14	Board of Directors and Corporate Officers	59
Key Issues: Q+A	7	Fire Rescue Group	18		
Financial Performance	8	Tool Group	22		

Financial Highlights

Compound Annual Return



For the years ended December 31,

(amounts in thousands except per share amounts)

Operations

	2002	2001	Change
Net sales	\$ 1,057,201	\$ 1,072,175	(1)%
Operating income	\$ 81,943	\$ 92,004	(11)%
Income from continuing operations	\$ 46,179	\$ 46,590	(1)%
Per share data:			
Income from continuing operations	\$ 1.01	\$ 1.03	(2)%
Income from discontinued operations, net of taxes	\$.00	\$.02	
Cumulative effect of change in accounting	\$ (.17)	\$.00	
Net income - diluted ⁽¹⁾	\$.83	\$ 1.05	(21)%
Cash dividends paid	\$.80	\$.78	3%
Operating margin	7.8%	8.6%	
Return on average common shareholders' equity	12.1%	13.3%	
Cash flow from operations	\$ 88,350	\$ 95,113	
Capital expenditures	\$ 20,144	\$ 18,424	
Average common shares outstanding	45,939	45,443	

Financial Position at Year-End

Shares outstanding	47,660	45,129
Primary working capital ^(2, 3)	\$ 261,237	\$ 240,959
Current ratio ⁽²⁾	1.8	1.8
Debt-to-capitalization ratio ⁽²⁾	44%	44%
Shareholders' equity	\$ 398,065	\$ 359,436
Backlog	\$ 421,995	\$ 352,153

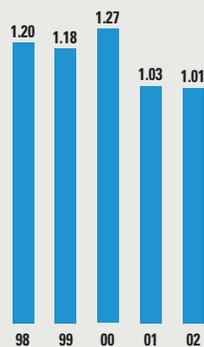
⁽¹⁾ amounts may not add due to rounding

⁽²⁾ manufacturing operations only

⁽³⁾ defined as accounts receivable plus inventory less accounts payable and customer deposits

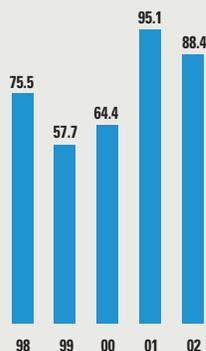
Net Income Per Share - Diluted

(continuing operations)



Cash Flow From Operations

(in millions of dollars)



SAFETY PRODUCTS GROUP

ENVIRONMENTAL PRODUCTS GROUP



Lines of Business

Warning, signaling, hazardous area lighting and communications products	Parking revenue and access control systems	Containment products for storage and use of hazardous material
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Market Segments

Industry, municipalities, automotive and truck, oil and gas, marine, mining	Airports, municipalities, institutions, parking operators, contractors, roadway authorities	Industry, laboratories, institutions, government
---	---	--

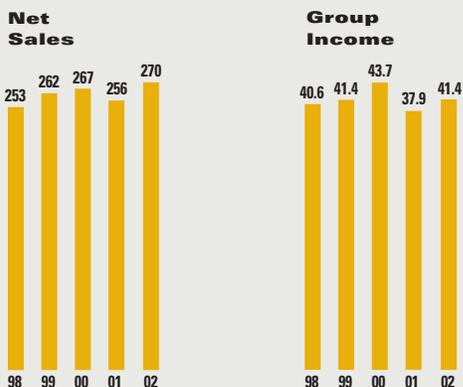
Representative Brands

Akusta, Federal Signal, NRL, Pauluhn, Target Tech, VAMA, Victor	Federal APD	Justrite
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Primary Manufacturing Locations

Anaheim, CA Danville, KY Pearland, TX University Park, IL Barcelona, Spain Newcastle, England Johannesburg, South Africa	Novi, MI Sao Paulo, Brazil	Mattoon, IL
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Net Sales/Group Income (in millions of dollars)

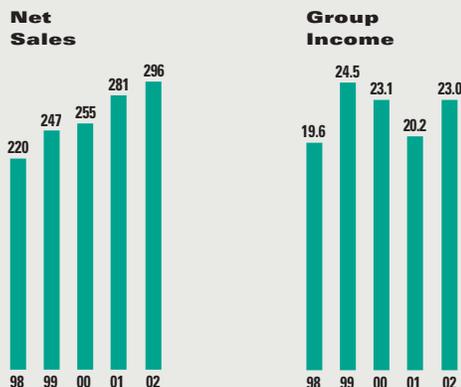


Air and mechanical sweepers for roadways, parking areas and industrial facilities	Sewer and catch basin cleaners, industrial vacuum loaders, glycol recovery vehicles, hydroexcavation vehicles, high pressure water blasting systems	Front-, side- and rear-load refuse truck bodies
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Municipalities, contractors, airports, industry	Municipalities, contractors, airports, industry	Municipalities, solid waste collection contractors
---	---	--

Elgin Ravo	Guzzler Jetstream Vactor	Leach Wittke
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Elgin, IL Alkmaar, Netherlands	Birmingham, AL Houston, TX Streator, IL	Oshkosh, WI Kelowna, British Columbia Medicine Hat, Alberta
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FIRE RESCUE GROUP

TOOL GROUP



Aluminum, steel and glassfiber reinforced polyester fire apparatus and rescue vehicles

Vehicle-mounted aerial access platforms

Aircraft rescue vehicles and industrial fire equipment

Standard and special die components and precision parts

Carbide cutoff, grooving and threading tool systems, superhard inserts, indexable insert drills and milling tools

Mold bases and mold tooling components

Municipalities, industry, military, airport fire protection, wildland/forestry

Municipalities, industry, airport fire protection, industrial contractors, utilities

Municipalities, industry, military, airport fire protection

Die builders, automotive, appliance, can making

Automotive, automotive suppliers, bearings, agriculture/ construction equipment, aerospace

Plastic injection mold builders, electronics, automotive, medical, building

E-One
Plastisol
Saulsbury
Superior

Bronto

E-One
Plastisol

Dayton Progress

Clapp Dico
Manchester Tools
OTM

P.C.S. Company

Ocala, FL
Preble, NY
Red Deer, Alberta
Wanroij, Netherlands

Tampere, Finland

Ocala, FL
Stellendam,
Netherlands
Wanroij, Netherlands

Dayton, OH
Minneapolis, MN
Portland, IN
Alcobaca, Portugal
Frankfurt, Germany
Meaux, France
Tokyo, Japan
Woodbridge,
Ontario

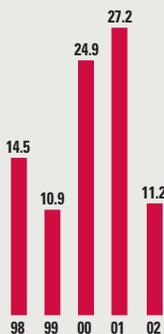
Akron, OH
Wapakoneta, OH
Whitehouse, OH

Fraser, MI

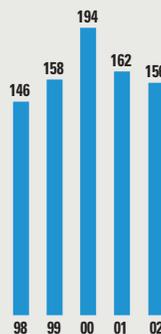
Net Sales



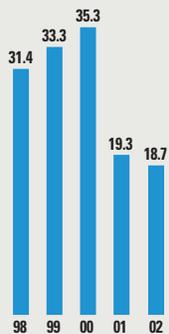
Group Income



Net Sales



Group Income



To Our Shareholders and Employees



Joseph J. Ross, Chairman and Chief Executive Officer

Despite strong performance in several of our key businesses, Federal Signal's earnings per share from continuing operations declined slightly to \$1.01 in 2002. Industrial demand remained weak in the United States and municipal demand started strong but weakened throughout the year. Operating results at Fire Rescue Group were disappointing.

Continuing our emphasis on sound cash management, we generated \$88 million in operating cash flow. In a year when stock indexes were down across the board by 20% or more, our share price was cushioned by the strength of our dividend, and shareholders sustained a more modest 9% loss, considerably better than benchmark returns. We know that good *relative* performance is small consolation to the investor, and we plan to deliver strong positive returns in 2003 and beyond.

The economy was tough in 2002... Like most companies addressing the industrial marketplace, Federal Signal struggled to make progress in a difficult economic environment. Industrial and commercial sales, which account for about 40% of our global revenues, showed little improvement from the prior year as slight positive growth in GDP was led primarily by residential housing and construction – not our primary markets. Capital spending, which underpins much of the demand for our industrial tooling and other industrial products, remained weak as companies restrained spending in light of economic uncertainty. For our municipal customers,

the year began stable, but they eventually experienced the lag effect of reduced tax revenues, and municipal orders for lower-priority products fell off in the back half of the year. We felt the greatest impact in our Environmental Products Group, where orders and sales for sewer cleaners, sweepers and even our newly-acquired refuse truck body businesses were significantly lower in the second half of the year.

The business environment changed in 2002...

The business community was buffeted by changes introduced in the wake of corporate accounting and control scandals. The Sarbanes-Oxley legislation, and the ancillary interpretive regulations, have dominated the financial news for months and have prompted a reexamination of many business practices. While these regulatory changes were both prudent and generally appropriate, the process of self-assessment has been costly, particularly in terms of management time. At Federal Signal, most of the required controls were already in place, and while some needed formalization, no wholesale changes were required as a result of the legislation. While some companies do not have financial experts on their audit committees, we are fortunate to have two – Chuck Campbell, who has been on our Board since 1998, and Joan Ryan, who joined our Board last year. Federal Signal's financial policies and controls have always been sound, and the events of 2002 only remind us of the importance of prudent financial management and good business ethics.

Due in part to a loss of investor confidence arising from these same scandals, the stock market declined sharply, affecting our shareholders' investments. The decline in the stock market also reduced the value of our pension investments. Given our robust cash flow, we responded by making a discretionary \$5 million investment in the fund at year-end. The lower expected pension investment returns reduced 2002 earnings by \$.04 per share, and will have a further negative effect of about \$.05 per share in 2003. We will consider further modest discretionary funding in 2003 to ensure no future large cash requirements will be necessary – again, conservative financial management.

I believe that, especially in the current environment, shareholders appreciate the conservative management style, consistent dividend payout and solid business judgment demonstrated at Federal Signal over its 102-year history.

Operating results were mixed... Across all of our operating units, Federal Signal employees worked to reduce costs and improve profitability in a difficult economic environment. We had notable success with two key programs.

We increased our focus on material purchases and reduced material costs through systematic application of our corporate purchasing philosophy. We have increased the corporate resources dedicated to this function, and, under the direction of our Chief Procurement Officer, we use a very disciplined approach to supply chain management. Our strategy is to develop and implement strategic supplier relationships, negotiate agreements across the entire company, and further integrate supplier expertise into our operations. Due to these efforts, and despite the adverse impact that steel tariffs had on steel prices, we saved \$8 million on material costs in 2002. The annualized impact, which will benefit 2003, is double this amount.

Lean enterprise activities, which kicked-off in 2001, are continuing to take hold and bear fruit. Across the corporation many of our production processes have been reconfigured, and lean principles have been applied to reduce work-in-process inventories and drive down production cycle times. Floor space has been released and will be redeployed or sold. During 2002, most of our businesses increased their inventory turns, reducing our average investment by over \$8 million.

On a disappointing note, our U.S. Fire Rescue Group operations did not perform well this year, as they were unable to deal effectively with changes in product complexity and order patterns which arose in part from the events of September 11th. Faced with unusually high demand for highly-customized rescue vehicles and still working on development and delivery of the new European style units for the Royal Netherlands Air Force and Schiphol Airport Amsterdam, production fell short and costs exceeded estimates. The group's operating margin declined significantly from the prior year, although production began to stabilize toward year-end. Improving this business is Federal Signal's number one priority for 2003, and we have begun a number of major initiatives to drive this improvement.

We invested for growth... Within the U.S., our market positions in our niche markets are strong, making growth a challenge. Consequently, our greatest growth opportunities are through new product development, expansion in markets outside of the U.S. and acquisitions of complementary businesses. We had success in all three areas this year. In late 2002, we entered the market for refuse truck bodies through the acquisition of two refuse vehicle body manufacturers – Leach Company of Oshkosh, Wisconsin and Wittke, Inc. of Alberta, Canada. These acquisitions provide a significant addition to the product offering of our Environmental Products Group and enable us to leverage our existing dealer network to reach our municipal and commercial customer base with these new products.

Regarding new product development, we increased our investment in research and development in 2002 in excess of 25% over 2001 and brought to market several new products. Notable additions to our product portfolio are a new Elgin-branded waterless street sweeper, a new fast interchangeable mold tooling system from our Tool Group, and a new rescue ladder platform with a 114-foot reach for our Fire Rescue Group customers. While the significant increase in research and development costs negatively impacted earnings in 2002, our shareholders should know that we continue to invest for the longer term, notwithstanding the short-term economic issues.

And we grew international sales by 9% in 2002. Contributing to the increase was expansion of our European police products business as we enjoyed success in our home market in Spain and increased our

market share in other European markets. Our aerial fire products business in Finland had a banner year as they introduced a new multi-purpose fire truck to the European market. International sales also benefited by the full year inclusion of Plastisol, a manufacturer of bodies for fire vehicles located in Holland, in which we acquired a majority stake in 2001. And our international tool sales rose as well, reflecting strong market share gains in Germany and France.

Our employees kept their eyes on the customer...Countless employees made significant contributions this year to deliver quality products to our customers. A few examples stand out. At Federal APD we produce sophisticated parking systems for large commercial customers. Dozens of employees from sales, testing, production and technical support worked around the clock during the final several days before the February grand opening of the new Northwest Airlines terminal at Detroit Metropolitan International Airport. Connecting, tuning, programming, cleaning and commissioning the largest system they had ever installed, these dedicated employees ensured that, despite contractor delays, when the terminal opened for business at midnight on February 24th, our system was ready to control the largest parking garage in America. Our VAMA police products business in Barcelona, Spain received a rush order to transform new police vehicles for the Spanish National Police. Due to the short lead-time, and because our customer was faced with expiring leases on its current fleet, VAMA organized extra resources to fulfill the order. More than 150 temporary employees worked long shifts along with 130 full-time employees to manufacture and install lights, sirens, trunk organizers, dividing shields, prisoner cells and basic ballistics protection for 740 police vehicles in record time. Our employees are truly “customer driven” and our company’s most valuable asset.

We made some changes...As I mentioned, Joan Ryan, Senior Vice President and Chief Financial Officer of SIRVA, Inc., joined our Board of Directors in July of 2002. We welcome the financial expertise that Joan brings to our company. In December, we announced the appointment of Karen Latham as Vice President and Treasurer of the corporation. Karen replaces Robert Racic

who has served as Vice President and Treasurer since 1979. We thank Bob for his many contributions over a 31-year career.

In January of 2003, we announced the departure of Andrew Graves, our President and Chief Operating Officer. During his two years with us, Andy increased the focus on corporate-wide materials purchasing and initiated lean enterprise activities on a company-wide basis. We remain committed to those programs as they have become “cultural” within our businesses.

2003 should improve modestly...As we enter 2003, our outlook is cautious. Despite slight improvement in sales to our U.S. industrial customers in the fourth quarter of 2002, we are not seeing any solid indication that a sustainable increase in demand is occurring. We are not confident about the rate, or certainty, of economic recovery in the U.S. in 2003. Our municipal customers are affected by the fall-off in tax revenues which lag the underlying economy, and will negatively impact public spending throughout 2003. This outlook is the basis for our planning in 2003.

Our major focus will be on improving the operational performance of our Fire Rescue business, completing the integration of our refuse truck body acquisitions and maintaining our emphasis on cost management. During 2003 we plan to close or consolidate five operating sites as we have become more efficient in our production processes, and we will continue to pursue our lean enterprise and purchasing initiatives to improve margins and generate additional cash.

We believe earnings per share will be up some five to 15 percent in an environment of relatively flat sales. Importantly, we look forward to another strong year of operating cash flow and expect to exceed the level we achieved in 2002.

With our new product focus, as well as our cost management focus, we are well positioned to outperform both short- and medium-term economic growth rates – and we look forward to doing so!



*Joseph J. Ross
Chairman and
Chief Executive Officer*

Key Issues: Q+A

How are the weak U.S. municipal budgets affecting your company?

Diversification of our markets is a key part of Federal Signal's strategy. About 43% of our 2002 sales, or about \$450 million, were to U.S. municipal and governmental customers. This represented about a 10% decline from the prior year. Clearly the downturn in state tax receipts has reduced funds available to these customers. However, at the local municipal level, the downturn in income tax receipts has been somewhat cushioned by strong property tax and sales tax proceeds. Offsetting the decline in our municipal segment has been strength in sales outside of the U.S., which rose 9% in the same period. Looking to 2003, we expect some further weakness in new U.S. municipal orders, but due to our strong backlogs entering this year, we expect municipal sales to be up. International sales, much of it to governmental customers, should continue strong. In response to the overall weak economy, we continue to focus on reducing expenses and improving our ability to generate cash.

The Fire Rescue Group has not performed to expectations in recent years. What actions are you taking to improve this business?

We have taken steps to address leadership shortcomings and improve business processes. During 2002, we brought in a new group president and made a number of changes to upgrade key management positions. From an operational perspective, we launched various initiatives in 2002. Internally, we have increased our focus on front-end ordering and design processes to ensure that our trucks are properly engineered and priced for custom features. Within our manufacturing operations, we have devoted more resources to lean enterprise initiatives; in 2003, we expect to see improvements in quality, shorter cycle times and lower inventories. Externally, we are dedicating more resources to the development of our dealer organization – a key source of our competitive advantage.

What do you look for in acquisition candidates and how do you value these companies? Do you expect to acquire any businesses in 2003?

Acquiring related companies is an important part of our growth strategy. We look for small to midsize companies in related markets, where there are clear opportunities for synergy with Federal Signal's current businesses. Examples of synergy potential include a shared customer base, common distribution channels, opportunities to apply new technology or geographic growth potential. Our valuations are based on discounted cash flow projections, but we also consider multiples of earnings and cash flow. Our near-term focus is on successful integration of the refuse acquisitions made in 2002.

Given the high current payout ratio, what is the outlook for dividends?

Federal Signal is committed to paying stable dividends to its shareholders. Although our current payout ratio (dividends paid as a percent of net income) is well above our target of 35%, our cash flow has been very strong and we are confident of our ability to continue to support dividend payments.

Does the company intend to begin expensing stock options?

For Federal Signal, the value of stock option grants is modest in relation to our income, amounting to about \$.02 per share using the most common valuation methodology. Given the relative insignificance of this charge and the lack of consensus as to the valuation approach, we do not plan to expense stock options, but will continue to include the pro forma impact in our footnotes.

Financial Performance



Stephanie K. Kushner, Chief Financial Officer

Generating consistent, strong cash flow was a high priority in 2002 and will continue to be an area of focus in 2003. We intend to use 2003 cash flow primarily to repay debt, fund necessary capital expenditures and pay dividends.

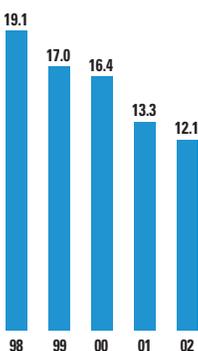
During 2002, our operating margin and return on equity declined, but our lean enterprise initiatives and focus on working capital management again led to operating cash flow well in excess of earnings - \$88 million, or \$1.83 per share. Specific improvements worth noting include: primary working capital averaged 22.4% of sales, down from 24.0% in 2001; average inventory turns rose from 4.1 to 4.3; days sales outstanding declined from 48 to 46.

We faced a difficult business environment in 2002 and were generally cautious with investments. On the acquisition front, we expanded our Environmental Products business through the acquisition of two refuse truck body companies, which we funded with a combination of \$48 million in cash and 2.4 million shares of common stock. Capital expenditures for the company totaled \$20 million, about 7% less than depreciation expense. In 2003, we will continue to closely monitor capital expenditures and will focus more on integrating our 2002 acquisitions than on making new acquisitions.

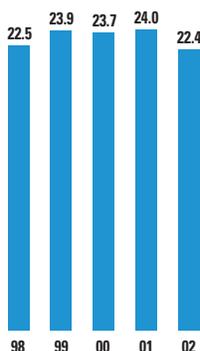
In 2002, we benefited from a very low interest rate environment, incurring an average borrowing rate of 3.85%. Accordingly, we capitalized on the attractive long-term debt market and issued \$100 million in private placement debt, prudently reducing our reliance on short-term borrowings. As of year end, 44% of outstanding debt had fixed rates, either directly or via interest rate swaps. Our 2002 debt issuances also increased the weighted-average life of our debt to 4.1 years from 2.7 years at the end of 2001. We have no significant long-term debt maturing in 2003. Our 44% year-end ratio of manufacturing debt to capitalization is unchanged from the prior year-end, and slightly above our 40% target ratio. We expect this ratio to decline as we focus on generating healthy operating cash flow and repaying debt during 2003.

Federal Signal is committed to shareholder value and dividend payout is an important element of shareholder return. Our long-term strategy is to pay out 35% of earnings in the form of dividends as we believe this payout ratio provides sufficient cash for internal growth and investment, and to fund acquisitions. Our actual payout ratio has exceeded this target due to lower than expected earnings growth. Nevertheless, we have placed a high priority on dividends and have continued to fund them from our strong cash flows. In 2002, we paid a dividend of \$.80 per share and made total dividend distributions to shareholders of \$36 million. Looking forward, we believe cash generation will be sufficient to support our dividend policy and expect our payout ratio to decline as the economy and our earnings recover from today's depressed levels.

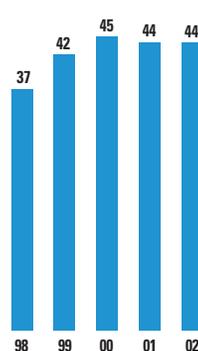
Return on Equity
(percent return)



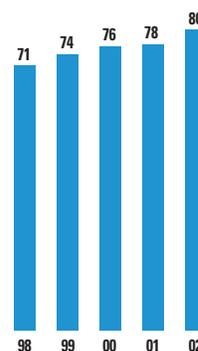
Primary Working Capital to Sales
(in percent)



Manufacturing Debt to Capitalization
(in percent)



Dividends Per Share
(in cents)



Strength Through Diversity



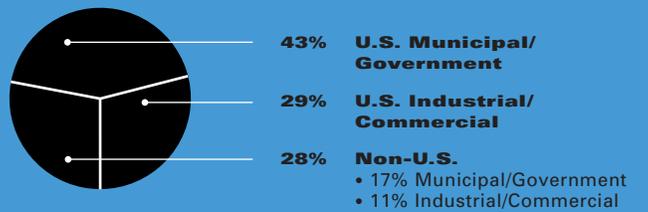
Sales and Manufacturing Locations



Sales by Group



Sales by Market





The Safety Products Group manufactures and markets worldwide a broad range of safety-related products, serving public and industrial safety, parking control and hazardous area lighting markets.

Vista lightbars are a core product that has helped the Emergency Products Division maintain its leadership position. Newly developed products in 2002 will further increase the division's stronghold into both the visual and audible warning equipment markets.

	2002	2001	2000
	<i>(in thousands except employee data)</i>		
Sales	\$ 270,273	\$ 256,261	\$ 267,062
Operating income	41,432	37,917	43,721
Operating margin %	15.3%	14.8%	16.4%
Backlog at December 31	44,282	31,561	18,493
Total assets	210,489	209,036	220,867
Capital expenditures	5,262	3,126	5,333
Employees	1,877	1,876	1,904



We produce the world's number one rotating warning siren. It covers a radius of nearly one mile and warns communities, nuclear stations and military bases against natural and manmade disasters.

Safety Products Group

2002 Highlights

- Record orders of \$285 million included a \$19 million award for the Dallas/Fort Worth International Airport parking and revenue control system
- Sales rose 5% on strength in outdoor warning systems and European police products
- Operating income before goodwill charges increased 3%
- Record year-end backlog of \$44 million
- Lean enterprise and supply chain initiatives reduced product costs and inventories

Markets and Products Safety Products Group achieved sales and earnings growth despite weak global market activity in most product categories. We continue to place a high priority on new product innovation. Sales of products introduced over the past five years represented about 20% of the group's total sales.

Emergency Vehicular Signaling sales increased 7% globally. In the U.S., sales declined from 2001 as the weak economy continued to affect sales of amber warning lights to commercial customers such as telecom and utility companies. In addition, the short-term redirection of funds within municipal police budgets adversely affected municipal sales. More than offsetting these declines were gains in international sales where we continued to have success expanding into new European markets. During 2002, we expanded our European production capacity and capabilities to better serve key customers in their requirements for single-source "turn-key" police vehicle product and installation services. Success on a project earlier in the year for the Spanish

National Police prompted a follow-up order for \$5 million that we received and shipped in the last quarter of 2002.

New product activity was high in this business. We continued to incorporate light emitting diode (LED) technology in lightbar and auxiliary lighting products extending our police, fire/emergency medical services and commercial product lines. We launched an innovative new strobe power supply to enhance performance and value for strobe lighting applications. In addition, we introduced a new value-priced compact speaker to address a previously unserved market niche.

Industrial Signaling and Lighting sales were flat, reflecting weak industrial markets. We were awarded several large international orders due to improved functionality in our industrial intercom/public address systems. We introduced a wireless industrial intercom system that reduces customer installation costs. For marine applications, we introduced a range of recessible fixtures expanding our product application coverage.

Outdoor Warning Systems sales grew 40%. Although the U.S. municipal market was weak, we made significant share gains by focusing on other areas of opportunity, including military installations and nuclear power plants. Sales outside of the U.S. grew 35% from the prior year, including key installations in Latvia and in U.S. Air Force bases in Turkey, Qatar and Europe.

Hazardous Liquid Containment sales rose 5% despite weak industrial markets, spurred by the success of new products introduced in 2001. European sales rose 12% as we supported European distribution with enhanced



In 2002 the French Gendarmerie chose Federal Signal VAMA to equip their vehicles with lightbars and sirens. VAMA also produces the grille lights and power supply equipment used on the police motorbikes.

field sales, marketing and local inventory support. We also enjoyed double-digit increases in safety can and cabinet sales into the laboratory market. New product introductions included a new line of industrial gasoline cans with ergonomically improved operating mechanisms.

Parking Revenue and Control sales were flat due to the low commercial order rate, particularly the fall-off in airport orders in late 2001. The short-term decline in airport orders occurred as airport authorities reassessed parking configurations in light of security concerns arising from the events of September 11th. Orders resumed in 2002, and included a \$19 million award for the Dallas/Fort Worth International Airport project. This award represents the initial portion of a \$33 million project for the group and is the largest commercial order in Federal Signal's history. The software, hardware and project management capabilities developed for this order will give the group competitive advantages to successfully compete on the many large airport parking expansion and renovation projects planned over the next several years.

Operations Lean enterprise initiatives across the group reduced production costs, reduced floor space, cut inventories and improved product throughput. All production facilities conducted "5S" (sort, shine, select, standardize and sustain) and Kaizen events to improve workflow. We were successful in moving production parts off traditional material requirements

planning "push" systems and placing them on "pull" systems to more closely match inventory requirements with product demand. We expanded our vendor-managed inventory programs where suppliers store consigned inventory at our manufacturing location and routinely replenish work cell inventory as consumed. This program has generated approximately \$1.5 million in cash flow while improving our flexibility to meet customer delivery requirements. Collectively, lean initiatives completed in 2002 have resulted in a \$2 million reduction in average inventory levels despite a 5% sales increase.

We achieved material cost reductions through corporate-wide supply chain alliance projects. Using cross-functional teams, we levered our combined purchasing requirements to select suppliers for long-term partnership agreements. We expect this year's focus on electronic parts, packaging materials and metal parts to result in a combined annual savings of over \$2 million once requirements are fully transitioned to the selected supply chain partners.

Value analysis and value engineering projects were also instrumental in driving cost out of the manufacturing process. For example, we redesigned several components in an outdoor warning siren to reduce that product's cost by more than 10%. We initiated a project to redesign several high volume emergency vehicular warning siren product families. As part of this project, we invested in advanced electronic and robotic manufacturing equipment to create a continuous flow, mixed-model assembly line. When fully implemented in mid-2003,

we expect this project will reduce production time for these products by 80%, costs by 10% and inventory requirements by 60%.

People We recognize that achieving our objectives requires training our employees in current tools and techniques to drive breakthrough performance. During 2002, we invested in extensive lean enterprise training for all employees, combining both off-site classroom work with in-house/hands-on training. By year's end, virtually all group employees had received training in lean concepts and techniques. More than 60% of employees have participated in "5S" and/or Kaizen process improvement events. We also continued with leadership and interpersonal skills development to leverage the significant talent that exists at all levels within the organization. As part of this, we formalized a leadership development process and expanded our use of evaluative tools to develop high potential talent. We also used cross-company assignments and participation in cross-functional teams, in both supply chain alliance and lean enterprise initiatives, broadening the experience base of tomorrow's leaders.

Outlook We anticipate modest sales and income growth for Safety Products Group in 2003 despite flat growth expectations for key markets. Higher sales will come from the record opening backlog, success of new products launched in 2002 and the positive momentum in channel and geographic growth initiatives. Continued focus on lean enterprise initiatives, cost savings and working capital reduction should boost operating income and contribute to the company's strong cash flow.

We installed our SST AutoRead automatic parking system at the new Northwest Airlines terminal at Detroit Metropolitan International Airport, the largest parking garage in America.





The Environmental Products Group manufactures and markets worldwide a full range of street and parking lot sweeping, industrial vacuuming, municipal catch basin/sewer cleaning vehicles, refuse hauling truck bodies and high-performance water blasting equipment.

The waterless Pelican sweeper was introduced in September 2002. It maintains all the popular features and sweep quality that has made it the best selling sweeper while offering dustless, waterless, all-temperature sweeping.

	2002	2001	2000
	<i>(in thousands except employee data)</i>		
Sales	\$ 296,372	\$ 280,708	\$ 255,269
Operating income	22,961	20,159	23,101
Operating margin %	7.8%	7.2%	9.0%
Backlog at December 31	84,108	68,608	72,275
Total assets-manufacturing	286,865	153,406	149,622
Total assets-financial services	65,542	72,581	69,055
Capital expenditures	3,436	4,554	4,137
Employees	1,907	1,219	1,134



In January 2002 Vactor Manufacturing reached a milestone in the mobile sewer cleaning industry when the Streator, Illinois based company delivered its 8000th vehicle. The Vactor 2100 sewer cleaner is designed for cleaning entire wastewater and sanitary systems.

Environmental Products Group

2002 Highlights

- Expansion into refuse truck body market through acquisitions of Leach Company and Wittke Inc.
- Earnings before goodwill charges up 3% despite weakening municipal markets
- Consolidation of manufacturing facilities to create sweeper focused factory in Elgin, Illinois
- Lean enterprise implementation drives \$11 million increase in cash flow
- Introduction of waterless Pelican sweeper

Markets and Products Revenues for Environmental Products Group (EPG) rose 6% in 2002, as the positive effect of the fourth quarter entry into the refuse truck body market more than offset the effects of a cyclically weaker core business. EPG sales serve two primary markets – municipal/governmental and industrial/commercial. Sales to municipal and governmental customers were 74% of EPG’s 2002 sales. In the U.S., municipal markets were firm at the beginning of the year as governments continued to spend money at a rate that outpaced tax receipts. However, as budgets constricted, orders softened during the course of the year, first impacting sewer cleaners and eventually reducing purchases of sweepers and refuse vehicles.

In spite of the weakening market, we were awarded some significant contracts, including a 54-unit order for Elgin Eagles for the California Department of Transportation. In Europe, RAVO street sweeper sales in the Netherlands market were lower, partially due to a tax law change that encouraged municipalities to defer delivery to 2003. For the year, municipal sales declined 2%.

Industrial and commercial sales were 26% of EPG’s business in 2002. Industrial sales in 2002 continued at the run rate of the second half of 2001, down from the prior full year but in line with the level of overall industrial activity. Notable contracts included an export fleet order of industrial vacuum trucks for Bao Steel in China. During the fourth quarter, we saw some indication of increased orders from our industrial customers.

Late in 2002, we acquired two manufacturers of refuse truck bodies for the waste hauling industry – Wittke, Inc., of Medicine Hat, Alberta, Canada and Leach Company of Oshkosh, Wisconsin. Through these acquisitions, EPG entered a significant new market with a broad product line including front-, side- and rear-loading refuse vehicles. The successful integration of Leach and Wittke into the Environmental Products Group is underway. We expect significant benefits from leveraging both our strong dealer network and direct strategic account sales-force to serve an expanded customer base. These acquisitions also open the door to adjacent markets and products, which provide potential growth opportunities for EPG.



In 2002, we acquired Wittke, Inc. (front-loader above, left) and Leach Company (rear-loader above, right). We now offer a full range of front-, side- and rear-loading refuse truck bodies.

EPG maintains market leadership through continuous renewal of its product line. We launched several new products in 2002. In the U.S. sweeper market, we introduced the waterless option for our Pelican sweeper. This product design allows the Pelican to sweep year round in cold climates and serve in-plant demands for the industrial market. Since the product was introduced in the fourth quarter of 2002 we have seen strong demand for demonstrations and a number of orders. We launched the Wittke Crocodile automated side-loading refuse collection truck in late 2002. The Crocodile uses a patented continuous packing technology, which significantly streamlines trash collection by eliminating driver stops for compaction of the collected trash. Also, a new Vactor Vaxjet 1090 model, launched in the third quarter of 2002, meets customer needs for surface cleaning and preparation by using a patented cleaning, recovery and filtration process now offered on a mobile platform.

In the European sweeper market, we re-engineered our entire RAVO sweeper line to incorporate antilock braking systems and to implement necessary

modifications to meet new European Union emission standards. The introduction of this entire line with improved technology has received significant customer acceptance as we enter 2003 with a strong order backlog in Europe.

EPG continues to be the market leader offering commercially viable products that address environmental issues. In response to more stringent air quality standards in California, we modified our Broom Bear sweeper to run on compressed natural gas and, as a result, won a variety of orders within the state. And our HXX hydroexcavator, which enables contractors to excavate underground with high-pressure water, thus eliminating the risk of cutting utility lines, is experiencing growing demand.

Operations Improving the operational performance of our companies has been an ongoing objective throughout EPG. We remain focused on constantly reducing the manufactured cost of our products by developing and implementing alliances with our suppliers and negotiating comprehensive agreements. We have aggressively implemented lean enterprise practices and generated improved cash flow by reducing our investment in inventories. As a result of lean initiatives, we reduced working capital by \$10 million and we have increased available space in our larger

production facilities. Taking advantage of this space consolidation we closed our Youngsville, North Carolina facility in late 2002. We consolidated parking lot sweeper production into our Elgin, Illinois facility, where we produce other sweepers for the North American market. That consolidation significantly reduced our fixed cost base and will improve customer service by incorporating support functions into existing facilities.

People We invest in our employees with a focus on attracting, retaining and providing incentives to continually raise the bar of performance. By focusing the organization on lean enterprise activities, our employees are actively engaged in the constant search for methods to improve our operational performance. Our employees are aligned with our investors through careful selection of team members and providing those team members with incentives linked to delivering shareholder value. People remain our most important asset and continue to drive the organization forward, achieving leadership positions in nearly all of our markets.

Outlook We believe 2003 will be a year of significant challenges and opportunities for EPG. While we faced a difficult economic environment in 2002 serving our industrial markets, we are positioned for improved profitability as those markets should improve somewhat from 2002 levels. U.S. municipal markets ended 2002 on a soft note, reflecting reductions in state and municipal tax proceeds. We expect municipal demand to remain weak in 2003 due to the lag effect of the weak economic environment on tax revenues. Group sales and earnings will increase in 2003 as a result of the recent additions of Leach and Wittke and our entry into refuse vehicle markets.



Uncovering buried utilities, natural gas and petroleum pipelines by traditional mechanical means can be complicated and dangerous. The Vactor HXX hydroexcavator makes excavating safer and more productive.



The Fire Rescue Group manufactures and markets worldwide a full range of fire apparatus, aircraft rescue and fire fighting trucks, rescue vehicles and aerial access platforms.

Our Bronto F100 rescue ladder platform is highly versatile, meeting numerous fire service needs, from fire fighting to complex rescue situations. This unit was delivered to the Chaska, Minnesota Fire Department in 2002.

	2002	2001	2000
	<i>(in thousands except employee data)</i>		
Sales	\$ 334,213	\$ 373,428	\$ 389,311
Operating income	11,239	27,194	24,940
Operating margin %	3.4%	7.3%	6.4%
Backlog at December 31	282,246	241,236	234,424
Total assets-manufacturing	225,305	203,749	201,960
Total assets-financial services	161,246	166,539	145,175
Capital expenditures	3,549	2,981	4,958
Employees	2,231	2,165	2,331



The first of 34 rescue vehicles for the Royal Netherlands Air Force and Schiphol Amsterdam Airport was shipped in late 2002. This product combines glassfiber reinforced polyester technology to provide modern cab and body styling on a high-performance chassis.

Fire Rescue Group

2002 Highlights

- Record new business of \$385 million due to increased demand for Bronto aerial ladders and full-year effect of 2001 Plastisol Holdings B.V. acquisition
- Sales declined 11% due to production difficulties from increasing demand for complex trucks and significant prototype development
- Operating income down sharply due to complex trucks and volatile order patterns
- Year-end backlog at record level of \$282 million
- 29% of orders from new products

Markets and Products The North American fire apparatus market recovered from the low levels experienced in late 2001 as municipalities invested to improve response to potential large-scale emergencies. The United States FIRE Act grant program, initiated in 2001, expanded in 2002 and the sales order pattern gradually stabilized from the erratic flow experienced at the initiation of the program.

We experienced strong new orders in this market due to improved distribution and sales coverage in several key U.S. markets. Outside of Fire Rescue Group's (FRG's) traditional North American fire service market, the events of September 11th drove increased orders for vehicles to manage military ordnance disposal and decontamination. Examples include multiple-unit contracts for the U.S. Navy and for the Georgia Bureau of Investigation.

FRG continues to focus on introducing new products to meet the changing needs of our customer base. In 2002, 29% of orders were for products introduced during the last five years. In 2001 we successfully introduced an entry-level pumper for fire service customers built on our new Typhoon custom chassis. We expanded the Typhoon-based product line in 2002, adding rescue vehicles, a 75-foot ladder and a 50-foot teleboom. To our Tradition product series we introduced a brush truck for wildland and forestry applications. We expanded our aerial product line for the North American market by introducing a new Bronto rescue ladder platform with a 114-foot reach.

The European fire apparatus market was weak in 2002. We continued to make significant progress in the aerial equipment segment of that market as more customers convert from ladder aerials to Bronto telescopic platform units. Also contributing to overall European growth were sales from our majority-owned Plastisol Holdings B.V., acquired in 2001. Much of FRG's focus in 2002 was on engineering and building the innovative new airport trucks for the Royal Netherlands Air Force and Schiphol Airport in Amsterdam. These trucks showcase technology from multiple operating units, including the glassfiber reinforced polyester cab and body introduced by Plastisol and the new aerial piercing device developed by Bronto. The first units of this 34-truck order were shipped in late 2002. These trucks set the stage for additional international growth in the years ahead.



On site in our Ocala, Florida manufacturing plant, a Tradition Series vehicle nears completion. In 2002, we made important cycle time reductions with this product line as part of our lean enterprise initiatives.

Also in 2002, our Finland-based Bronto Skylift operation introduced its new “Allrounder” vehicle that offers an optimal fire apparatus package combining water pumping and rescue capabilities with an aerial platform, all in one configuration. Market acceptance has been relatively quick, with multiple-unit orders secured in 2002 for Greece and New Zealand.

Operations The year was a challenging one for FRG’s U.S. operating units. Our plants had difficulty responding to the volatility in the order pattern caused by the 2001 introduction of the FIRE Act grant program and an order hiatus immediately following the events of September 11th. Once order activity resumed, a shift in customer preference toward more highly-customized vehicles extended engineering and production lead times. The resulting decline in production and increase in unit costs led to a significant fall-off in profitability. Efforts to manage production and adjust business processes to suit these customer preferences began to yield results toward year-end, but significant further improvement is needed and forthcoming.

Outside of the U.S., operating results were stronger. At our Red Deer, Alberta facility we focused on improving operations by reducing non-value-added processes. At the same time, we achieved ISO 9001 certification.

Our Finland-based operations implemented significant improvements in the layout of boom assembly and painting processes. We realized benefits from these changes toward the end of the year and are expecting cycle time reductions of 20% in 2003. These changes, in addition to mass customization of current product lines, helped Bronto efficiently adjust to rapid changes in its backlog. At Plastisol, productivity increased markedly when it established several fast-track assembly lines and outsourced lower value activities. As a result of these changes, Plastisol’s glassfiber reinforced polyester cab shipments increased 25% from 2001.

People Developing our workforce continues to receive high priority. We held supervisory training courses through the University of Alabama for 65 supervisors and managers in the U.S. Through E-One’s partnership with a local community college in Ocala, Florida 475 employees participated in continuing education training to better prepare themselves for future challenges.

We implemented additional development activities for our dealer partners in North America. To improve efficiency and productivity, we provided specific sales process training and initiated a product-training program over the Internet.

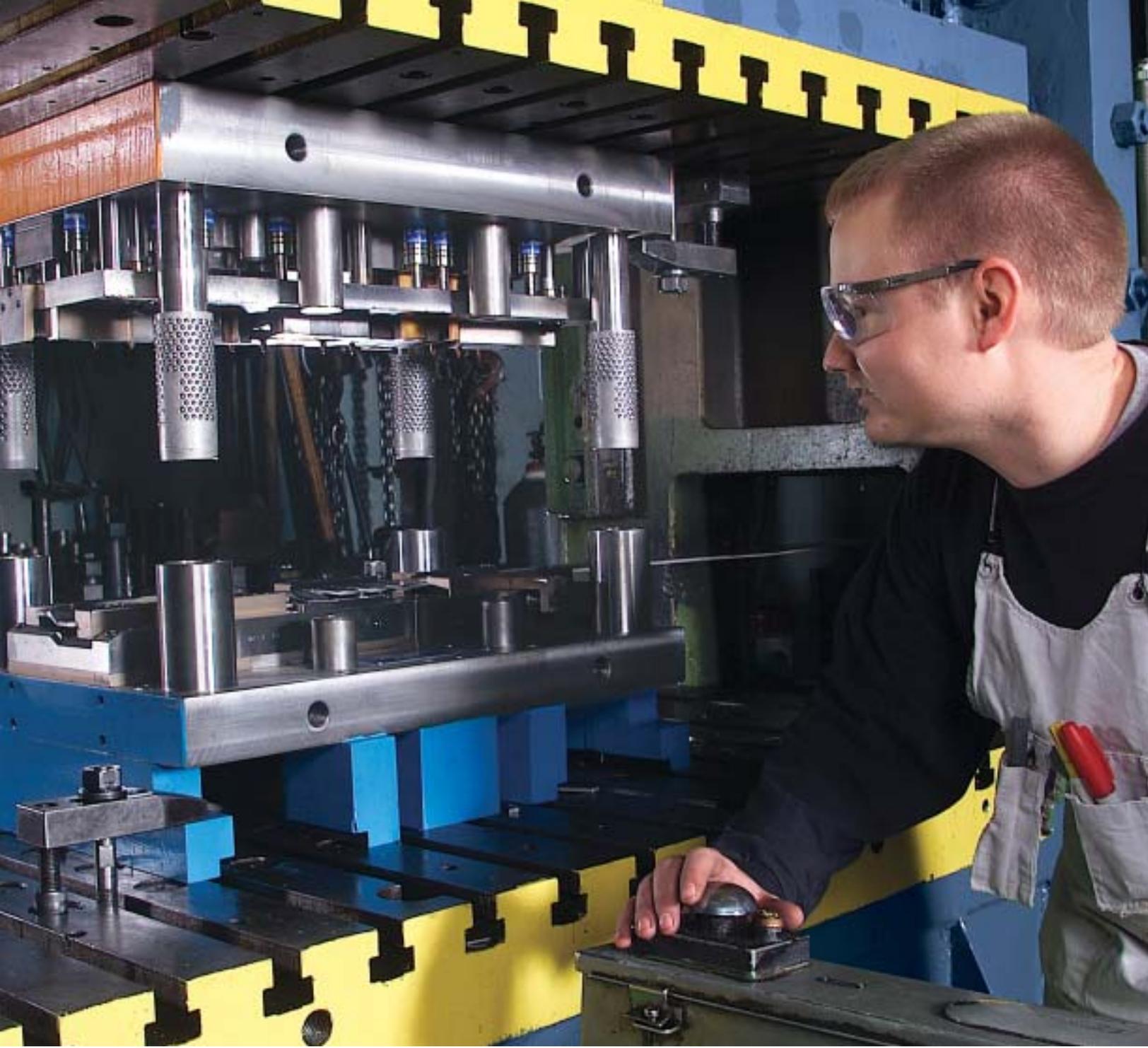
Working with our supplier partners, E-One donated this dewatering unit to the Fire Department of New York City to help replenish their fleet after the tragic events of September 11, 2001.

Outlook We expect stable to improving global demand in 2003 for Fire Rescue Group. While U.S. municipal spending in general is lower due to budget constraints at the state and local level, the U.S. fire service continues to receive increased funding from the federal government. The new Department of Homeland Security plans to establish a fully integrated national emergency response system and a national system for incident management.

The Federal Emergency Management Agency (FEMA), which administers the FIRE Act grant process, has been absorbed into the new Department of Homeland Security. FEMA, under the Department of Homeland Security, will continue to manage the FIRE Act grant program, funding a wide range of fire service needs ranging from training to fire apparatus purchases. Early indications are for a further increase in funding in 2003, from the \$360 million in 2002 and \$90 million in 2001, which should at least partially offset tightening municipal budgets.

We are entering 2003 with a record \$282 million backlog. We are committed to making steady operating improvements during 2003 and beyond. By accelerating lean enterprise and other strategic initiatives, we expect to reduce cycle time, improve productivity, reduce inventory and improve customer satisfaction. Emphasizing customer focus and continuous improvement will drive profitable growth and global leadership in solutions for the fire and emergency response community.





A die is being set up for manufacturing parts for automobile wiper blades at our customer, Jena Tool in Dayton, Ohio. Our punches, pilots and matrixes are used in the die to shape the wiper part.

The Tool Group manufactures a broad range of high precision and consumable tools for metal stamping, metal cutting and plastic injection mold industries serving more than 14,000 industrial customers around the world.

	2002	2001	2000
	<i>(in thousands except employee data)</i>		
Sales	\$ 156,343	\$ 161,778	\$ 194,485
Operating income	18,716	19,290	35,298
Operating margin %	12.0%	11.9%	18.1%
Backlog at December 31	11,359	10,748	14,679
Total assets	170,343	176,580	175,884
Capital expenditures	7,733	7,733	7,837
Employees	1,324	1,333	1,534

Tool Group

2002 Highlights

- Sales and earnings decline due to weak U.S. industrial markets and low capital spending
- ISO 9001/2000 certification earned at U.S. die component facilities
- International sales of die component tooling grow 28%
- Lean enterprise initiatives drive \$2.3 million reduction in inventories
- In Portugal, new die component manufacturing facility preparing for initial shipments

Markets and Products Operating in targeted niches, Tool Group provides industrial tooling products to metal stamping, metal cutting and plastic injection mold customers. In the U.S., demand for industrial tooling remained weak in 2002. Group sales decreased 3% from 2001 levels. In our primary markets there continued to be no significant new capital expenditures or new tooling projects to generate sales opportunities for the group. Most customer segments were depressed as a result of the ongoing recession. Despite higher automobile production in North America in 2002, several of the major manufacturers did not appreciably increase their tooling expenditure levels; while at the same time, price levels on tooling products continued to be under intense competitive pressure. Mold tooling and body can tooling were the only segments where sales improved slightly year-over-year. Despite focused cost reduction efforts, operating income before goodwill charges declined 14% from 2001.



One of our Manchester Tool service technicians evaluates a new grooving tool in use at our customer, Gosiger, Inc. Introduced in September 2002, this new tooling line lengthens tool life and improves chip control.

Die Component sales for metal stamping were flat with 2001, yet we maintained our leadership position in a weak domestic market. Our foreign sales branches achieved significant growth, particularly in Germany, Japan and Canada. In the fourth quarter, we introduced a broader product offering primarily for the automotive industry, including wearplates, cams and related products. We opened our new manufacturing facility in Portugal in late 2002 and began hiring and training production personnel. This facility went into production early in 2003 to better serve our European customer base.

Cutting Tool sales declined 13% from 2001. More than half our cutting tool sales are used in the automotive industry. In North America, light vehicle production remained strong, but significant capital spending to introduce new power trains was deferred by most domestic vehicle manufacturers, thereby postponing the need for new tooling. Pricing of superhard tooling was under intense pressure in 2002 as our user base continued to enact improved perishable tooling management services and aggressively began to do more reconditioning of this type of tooling. The addition of OTM products (acquired in 2001) and the introduction of a new grooving system at the International Machine Tool Show in September 2002 continued to broaden and enhance our product portfolio and potential customer base.

The accelerating globalization of our customer base has made it more important for us to have a worldwide presence in cutting tools; accordingly, we are taking steps to broaden our reach. In early 2003 we will open a small sales and manufacturing operation in Germany and add new distribution outlets in the United Kingdom and Italy. These additions will improve our positioning with European machine tool manufacturers, particularly those that provide increasing amounts of equipment to automobile manufacturers in North America.

Mold Tooling sales increased slightly despite the difficult economy. Sales rose 5% in 2002 as we added new products and made modest share gains in the United States. The most significant new product introduction is a fast, interchangeable tooling system for manufacturers and users of small molds. This product provides the customer greater flexibility, lower cost and increased speed in mold development and subsequent manufacturing.

Operations Aggressive implementation of lean enterprise practices remained a high priority throughout 2002 in all operations. Our metal cutting operations rearranged more than 80% of their manufacturing assets into cellular units around product lines. These facilities experienced significant reductions in lead times, improved delivery performance, lowered inventories and increased throughput. We will re-engineer the remaining portion of these facilities in the first quarter of 2003.

Other parts of our business also progressed their lean initiatives. The die component blanking operations completed their initial lean effort in October and improved overall productivity more than 10%. At the same time, our four U.S. die component manufacturing plants also achieved ISO 9001/2000 certification during the fourth quarter. We rearranged most of the U.S. mold pin manufacturing facility to improve product flow. This resulted in reducing production lead times by more than 50% and lowering manufacturing floor space requirements. As a result of these lean initiatives, the group's inventory level declined more than \$2 million, a 12% decrease. Lean activities will continue to be a main emphasis of the Tool Group in 2003.



Clapp Dico is the U.S. market leader in superhard cutting tools. At our plant in Whitehouse, Ohio we produce grooving tools used by our customers to machine hardened-steel components and aluminum automotive parts.

People In 2002 the group invested in education and skills training in several areas. We exposed every employee in the group to lean enterprise concepts and the potential benefits achievable through effective implementation of these principles throughout the organization. We trained most of the organization in the requirements of ISO 9000 or QS 9000. And we provided additional purchasing and negotiations training to key decision-makers in the procurement and materials management areas.

Outlook We anticipate that our global markets will demonstrate only a slight improvement during 2003 and have adjusted our organization accordingly. In the absence of a significant improvement in the economic environment, we expect improved earnings and cash flow from our restructuring efforts, start up of our lower cost Portugal facility and the continued benefits from implementation of lean enterprise systems.

Financial Section

Selected Financial Data	29
Consolidated Balance Sheets	30
Consolidated Statements of Income	31
Consolidated Statements of Comprehensive Income	32
Consolidated Statements of Cash Flows	33
Notes to Consolidated Financial Statements	34
Auditors' Report	50
Financial Review	51

Forward-Looking Statements This annual report contains various forward-looking statements. Statements in this report that are not historical are forward-looking statements. Such statements are subject to various risks and uncertainties that could cause actual results to vary materially from those stated. Such risks and uncertainties include: economic conditions in various regions, product and price competition, raw material prices, foreign currency exchange rate changes, technology changes, patent issues, litigation results, legal and regulatory developments and other risks and uncertainties described in documents filed with the Securities and Exchange Commission.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

SELECTED FINANCIAL DATA

	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>	<u>1997</u>	<u>1996</u>	<u>1995</u>	<u>1994</u>	<u>1993</u>	<u>1992</u>
Operating Results											
(dollars in millions):											
Net sales (a)	\$1,057.2	\$1,072.2	\$1,106.1	\$ 977.2	\$936.8	\$858.6	\$814.1	\$744.9	\$611.1	\$506.7	\$462.1
Income before income taxes (a,b)	\$ 61.1	\$ 64.5	\$ 84.4	\$ 79.3	\$ 79.4	\$ 81.5	\$ 86.6	\$ 77.8	\$ 66.2	\$ 57.6	\$ 51.7
Income from continuing operations (a,b)	\$ 46.2	\$ 46.6	\$ 57.7	\$ 54.4	\$ 55.1	\$ 56.9	\$ 57.8	\$ 51.9	\$ 44.3	\$ 39.0	\$ 35.6
Operating margin (a)	7.8%	8.6%	10.5%	10.4%	10.4%	11.2%	11.8%	12.1%	12.2%	12.4%	12.3%
Return on average common shareholders' equity (b,c,d)	12.1%	13.3%	16.4%	17.0%	19.1%	20.6%	23.8%	22.0%	22.3%	21.0%	20.0%
Common Stock Data											
(per share) (e):											
Income from continuing operations—diluted	\$ 1.01	\$ 1.03	\$ 1.27	\$ 1.18	\$ 1.20	\$ 1.24	\$ 1.26	\$ 1.13	\$.96	\$.85	\$.77
Cash dividends	\$.80	\$.78	\$.76	\$.74	\$.71	\$.67	\$.58	\$.50	\$.42	\$.36	\$.31
Market price range:											
High	\$ 27.07	\$ 24.63	\$ 24.13	\$ 28.06	\$27.50	\$26.75	\$28.25	\$25.88	\$21.38	\$21.00	\$17.63
Low	\$ 16.00	\$ 17.00	\$ 14.75	\$ 15.06	\$20.00	\$19.88	\$20.88	\$19.63	\$16.88	\$15.75	\$12.38
Average common shares outstanding (in thousands)	45,939	45,443	45,521	45,958	45,846	45,840	45,885	45,776	45,948	46,155	46,157
Financial Position at Year-End											
(dollars in millions):											
Working capital (f,g)	\$ 172.9	\$ 151.6	\$ 60.0	\$ 71.6	\$116.0	\$ 41.6	\$ 40.6	\$ 48.8	\$ 53.9	\$ 52.8	\$ 49.5
Current ratio (f,g)	1.8	1.8	1.2	1.3	1.6	1.2	1.2	1.3	1.4	1.5	1.6
Total assets	\$1,168.4	\$1,026.9	\$1,001.4	\$ 948.6	\$836.0	\$727.9	\$703.9	\$620.0	\$521.6	\$405.7	\$363.7
Long-term debt, net of current portion (f)	\$ 279.5	\$ 232.7	\$ 125.4	\$ 134.4	\$137.2	\$ 32.1	\$ 34.3	\$ 39.7	\$ 34.9	\$ 21.1	\$ 16.2
Shareholders' equity	\$ 398.1	\$ 359.4	\$ 357.4	\$ 354.0	\$321.8	\$299.8	\$272.8	\$248.1	\$220.3	\$199.2	\$179.0
Debt-to-capitalization ratio (f)	44%	44%	45%	42%	37%	30%	28%	29%	22%	1%	2%
Other (dollars in millions):											
New business (a)	\$1,121.2	\$1,082.4	\$1,113.7	\$1,018.8	\$967.9	\$888.8	\$851.3	\$704.9	\$631.5	\$526.0	\$455.0
Backlog (a)	\$ 422.0	\$ 352.2	\$ 339.9	\$ 329.5	\$305.0	\$254.7	\$227.6	\$190.0	\$204.0	\$167.6	\$143.4
Net cash provided by operating activities	\$ 88.4	\$ 95.1	\$ 64.4	\$ 57.7	\$ 75.5	\$ 64.2	\$ 61.4	\$ 62.9	\$ 53.8	\$ 48.8	\$ 40.2
Net cash (used for) investing activities	\$ (57.3)	\$ (59.2)	\$ (64.8)	\$ (105.1)	\$ (93.0)	\$ (38.4)	\$ (54.2)	\$ (88.1)	\$ (96.9)	\$ (38.1)	\$ (26.9)
Net cash provided by (used for) financing activities	\$ (38.1)	\$ (32.6)	\$ 5.2	\$ 40.9	\$ 22.2	\$ (27.5)	\$ (4.1)	\$ 29.9	\$ 45.1	\$ (10.3)	\$ (11.2)
Capital expenditures (a)	\$ 20.1	\$ 18.4	\$ 22.3	\$ 23.4	\$ 19.2	\$ 18.2	\$ 15.2	\$ 14.2	\$ 9.9	\$ 9.1	\$ 7.6
Depreciation (a)	\$ 21.7	\$ 20.0	\$ 19.5	\$ 17.1	\$ 14.9	\$ 13.3	\$ 11.8	\$ 10.5	\$ 8.9	\$ 7.5	\$ 6.8
Employees (a)	7,378	6,631	6,936	6,750	6,531	6,102	5,721	5,469	4,638	3,847	3,635

(a) continuing operations only

(b) in 1996, includes gain on sale of subsidiary of \$4.7 million pre-tax, \$2.8 million after-tax or \$.06 per share

(c) in 1995, includes the effect of a nonrecurring charge for a litigation settlement related to a discontinued business of \$4.2 million after-tax

(d) excludes cumulative effects of changes in accounting

(e) reflects 3-for-2 stock split in 1992 and a 4-for-3 stock split in 1994

(f) manufacturing operations only

(g) in 2001, increase largely attributable to refinancing of short-term debt with funded long-term debt

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	December 31,	
	2002	2001
Assets		
Manufacturing activities:		
Current assets		
Cash and cash equivalents	\$ 9,782,000	\$ 16,882,000
Accounts receivable, net of allowances for doubtful accounts of \$2,640,000 and \$2,355,000, respectively	181,843,000	158,994,000
Inventories—Note B	183,802,000	152,841,000
Prepaid expenses	19,390,000	13,608,000
Total current assets	394,817,000	342,325,000
Properties and equipment—Note C	143,932,000	113,742,000
Other assets		
Goodwill, net of accumulated amortization	348,435,000	280,888,000
Other deferred charges and assets	44,046,000	36,450,000
Total manufacturing assets	931,230,000	773,405,000
Net assets of discontinued operations, including financial assets	10,392,000	14,396,000
Financial services activities—Lease financing and other receivables, net of allowances for doubtful accounts of \$1,002,000 and \$1,005,000, respectively, and net of unearned finance revenue—Note D	226,788,000	239,120,000
Total assets	\$1,168,410,000	\$1,026,921,000
Liabilities and Shareholders' Equity		
Manufacturing activities:		
Current liabilities		
Short-term borrowings—Note E	\$ 16,432,000	\$ 28,849,000
Accounts payable	76,082,000	53,292,000
Accrued liabilities		
Compensation and withholding taxes	29,274,000	24,816,000
Customer deposits	28,326,000	17,584,000
Other	66,007,000	55,484,000
Income taxes—Note F	5,763,000	10,712,000
Total current liabilities	221,884,000	190,737,000
Long-term borrowings—Note E	279,544,000	232,678,000
Long-term pension liabilities	32,656,000	
Deferred income taxes—Note F	33,495,000	29,280,000
Total manufacturing liabilities	567,579,000	452,695,000
Financial services activities—Borrowings—Note E	202,022,000	213,917,000
Total liabilities	769,601,000	666,612,000
Minority interest in subsidiary—Note K	744,000	873,000
Shareholders' equity—Notes I and J		
Common stock, \$1 par value, 90,000,000 shares authorized, 48,394,000 and 47,378,000 shares issued, respectively	48,394,000	47,378,000
Capital in excess of par value	91,114,000	73,177,000
Retained earnings—Note E	313,684,000	312,206,000
Treasury stock, 734,000 and 2,249,000 shares, respectively, at cost	(18,026,000)	(45,486,000)
Deferred stock awards	(3,136,000)	(2,179,000)
Accumulated other comprehensive income (loss)		
Foreign currency translation	(18,084,000)	(25,660,000)
Net derivative (loss), cash flow hedges	(2,098,000)	
Minimum pension liability	(13,783,000)	
Total shareholders' equity	398,065,000	359,436,000
Total liabilities and shareholders' equity	\$1,168,410,000	\$1,026,921,000

See notes to consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME

	For the years ended December 31,		
	2002	2001	2000
Net sales	\$1,057,201,000	\$1,072,175,000	\$1,106,127,000
Costs and expenses			
Cost of sales	(758,205,000)	(759,914,000)	(768,783,000)
Selling, general and administrative	(217,053,000)	(220,257,000)	(220,690,000)
Operating income	81,943,000	92,004,000	116,654,000
Interest expense	(20,075,000)	(26,368,000)	(31,401,000)
Other income (expense), net	(895,000)	(1,182,000)	(839,000)
Minority interest	129,000		
Income before income taxes	61,102,000	64,454,000	84,414,000
Income taxes—Note F	(14,923,000)	(17,864,000)	(26,759,000)
Income from continuing operations	46,179,000	46,590,000	57,655,000
Income from discontinued operations, net of taxes		983,000	726,000
Cumulative effect of change in accounting, net of taxes	(7,984,000)		(844,000)
Net income	<u>\$ 38,195,000</u>	<u>\$ 47,573,000</u>	<u>\$ 57,537,000</u>
Basic income per share			
Income from continuing operations	\$ 1.01	\$ 1.03	\$ 1.27
Income from discontinued operations, net of taxes		.02	.02
Cumulative effect of change in accounting, net of taxes	(.17)		(.02)
Net income*	<u>\$.83</u>	<u>\$ 1.05</u>	<u>\$ 1.27</u>
Diluted income per share			
Income from continuing operations	\$ 1.01	\$ 1.03	\$ 1.27
Income from discontinued operations, net of taxes		.02	.02
Cumulative effect of change in accounting, net of taxes	(.17)		(.02)
Net income*	<u>\$.83</u>	<u>\$ 1.05</u>	<u>\$ 1.26</u>

* amounts may not add to total due to rounding

See notes to consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	<u>For the years ended December 31,</u>		
	<u>2002</u>	<u>2001</u>	<u>2000</u>
Net income	\$ 38,195,000	\$47,573,000	\$57,537,000
Other comprehensive income (loss), net of related tax provision (benefit)			
Foreign currency translation adjustment, net of taxes of \$4,449,000 in 2002, (\$2,053,000) in 2001 and (\$2,853,000) in 2000	7,576,000	(3,495,000)	(4,857,000)
Net derivative (loss), cash flow hedges, net of tax benefit of (\$1,232,000) in 2002	(2,098,000)		
Minimum pension liability, net of tax benefit of (\$8,094,000) in 2002	<u>(13,783,000)</u>		
Comprehensive income	<u>\$ 29,890,000</u>	<u>\$44,078,000</u>	<u>\$52,680,000</u>

See notes to consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	For the years ended December 31,		
	2002	2001	2000
Operating activities			
Net income	\$ 38,195,000	\$ 47,573,000	\$ 57,537,000
Adjustments to reconcile net income to net cash provided by operating activities:			
Cumulative effect of change in accounting	7,984,000		844,000
Depreciation	21,693,000	20,036,000	19,482,000
Amortization	2,302,000	10,222,000	9,575,000
Provision for doubtful accounts	1,721,000	1,087,000	881,000
Deferred income taxes	2,387,000	(458,000)	(220,000)
Other, net	5,026,000	274,000	(102,000)
Changes in operating assets and liabilities, net of effects from acquisitions of companies			
Accounts receivable	(5,052,000)	11,047,000	(10,012,000)
Inventories	(2,126,000)	10,085,000	7,522,000
Prepaid expenses	(4,211,000)	(3,961,000)	(120,000)
Accounts payable	12,056,000	(10,372,000)	(9,567,000)
Customer deposits	9,549,000	7,536,000	(8,453,000)
Accrued liabilities	(4,610,000)	(1,972,000)	(2,249,000)
Income taxes	3,436,000	4,016,000	(728,000)
Net cash provided by operating activities	88,350,000	95,113,000	64,390,000
Investing activities			
Purchases of properties and equipment	(20,144,000)	(18,424,000)	(22,288,000)
Principal extensions under lease financing agreements	(155,293,000)	(174,457,000)	(143,850,000)
Principal collections under lease financing agreements	169,025,000	148,375,000	122,412,000
Payments for purchases of companies, net of cash acquired, excludes \$43,418,000 of common stock issued in 2002	(48,059,000)	(19,657,000)	(24,401,000)
Other, net	(2,858,000)	4,953,000	3,297,000
Net cash used for investing activities	(57,329,000)	(59,210,000)	(64,830,000)
Financing activities			
Increase (reduction) in short-term borrowings, net	(98,273,000)	(91,696,000)	61,482,000
Increase (reduction) in long-term borrowings	97,211,000	105,130,000	(4,961,000)
Purchases of treasury stock	(4,356,000)	(13,155,000)	(17,279,000)
Cash dividends paid to shareholders	(35,983,000)	(35,150,000)	(34,534,000)
Other, net	3,280,000	2,294,000	524,000
Net cash (used for) provided by financing activities	(38,121,000)	(32,577,000)	5,232,000
Increase (decrease) in cash and cash equivalents	(7,100,000)	3,326,000	4,792,000
Cash and cash equivalents at beginning of year	16,882,000	13,556,000	8,764,000
Cash and cash equivalents at end of year	\$ 9,782,000	\$ 16,882,000	\$ 13,556,000

See notes to consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE A—SIGNIFICANT ACCOUNTING POLICIES

Principles of consolidation: The consolidated financial statements include the accounts of Federal Signal Corporation and all of its subsidiaries. All significant intercompany balances and transactions have been eliminated.

Cash equivalents: The company considers all highly liquid investments with a maturity of three-months or less, when purchased, to be cash equivalents.

Allowance for doubtful accounts: The company maintains an allowance for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments on the outstanding accounts receivable. The allowance is maintained at a level considered appropriate based on historical and other factors that affect collectibility. These factors include historical trends of write-offs, recoveries and credit losses; the monitoring of portfolio credit quality; and current and projected economic and market conditions. If the financial condition of the company's customers were to deteriorate, resulting in an impairment of the ability to make payments, additional allowances may be required.

Inventories: Inventories are stated at the lower of cost or market. At December 31, 2002 and 2001, approximately 45% and 48%, respectively, of the company's inventories are costed using the LIFO (last-in, first-out) method. The remaining portion of the company's inventories is costed using the FIFO (first-in, first-out) method.

Properties and depreciation: Properties and equipment are stated at cost. Depreciation, for financial reporting purposes, is computed principally on the straight-line method over the estimated useful lives of the assets. Property, plant and equipment and other long-term assets (including amortizable intangible assets) are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. If the sum of the expected undiscounted cash flows is less than the carrying value of the related asset or group of assets, a loss is recognized for the difference between the fair value and carrying value of the asset or group of assets. Such analyses necessarily involve significant judgment.

Intangible assets: Intangible assets principally consist of costs in excess of fair values of net assets acquired in purchase transactions. These assets are assessed yearly for impairment at the beginning of the fourth quarter and also between annual tests if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount.

Stock-based compensation plans: The company has two stock-based compensation plans, which are described more fully in Note I. The company accounts for these plans under the recognition and measurement principles of APB Opinion No. 25, "Accounting for Stock Issued to Employees", and related interpretations. No stock-based employee compensation cost is reflected in net income, as all options granted under those plans had an exercise price equal to the market value of the underlying common stock at the date of grant.

The weighted average fair value per share of options granted was \$4.52 in 2002, \$5.33 in 2001 and \$4.86 in 2000. The fair value of options was estimated at the grant date using a Black-Scholes option pricing model with the following weighted average assumptions: risk free interest rates of 2.7% in 2002, 4.4% in 2001 and 5.0% in 2000; dividend yield of 4.1% in 2002, 3.5% in 2001 and 3.9% in 2000; market volatility of the company's common stock of .28 in 2002 and 2001 and .27 in 2000; and a weighted average expected life of the options of approximately 8 years for 2002, 2001 and 2000.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The following table illustrates the effect on net income and earnings per share for the three-year period ended December 31, 2002 if the company had applied fair value recognition provisions of Statement of Financial Accounting Standards (SFAS) No. 123, "Accounting for Stock-Based Compensation", to all stock-based employee compensation. For purposes of pro forma disclosure, the estimated fair value of the options is amortized to expense over the option's vesting period.

	<u>2002</u>	<u>2001</u>	<u>2000</u>
Reported net income	\$38,195,000	\$47,573,000	\$57,537,000
Deduct: Total stock-based employee compensation expense determined under the fair-value method for all awards, net of related tax effects	<u>1,052,000</u>	<u>1,079,000</u>	<u>737,000</u>
Pro forma net income	<u>\$37,143,000</u>	<u>\$46,494,000</u>	<u>\$56,800,000</u>
Basic net income per common share			
Reported net income	\$.83	\$ 1.05	\$ 1.27
Pro forma net income	\$.81	\$ 1.03	\$ 1.25
Diluted net income per common share			
Reported net income	\$.83	\$ 1.05	\$ 1.26
Pro forma net income	\$.81	\$ 1.02	\$ 1.25

The intent of the Black-Scholes option valuation model is to provide estimates of fair values of traded options that have no vesting restrictions and are fully transferable. Option valuation models require the use of highly subjective assumptions including expected stock price volatility. The company has utilized the Black-Scholes method to produce the pro forma disclosures required under SFAS No. 123 and 148. In management's opinion, existing valuation models do not necessarily provide a reliable single measure of the fair value of its employee stock options because the company's employee stock options have significantly different characteristics from those of traded options and the assumptions used in applying option valuation methodologies, including the Black-Scholes model, are highly subjective.

Use of estimates: The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Warranty: Sales of some of the company's products carry express warranties based on the terms that are generally accepted in the company's marketplaces. The company records provisions for estimated warranty at the time of sale based on historical experience and periodically adjusts these provisions to reflect actual experience. Infrequently, a material warranty issue can arise which is beyond the scope of the company's historical experience. The company provides for these issues as they become probable and estimable.

Product liability and worker's compensation liability: Due to the nature of the company's products, the company is subject to claims for product liability and worker's compensation in the normal course of business. The company is self-insured for a portion of these claims. The company establishes a liability using a third party actuary for any known outstanding matters, including a reserve for claims incurred but not yet reported.

Financial instruments: The company enters into agreements (derivative financial instruments) to manage the risks associated with interest rates and foreign exchange rates. The company does not actively trade such instruments nor enter into such agreements for speculative purposes. The company principally utilizes two types of derivative financial instruments: 1) interest rate swaps to manage its interest rate risk, and 2) foreign currency forward exchange contracts to manage risks associated with sales and expenses (forecasted or committed) denominated in foreign currencies.

On the date a derivative contract is entered into, the company designates the derivative as one of the following types of hedging instruments and accounts for the derivative as follows:

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Fair value hedge: A hedge of a recognized asset or liability or an unrecognized firm commitment is declared as a fair value hedge. For fair value hedges, both the effective and ineffective portions of the changes in the fair value of the derivative, along with the gain or loss on the hedged item that is attributable to the hedged risk, are recorded in earnings and reported in the consolidated statements of income on the same line as the hedged item.

Cash flow hedge: A hedge of a forecasted transaction or of the variability of cash flows to be received or paid related to a recognized asset or liability is declared as a cash flow hedge. The effective portion of the change in the fair value of a derivative that is declared as a cash flow hedge is recorded in accumulated other comprehensive income. When the hedged item impacts the income statement, the gain or loss included in accumulated other comprehensive income is reported on the same line in the consolidated statements of income as the hedged item. In addition, both the fair value of changes excluded from the company's effectiveness assessments and the ineffective portion of the changes in the fair value of derivatives used as cash flow hedges are reported in selling, general and administrative expenses in the consolidated statements of income.

The company formally documents its hedge relationships, including identification of the hedging instruments and the hedged items, as well as its risk management objectives and strategies for undertaking the hedge transaction. Derivatives are recorded in the consolidated balance sheets at fair value in other assets and other liabilities. This process includes linking derivatives that are designated as hedges of specific forecasted transactions. The company also formally assesses, both at inception and at least quarterly thereafter, whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in either the fair value or cash flows of the hedged item. If it is determined that a derivative ceases to be a highly effective hedge, or if the anticipated transaction is no longer likely to occur, the company discontinues hedge accounting, and any deferred gains or losses are recorded in selling, general and administrative expenses. Amounts related to terminated interest rate swaps are deferred and amortized as an adjustment to interest expense over the original period of interest exposure, provided the designated liability continues to exist or is probable of occurring.

Revenue recognition: Effective January 1, 2000, the company changed its method of accounting for recognizing revenues as required by Staff Accounting Bulletin No. 101 issued by the Securities and Exchange Commission. Effective with the change, the company recognizes revenues when all of the following are satisfied: persuasive evidence of an arrangement exists, the price is fixed or determinable, collectibility is reasonably assured and delivery has occurred or services have been rendered. In most instances, this occurs at the time that title passes to the customer based on the respective sales agreement. Infrequently, a sale qualifies for percentage of completion accounting. Sales accounted for under this method were immaterial for the three-year period ended December 31, 2002. Management believes that all relevant criteria and conditions are considered when recognizing sales.

In years prior to 2000, the company recognized substantially all of its revenues for product sales as products were shipped, as this method was then in compliance with generally accepted accounting principles. See Note P.

Income per share: Basic net income per share is calculated using income available to common shareholders (net income) divided by the weighted average number of common shares outstanding during the year. Diluted net income per share is calculated in the same manner except that the denominator is increased to include the weighted number of additional shares that would have been outstanding had dilutive stock option shares been actually issued. The company uses the treasury stock method to calculate dilutive shares. See Note N for the calculation of basic and diluted net income per share.

Reclassification: Certain amounts in the 2001 balance sheet have been reclassified to conform to the 2002 presentation.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

NOTE B—INVENTORIES

Inventories at December 31 are summarized as follows:

	<u>2002</u>	<u>2001</u>
Finished goods	\$ 50,952,000	\$ 50,148,000
Work in process	63,971,000	39,258,000
Raw materials	68,879,000	63,435,000
Total inventories	<u>\$183,802,000</u>	<u>\$152,841,000</u>

If the company had used the first-in, first-out cost method exclusively, which approximates replacement cost, inventories would have aggregated \$192,342,000 and \$161,913,000 at December 31, 2002 and 2001, respectively.

NOTE C—PROPERTIES AND EQUIPMENT

A comparative summary of properties and equipment at December 31 is as follows:

	<u>2002</u>	<u>2001</u>
Land	\$ 6,251,000	\$ 5,606,000
Buildings and improvements	69,359,000	53,854,000
Machinery and equipment	233,677,000	198,047,000
Accumulated depreciation	<u>(165,355,000)</u>	<u>(143,765,000)</u>
Total properties and equipment	<u>\$ 143,932,000</u>	<u>\$ 113,742,000</u>

NOTE D—LEASE FINANCING AND OTHER RECEIVABLES

As an added service to its customers, the company is engaged in financial services activities. These activities primarily consist of providing long-term financing for certain U.S. customers purchasing vehicle-based products from the company's Environmental Products and Fire Rescue groups. A substantial portion of these receivables is due from municipalities and volunteer fire departments. Financing is provided through sales-type lease contracts with terms that range from one to ten years.

At the inception of the lease, the company records the product sales price and related costs and expenses of the sale. Financing revenues are included in income over the life of the lease. The amounts recorded as lease financing receivables represent amounts equivalent to normal selling prices less subsequent customer payments.

Lease financing and other receivables will become due as follows: \$74,259,000 in 2003, \$37,577,000 in 2004, \$33,767,000 in 2005, \$22,492,000 in 2006, \$15,820,000 in 2007 and \$43,875,000 thereafter. At December 31, 2002 and 2001, unearned finance revenue on these leases aggregated \$35,561,000 and \$36,134,000, respectively.

NOTE E—DEBT

Short-term borrowings at December 31 consisted of the following:

	<u>2002</u>	<u>2001</u>
Commercial paper	\$115,435,000	\$203,082,000
Notes payable	37,363,000	30,798,000
Current maturities of long-term debt	<u>656,000</u>	<u>8,886,000</u>
Total short-term borrowings	<u>\$153,454,000</u>	<u>\$242,766,000</u>

Of the above amounts, \$137,022,000 and \$213,917,000 are classified as financial services activities borrowings at December 31, 2002 and 2001, respectively.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Long-term borrowings at December 31 consisted of the following:

	<u>2002</u>	<u>2001</u>
6.79% unsecured note payable in annual installments of \$10,000,000 in 2007-2011	\$ 50,000,000	\$ 50,000,000
6.37% unsecured note payable in annual installments of \$10,000,000 in 2004-2008	50,000,000	50,000,000
6.60% unsecured note payable in annual installments of \$7,143,000 in 2005-2011	50,000,000	50,000,000
4.93% unsecured note payable in annual installments of \$8,000,000 in 2008-2012	40,000,000	
5.24% unsecured note payable in 2012	60,000,000	
5.49% unsecured note payable in 2006	65,000,000	65,000,000
7.99% unsecured note payable in 2004	15,000,000	15,000,000
7.59% unsecured note payable in 2002		8,000,000
Floating rate (5.80% at December 31, 2002) secured note payable in monthly installments ending in 2011	4,540,000	
Floating rate secured note payable in monthly installments ending in 2004		2,207,000
Fair value adjustment of notes	10,146,000	
Other	<u>514,000</u>	<u>1,357,000</u>
	345,200,000	241,564,000
Less current maturities	<u>656,000</u>	<u>8,886,000</u>
Total long-term borrowings	<u>\$344,544,000</u>	<u>\$232,678,000</u>

Of the above amounts, \$65,000,000 is classified as financial services activities borrowings at December 31, 2002.

Aggregate maturities of long-term debt amount to approximately \$656,000 in 2003, \$25,591,000 in 2004, \$17,667,000 in 2005, \$82,638,000 in 2006, \$27,593,000 in 2007 and \$180,909,000 thereafter. The fair values of these borrowings were \$316,300,000 and \$242,500,000 at December 31, 2002 and 2001, respectively.

The 6.79%, 6.37%, 6.60%, 4.93%, 5.24% and 5.49% notes contain covenants relating to a maximum debt-capital ratio and minimum net worth. The 7.99% note contains various restrictions relating to maintenance of minimum working capital, payments of cash dividends, purchases of the company's stock, and principal and interest of any subordinated debt. At December 31, 2002, all of the company's retained earnings were free of any restrictions and the company was in compliance with the financial covenants of its debt agreements.

The company paid interest of \$20,796,000 in 2002, \$26,097,000 in 2001 and \$31,780,000 in 2000. Weighted average interest rates on short-term borrowings were 1.75% and 2.65% at December 31, 2002 and 2001, respectively. See Note H regarding the company's utilization of derivative financial instruments relating to outstanding debt.

At December 31, 2002, the company had unused credit lines of \$300,000,000, of which \$166,000,000 expires June 12, 2003 and \$134,000,000 expires June 17, 2004. Commitment fees, paid in lieu of compensating balances, were insignificant.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

NOTE F—INCOME TAXES

The provisions for income taxes consisted of the following:

	<u>2002</u>	<u>2001</u>	<u>2000</u>
Current:			
Federal	\$ 5,562,000	\$11,257,000	\$19,119,000
Foreign	6,006,000	5,411,000	5,036,000
State and local	968,000	1,654,000	2,824,000
	<u>12,536,000</u>	<u>18,322,000</u>	<u>26,979,000</u>
Deferred:			
Federal	2,330,000	(826,000)	426,000
Foreign	(686,000)	140,000	(424,000)
State and local	743,000	228,000	(222,000)
	<u>2,387,000</u>	<u>(458,000)</u>	<u>(220,000)</u>
Total income taxes	<u>\$14,923,000</u>	<u>\$17,864,000</u>	<u>\$26,759,000</u>

Differences between the statutory federal income tax rate and the effective income tax rate are summarized below:

	<u>2002</u>	<u>2001</u>	<u>2000</u>
Statutory federal income tax rate	35.0%	35.0%	35.0%
State income taxes, net of federal tax benefit	1.8	1.9	2.0
Tax-exempt interest	(5.3)	(4.7)	(3.3)
Exports benefit	(1.5)	(1.3)	(1.2)
Reduction for prior years taxes	(2.3)	(1.3)	(1.0)
Other, net	(3.3)	(1.9)	0.2
Effective income tax rate	<u>24.4%</u>	<u>27.7%</u>	<u>31.7%</u>

The company had net current deferred income tax benefits of \$6,608,000 and \$4,780,000 recorded in the balance sheet at December 31, 2002 and 2001, respectively. The company paid income taxes of \$8,662,000 in 2002, \$15,193,000 in 2001 and \$24,481,000 in 2000.

Net deferred tax liabilities (assets) comprised the following at December 31, 2002: Depreciation and amortization—\$48,962,000; revenue recognized on custom manufacturing contracts—\$2,558,000; accrued pension benefits—(\$4,639,000); accrued expenses deductible in future periods—(\$17,194,000); net operating loss carryforwards of subsidiaries—(\$5,400,000); valuation allowance for net operating loss carryforwards—\$5,400,000; and other—(\$2,800,000).

Net deferred tax liabilities (assets) comprised the following at December 31, 2001: Depreciation and amortization—\$36,371,000; revenue recognized on custom manufacturing contracts—\$2,535,000; accrued pension benefits—\$4,507,000; accrued expenses deductible in future periods—(\$18,675,000); net operating loss carryforwards of subsidiaries—(\$4,271,000); valuation allowance for net operating loss carryforwards—\$4,271,000; and other—(\$238,000).

The majority of the net operating loss carryforwards of subsidiaries have no expiration dates.

Income before taxes consisted of the following:

	<u>2002</u>	<u>2001</u>	<u>2000</u>
United States	\$45,295,000	\$48,335,000	\$71,734,000
Non-U.S	15,807,000	16,119,000	12,680,000
	<u>\$61,102,000</u>	<u>\$64,454,000</u>	<u>\$84,414,000</u>

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

NOTE G—POSTRETIREMENT BENEFITS

The company and its subsidiaries sponsor a number of defined benefit retirement plans covering certain of its salaried employees and hourly employees not covered by plans under collective bargaining agreements. Benefits under these plans are primarily based on final average compensation and years of service as defined within the provisions of the individual plans. The company also participates in several multiemployer retirement plans that provide defined benefits to employees under certain collective bargaining agreements.

U.S. Benefit Plans

The components of net periodic pension expense (credit) are summarized as follows:

	<u>2002</u>	<u>2001</u>	<u>2000</u>
Company-sponsored plans			
Service cost	\$ 3,291,000	\$ 2,597,000	\$ 2,251,000
Interest cost	5,372,000	4,635,000	4,537,000
Expected return on plan assets	(7,073,000)	(9,020,000)	(8,961,000)
Amortization of transition amount	(230,000)	(230,000)	(230,000)
Other	<u>118,000</u>	<u>666,000</u>	<u>(228,000)</u>
	1,478,000	(1,352,000)	(2,631,000)
Multiemployer plans	<u>445,000</u>	<u>534,000</u>	<u>636,000</u>
Net periodic pension expense (credit)	<u>\$ 1,923,000</u>	<u>\$ (818,000)</u>	<u>\$ (1,995,000)</u>

The following summarizes the changes in the projected benefit obligation and plan assets, the funded status of the company-sponsored plans and the major assumptions used to determine these amounts.

	<u>2002</u>	<u>2001</u>
Projected benefit obligation, January 1	\$ 66,228,000	\$60,656,000
Assumption of obligation in business acquisition	27,269,000	
Service cost	3,291,000	2,597,000
Interest cost	5,372,000	4,635,000
Actuarial (gain) loss	6,231,000	3,972,000
Benefits paid	<u>(2,399,000)</u>	<u>(5,632,000)</u>
Projected benefit obligation, December 31	<u>\$105,992,000</u>	<u>\$66,228,000</u>
Fair value of plan assets, January 1	\$ 60,187,000	\$68,078,000
Assumption of assets in business acquisition	18,390,000	
Adjustment to prior year actual return		(612,000)
Actual return on plan assets	(7,043,000)	(1,647,000)
Company contribution	5,000,000	
Benefits paid	<u>(2,399,000)</u>	<u>(5,632,000)</u>
Fair value of plan assets, December 31	<u>\$ 74,135,000</u>	<u>\$60,187,000</u>
Funded status of plan, December 31	\$(31,857,000)	\$(6,041,000)
Unrecognized actuarial (gain) loss	36,652,000	18,285,000
Unrecognized prior service cost	2,007,000	(88,000)
Unrecognized net transition obligation	<u>(618,000)</u>	<u>(848,000)</u>
Net amount recognized as prepaid benefit cost in the balance sheet	<u>\$ 6,184,000</u>	<u>\$11,308,000</u>
Amounts recognized in the balance sheet consist of:		
Prepaid benefit cost	\$ 14,956,000	\$11,308,000
Accrued benefit liability	(32,656,000)	
Intangible asset	2,007,000	
Accumulated other comprehensive income, pre-tax	<u>21,877,000</u>	
Net amount recognized	<u>\$ 6,184,000</u>	<u>\$11,308,000</u>

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Plan assets consist principally of a broadly diversified portfolio of equity securities and corporate and U.S. government obligations. Included in plan assets at December 31, 2002 and 2001 were 503,400 and 653,400 shares of the company's common stock valued at \$9,776,000 and \$14,551,000, respectively. Dividends paid on the company's common stock to the pension trusts aggregated \$403,000 and \$506,000, respectively, for the years ended December 31, 2002 and 2001.

The following table summarizes the significant assumptions used in determining pension costs for the three-year period ended December 31, 2002 and the company's assumptions for 2003:

	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>
Discount rate	6.75%	7.3%	7.7%	8.1%
Rate of increase in compensation levels	3.5%	3.5%	4%	4%
Expected long-term rate of return on plan assets	9.0%	9.5%	12%	12%

The weighted average discount rates used in determining the actuarial present value of all pension obligations at December 31, 2002 and 2001 were 6.75% and 7.3%, respectively. The discount rate at the end of the year is one of the significant assumptions used in determining pension costs for the following year. The company expects that the change in the above assumptions will increase 2003 pension costs by approximately \$3,600,000 compared to 2002.

The company also sponsors a number of defined contribution pension plans covering a majority of its employees. Participation in the plans is at each employee's election. Company contributions to these plans are based on a percentage of employee contributions. The cost of these plans, including the plans of companies acquired during the three-year period ended December 31, 2002, was \$5,396,000 in 2002, \$5,252,000 in 2001 and \$4,886,000 in 2000.

The company also provides certain medical, dental and life benefits to certain eligible retired employees. These benefits are funded when the claims are incurred. Participants generally become eligible for these benefits at age 60 after completing at least fifteen years of service. The plan provides for the payment of specified percentages of medical and dental expenses reduced by any deductible and payments made by other primary group coverage and government programs. The company will continue to reduce the percentage of the cost of benefits that it will pay since the company's future costs are limited to 150% of the 1992 cost. Accumulated postretirement benefit liabilities of \$5,562,000 and \$3,988,000 at December 31, 2002 and 2001, respectively, were fully accrued. The net periodic postretirement benefit costs have not been significant during the three-year period ended December 31, 2002.

Non-U.S. Benefit Plan

A wholly-owned subsidiary sponsors a defined benefit plan for substantially all of its employees in the United Kingdom. Benefits under this plan are based on final compensation and years of service as defined within the provisions of the plan.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Net periodic pension expenses or credits during the three-year period ended December 31, 2002 were not significant. The following table summarizes the changes in the projected benefit obligation and plan assets, the funded status of the company-sponsored plans and the major assumptions used to determine these amounts.

	<u>2002</u>	<u>2001</u>
Projected benefit obligation, October 1	\$34,192,000	\$33,649,000
Service cost	500,000	468,000
Interest cost	2,106,000	2,101,000
Actuarial (gain)loss	3,461,000	(338,000)
Employee contributions	91,000	90,000
Benefits paid	(1,689,000)	(1,766,000)
Increase (decrease) due to translation	<u>2,227,000</u>	<u>(12,000)</u>
Projected benefit obligation, September 30	<u>\$40,888,000</u>	<u>\$34,192,000</u>
Fair value of plan assets, October 1	\$33,881,000	\$38,193,000
Actual return on plan assets	(511,000)	(2,815,000)
Company contribution	390,000	381,000
Employee contribution	91,000	90,000
Benefits paid	(1,689,000)	(1,766,000)
Plan expenses	(155,000)	(124,000)
Increase (decrease) due to translation	<u>2,073,000</u>	<u>(78,000)</u>
Fair value of plan assets, September 30	<u>\$34,080,000</u>	<u>\$33,881,000</u>
Funded status of plan, September 30	\$ (6,808,000)	\$ (311,000)
Unrecognized actuarial loss	<u>12,949,000</u>	<u>6,438,000</u>
Net amount recognized as prepaid benefit cost in the balance sheet	<u>\$ 6,141,000</u>	<u>\$ 6,127,000</u>

Plan assets consist principally of a broadly diversified portfolio of equity securities, U.K. government obligations and fixed interest securities. The following significant assumptions were used in determining pension costs for the three-year period ended December 31, 2002:

	<u>2002</u>	<u>2001</u>	<u>2000</u>
Discount rate	6.25%	6.5%	6.5%
Rate of increase in compensation levels	2.5%	3%	3%
Expected long-term rate of return on plan assets	8.0%	8.5%	8.5%

The weighted average discount rate used in determining the actuarial present value of all pension obligations at September 30, 2002 and 2001 were 5.5% and 6.25%, respectively.

NOTE H—DERIVATIVE FINANCIAL INSTRUMENTS

All derivative financial instruments are reported on the balance sheet at their respective fair values. Changes in fair value are recognized either in earnings or equity, depending on the nature of the underlying exposure being hedged and how effective a derivative is at offsetting price movements in the underlying exposure. All of the company's derivative positions existing at December 31, 2002 qualified for hedge accounting under SFAS No. 133. Derivatives documentation policies comply with the standard's requirements.

To manage interest costs, the company utilizes interest rate swaps in combination with its funded debt. Interest rate swaps executed during 2002 and 2001 in conjunction with long-term private placements effectively converted fixed rate debt to variable rate debt. At December 31, 2002, the company had receive fixed, pay variable swap agreements with financial institutions having notional amounts aggregating \$205,000,000 which terminate in varying amounts during 2006 to 2012. These agreements are accounted for as fair value hedges and are 100% effective; no amounts were excluded from the assessment of hedge effectiveness.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

At December 31, 2002, the company also had agreements with financial institutions to swap interest rates in which the company pays interest at a fixed rate and receives interest at the three-month LIBOR rate. These agreements had notional amounts aggregating \$65,000,000 and terminate in varying amounts during 2004 to 2008; the agreement allows the counterparties to cancel the swaps at three-month intervals. If at any three-month extension date the counterparty decides not to extend the swap, it is terminated and no further obligations are due by either party. These interest rate swap agreements are accounted for as cash flow hedges and are 100% effective; no amounts were excluded from the assessment of hedge effectiveness.

The fair values of interest rate and currency swaps are based on quotes from financial institutions. The following table summarizes the company's interest rate swaps at December 31, 2002 and 2001:

	2002		2001	
	Total	Fair value	Total	Fair value
Pay fixed, receive variable				
Notional amount	\$ 65.0	\$(2.4)	\$ 25.0	\$(1.4)
Average pay rate	4.8%		5.1%	
Average receive rate	1.4%		2.0%	
Receive fixed, pay variable				
Notional amount	\$205.0	\$ 3.6	\$105.0	\$(2.5)
Average pay rate	3.0%		3.2%	
Average receive rate	5.6%		6.1%	

The company defers the benefits of terminated interest rate swaps and amortizes the amount as an offset to interest expense over the life of the underlying debt. The unamortized balance at December 31, 2002 and 2001 was \$6,732,000 and \$2,496,000, respectively.

Foreign exchange forward contracts were \$47,126,000 at December 31, 2002 and insignificant at December 31, 2001. Most of these contracts at December 31, 2002 were used to purchase Canadian dollars and expire at various dates in 2003; the fair value of these contracts was (\$316,000) at December 31, 2002.

NOTE I—STOCK-BASED COMPENSATION

The company's stock benefit plans, approved by the company's shareholders, authorize the grant of benefit shares or units to key employees and directors. The plan approved in 1988 authorized, until May 1998, the grant of up to 2,737,500 benefit shares or units (as adjusted for subsequent stock splits and dividends). The plan approved in 1996 and amended in 1999 authorizes the grant of up to 2,500,000 benefit shares or units until April 2006. These share or unit amounts exclude amounts that were issued under predecessor plans. Benefit shares or units include incentive and non-incentive stock options, stock awards and other stock units. The plan approved in December 2001 authorized the grant of up to 1,000,000 benefit shares until December 2011. No grants were made under this plan and the plan was canceled in July 2002.

Stock options are primarily granted at the fair market value of the shares on the date of grant and become exercisable one year after grant at a rate of one-half annually and are exercisable in full on the second anniversary date. All options and rights must be exercised within ten years from date of grant. At the company's discretion, vested stock option holders are permitted to elect an alternative settlement method in lieu of purchasing common stock at the option price. The alternative settlement method permits the employee to receive, without payment to the company, cash, shares of common stock or a combination thereof equal to the excess of market value of common stock over the option purchase price. The company expects to settle all such options in common stock.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Stock option activity for the three-year period ended December 31, 2002 follows (number of shares in 000's, prices in dollars per share):

	<u>Option shares</u>			<u>Weighted average price (\$)</u>		
	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>
Outstanding at beginning of year	2,323	2,178	2,312	20.86	19.84	19.29
Granted	279	519	63	22.84	21.24	18.65
Canceled or expired	(149)	(88)	(36)	21.87	19.93	21.74
Exercised	(233)	(286)	(161)	18.09	14.09	11.05
Outstanding at end of year	<u>2,220</u>	<u>2,323</u>	<u>2,178</u>	21.33	20.86	19.84
Exercisable at end of year	<u>1,452</u>	<u>1,602</u>	<u>1,588</u>	21.28	21.10	19.95

For options outstanding at December 31, 2002, the number (in thousands), weighted average exercise prices in dollars per share, and weighted average remaining terms were as follows:

	<u>Period in which options were granted</u>					<u>Aggregate</u>
	<u>02-01</u>	<u>00-99</u>	<u>98-97</u>	<u>96-95</u>	<u>94-93</u>	
Number outstanding	729	422	464	362	243	2,220
Exercise price range (\$):						
High	25.67	26.13	25.38	24.75	20.62	26.13
Low	16.05	14.94	20.06	20.12	16.00	14.94
Weighted average:						
Exercise price (\$)	21.83	18.54	21.76	23.96	19.89	21.33
Remaining term (years)	9	7	5	3	1	6

Stock award shares are granted to employees at no cost. Awards primarily vest at the rate of 25% annually commencing one year from the date of award, provided the recipient is still employed by the company on the vesting date. The cost of stock awards, based on the fair market value at the date of grant, is being charged to expense over the four-year vesting period. The following table summarizes stock award grants for the three-year period ended December 31, 2002:

	<u>2002</u>	<u>2001</u>	<u>2000</u>
Number of shares granted	109,700	92,500	69,500
Fair value of shares granted	\$2,494,000	\$1,677,000	\$1,108,000
Weighted average fair value per share	\$ 22.73	\$ 18.13	\$ 15.94
Compensation expense recorded	\$1,537,000	\$1,345,000	\$1,499,000

Under the 1988 plan, no benefit shares or units were available for future grant during the three-year period ending December 31, 2002. Under the 1996 plan, the following benefit shares or units were available for future grant: 144,000 at December 31, 2002, 410,000 at December 31, 2001 and 937,000 at December 31, 2000.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

NOTE J—SHAREHOLDERS' EQUITY

The company has 90,000,000 authorized shares of common stock, \$1 par value and 800,000 authorized and unissued shares of preference stock, \$1 par value.

The changes in shareholders' equity for each of the three years in the period ended December 31, 2002 were as follows:

	<u>Common stock par value</u>	<u>Capital in excess of par value</u>	<u>Retained earnings</u>	<u>Treasury stock</u>	<u>Deferred stock awards</u>	<u>Accumulated other comprehensive income</u>
Balance at December 31, 1999—						
46,889,000 shares issued	\$46,889,000	\$66,762,000	\$276,951,000	\$(17,023,000)	\$(2,238,000)	\$(17,308,000)
Net income			57,537,000			
Cash dividends declared			(34,503,000)			
Exercise of stock options:						
Cash proceeds	82,000	961,000				
Exchange of shares	79,000	697,000		(776,000)		
Stock awards granted	69,000	1,039,000			(1,108,000)	
Tax benefits related to stock compensation plans		302,000				
Retirement of treasury stock	(52,000)	(1,068,000)		1,120,000		
Purchases of 988,000 shares of treasury stock				(17,279,000)		
Amortization of deferred stock awards					1,499,000	
Foreign currency translation adjustment, net						(4,857,000)
Other				(344,000)		
Balance at December 31, 2000—						
47,067,000 shares issued	47,067,000	68,693,000	299,985,000	(34,302,000)	(1,847,000)	(22,165,000)
Net income			47,573,000			
Cash dividends declared			(35,352,000)			
Exercise of stock options:						
Cash proceeds	211,000	2,835,000				
Exchange of shares	75,000	909,000		(984,000)		
Stock awards granted	93,000	1,834,000			(1,927,000)	
Tax benefits related to stock compensation plans		402,000				
Retirement of treasury stock	(56,000)	(1,258,000)		1,314,000		
Purchases of 579,000 shares of treasury stock				(13,155,000)		
Issued 93,000 shares from treasury for purchases of companies				1,900,000		
Amortization of deferred stock awards					1,345,000	
Foreign currency translation adjustment, net						(3,495,000)
Other	(12,000)	(238,000)		(259,000)	250,000	
Balance at December 31, 2001—						
47,378,000 shares issued	47,378,000	73,177,000	312,206,000	(45,486,000)	(2,179,000)	(25,660,000)
Net income			38,195,000			
Cash dividends declared			(36,717,000)			
Exercise of stock options:						
Cash proceeds	150,000	2,788,000				
Exchange of shares	81,000	1,193,000		(1,274,000)		
Stock awards granted	110,000	2,426,000			(2,536,000)	
Tax benefits related to stock compensation plans		178,000				
Retirement of treasury stock	(73,000)	(1,396,000)		1,469,000		
Purchases of 203,000 shares of treasury stock				(4,356,000)		
Issued 750,000 shares and 1,639,000 shares from treasury for purchases of companies	750,000	12,788,000		29,880,000		
Issued 79,000 shares from treasury for retirement plan match				1,873,000		
Amortization of deferred stock awards					1,537,000	
Foreign currency translation adjustment, net						7,576,000
Net derivative (loss), cash flow hedges						(2,098,000)
Record minimum pension liability, net of tax						(13,783,000)
Other	(2,000)	(40,000)		(132,000)	42,000	
Balance at December 31, 2002—						
48,394,000 shares issued	<u>\$48,394,000</u>	<u>\$91,114,000</u>	<u>\$313,684,000</u>	<u>\$(18,026,000)</u>	<u>\$(3,136,000)</u>	<u>\$(33,965,000)</u>

In July 1998, the company declared a dividend distribution of one preferred share purchase right on each share of common stock outstanding on and after August 18, 1998. The rights are not exercisable until the rights distribution date, defined as the earlier of: 1) the tenth day following a public announcement that a person or group of affiliated or associated persons acquired or obtained the right to acquire beneficial ownership of 20% or

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

more of the outstanding common stock or 2) the tenth day following the commencement or announcement of an intention to make a tender offer or exchange offer, the consummation of which would result in the beneficial ownership by a person or group of 30% or more of such outstanding common shares. Each right, when exercisable, entitles the holder to purchase from the company one one-hundredth of a share of Series A Preferred stock of the company at a price of \$100 per one one-hundredth of a preferred share, subject to adjustment. The company is entitled to redeem the rights at \$.10 per right, payable in cash or common shares, at any time prior to the expiration of twenty days following the public announcement that a 20% position has been acquired. In the event that the company is acquired in a merger or other business combination transaction or 50% or more of its consolidated assets or earning power is sold, proper provision will be made so that each holder of a right will thereafter have the right to receive, upon the exercise thereof at the then current exercise price of a right, that number of shares of common stock of the acquiring company which at the time of such transaction would have a market value of two times the exercise price of the right. The rights expire on August 18, 2008 unless earlier redeemed by the company. Until exercised, the holder of a right, as such, will have no rights as a shareholder, including, without limitation, the right to vote or to receive dividends.

NOTE K—ACQUISITIONS

During the three-year period ended December 31, 2002, the company made the following acquisitions, principally all for cash, except as otherwise noted.

In September 2002, the company acquired Leach Company of Oshkosh, WI, a leading manufacturer of rear load refuse collection bodies. Leach, whose market strength is primarily in government and municipal markets, utilizes a dealer channel similar to other Environmental Products Group operations. In October 2002, the company also acquired Wittke, Inc., a manufacturer of dynamic truck-mounted refuse collection equipment located in Medicine Hat, Alberta and Kelowna, British Columbia. Wittke brand products include front load, side load and automated side load refuse truck bodies. Wittke sold direct to customers at the time of the acquisition, and is particularly strong in the private contractors and large waste hauling company market segments. The company acquired Leach and Wittke using a combination of cash and stock for a total of \$101.6 million. As a result of these 2002 acquisitions, the company recorded approximately \$16.3 million of working capital, \$20.2 million of fixed and other assets and \$65.1 million of costs in excess of fair value. The company also assumed \$10.1 million in debt. The assigned values of these acquisitions are based upon preliminary estimates. An insignificant portion of the related goodwill is expected to be deductible for tax purposes.

In March 2001, the company acquired all of the assets of Athey Products Corporation from bankruptcy proceedings. Athey was a primary competitor to Environmental Products Group's line of mechanical sweepers. Subsequent to the purchase, the company sold off substantially all assets of Athey. In September 2001, the company acquired a majority interest in Plastisol Holdings B.V., located in the Netherlands. Plastisol is a small manufacturer of cabs and bodies for fire apparatus using glassfiber reinforced polyester. The company also made two small Tool Group acquisitions during 2001. As a result of the 2001 acquisitions, the company recorded approximately \$5.8 million of working capital, \$9.4 million of fixed and other assets and \$12.1 million of costs in excess of fair value.

In March 2000, the company acquired P.C.S. Company. Located near Detroit, Michigan, P.C.S. offers a comprehensive line of tooling components for the plastic injection mold and the die cast industries. The company also made a small Environmental Products Group acquisition during the first quarter of 2000. As a result of the 2000 acquisitions, the company recorded approximately \$9.9 million of working capital, \$3.8 million of fixed and other assets and \$10.7 million of costs in excess of fair value.

All of the acquisitions in the three-year period ended December 31, 2002 have been accounted for as purchases. Accordingly, the results of operations of the acquired companies have been included in the consolidated statements of income from the effective dates of the acquisitions. Assuming the 2002 and 2001

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

acquisitions occurred January 1, 2001, the company estimates the following pro forma amounts for the years ended December 31, 2002 and 2001:

	<u>2002</u>	<u>2001</u>
Net sales	\$1,175,388,000	\$1,197,791,000
Income from continuing operations	32,136,000	44,907,000
Net income	24,152,000	45,890,000
Basic income per share		
Income from continuing operations	\$.70	\$.99
Net income	.53	1.01
Diluted income per share		
Income from continuing operations	\$.70	\$.98
Net income	.52	1.01

The company made no significant changes to the values originally assigned to assets and liabilities recorded as a result of acquisitions made prior to 2002.

NOTE L—LEGAL PROCEEDINGS

The company is subject to various claims, other pending and possible legal actions for product liability and other damages and other matters arising out of the conduct of the company's business. The company believes, based on current knowledge and after consultation with counsel, that the outcome of such claims and actions will not have a material adverse effect on the company's consolidated financial position or the results of operations.

The company has been sued by firefighters in Chicago seeking damages and claiming that exposure to the company's sirens has impaired their hearing and that the sirens are therefore defective. There were sixteen cases filed during the period 1999-2002, involving a total of 1,004 plaintiffs pending in the Circuit Court of Cook County, Illinois. The plaintiffs' attorneys have threatened to bring more suits if the company does not settle these cases. The company believes that these product liability suits have no merit and that sirens are necessary in emergency situations and save lives. The company successfully defended approximately 41 similar cases in Philadelphia in 1999 after a series of unanimous jury verdicts in favor of the company.

NOTE M—SEGMENT AND RELATED INFORMATION

The company has four continuing operating segments as defined under Statement of Financial Accounting Standards No. 131, "Disclosures about Segments of an Enterprise and Related Information". Business units are organized under each segment because they share certain characteristics, such as technology, marketing and product application, which create long-term synergies. The principal activities of the company's operating segments are as follows:

Environmental Products—Environmental Products manufactures a variety of self-propelled street cleaning vehicles, vacuum loader vehicles, municipal catch basin/sewer cleaning vacuum trucks, refuse truck bodies and water blasting equipment. Environmental Products sells primarily to municipal customers, contractors and government customers.

Fire Rescue—Fire Rescue manufactures chassis; fire trucks, including Class A pumpers, mini-pumpers and tankers; airport and other rescue vehicles, aerial access platforms and aerial ladder trucks. This group sells primarily to municipal customers, volunteer fire departments and government customers.

Safety Products—Safety Products produces a variety of visual and audible warning and signal devices; paging, local signaling, and building security, parking and access control systems; hazardous area lighting; and equipment for storage, transfer, use and disposal of flammable and hazardous materials. The group's products are sold primarily to industrial, municipal and government customers.

Tool—Tool manufactures a variety of consumable tools which include die components for the metal stamping industry, a large selection of precision metal products for nonstamping needs and a line of precision cutting and grooving tools including polycrystalline diamond and cubic boron nitride products for superhard applications. The group's products are sold predominately to industrial markets.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Net sales by operating segment reflect sales of products and services and financial revenues to external customers, as reported in the company's consolidated statements of income. Intersegment sales are insignificant. The company evaluates performance based on operating income of the respective segment. Operating income includes all revenues, costs and expenses directly related to the segment involved. In determining operating segment income, neither corporate nor interest expenses are included. Operating segment depreciation expense, identifiable assets and capital expenditures relate to those assets that are utilized by the respective operating segment. Corporate assets consist principally of cash and cash equivalents, notes and other receivables and fixed assets. The accounting policies of each operating segment are the same as those described in the summary of significant accounting policies.

See Note K for a discussion of the company's acquisition activity during the three-year period ended December 31, 2002.

Non-U.S. sales, which include sales exported from the U.S. and sales made by non-U.S. operations, aggregated \$293,248,000 in 2002, \$267,531,000 in 2001 and \$274,168,000 in 2000. Sales exported from the U.S. aggregated \$77,517,000 in 2002, \$87,064,000 in 2001 and \$102,402,000 in 2000.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

A summary of the company's continuing operations by segment for the three-year period ended December 31, 2002 is as follows:

	<u>2002</u>	<u>2001</u>	<u>2000</u>
Net sales			
Environmental Products	\$ 296,372,000	\$ 280,708,000	\$ 255,269,000
Fire Rescue	334,213,000	373,428,000	389,311,000
Safety Products	270,273,000	256,261,000	267,062,000
Tool	156,343,000	161,778,000	194,485,000
Total net sales	<u>\$1,057,201,000</u>	<u>\$1,072,175,000</u>	<u>\$1,106,127,000</u>
Operating income			
Environmental Products	\$ 22,961,000	\$ 20,159,000	\$ 23,101,000
Fire Rescue	11,239,000	27,194,000	24,940,000
Safety Products	41,432,000	37,917,000	43,721,000
Tool	18,716,000	19,290,000	35,298,000
Corporate expense	<u>(12,405,000)</u>	<u>(12,556,000)</u>	<u>(10,406,000)</u>
Total operating income	81,943,000	92,004,000	116,654,000
Interest expense	(20,075,000)	(26,368,000)	(31,401,000)
Other income (expense)	(895,000)	(1,182,000)	(839,000)
Minority interest	129,000		
Income before income taxes	<u>\$ 61,102,000</u>	<u>\$ 64,454,000</u>	<u>\$ 84,414,000</u>
Depreciation and amortization			
Environmental Products	\$ 4,452,000	\$ 5,510,000	\$ 5,030,000
Fire Rescue	4,511,000	5,199,000	5,304,000
Safety Products	6,378,000	9,316,000	8,978,000
Tool	7,530,000	9,418,000	8,907,000
Corporate	1,124,000	815,000	838,000
Total depreciation and amortization	<u>\$ 23,995,000</u>	<u>\$ 30,258,000</u>	<u>\$ 29,057,000</u>
Identifiable assets			
Manufacturing activities			
Environmental Products	\$ 286,865,000	\$ 153,406,000	\$ 149,622,000
Fire Rescue	225,305,000	203,749,000	201,960,000
Safety Products	210,489,000	209,036,000	220,867,000
Tool	170,343,000	176,580,000	175,884,000
Corporate	38,228,000	30,634,000	24,343,000
Total manufacturing activities	<u>931,230,000</u>	<u>773,405,000</u>	<u>772,676,000</u>
Financial services activities			
Environmental Products	65,542,000	72,581,000	69,055,000
Fire Rescue	161,246,000	166,539,000	145,175,000
Total financial services activities	<u>226,788,000</u>	<u>239,120,000</u>	<u>214,230,000</u>
Total identifiable assets	<u>\$1,158,018,000</u>	<u>\$1,012,525,000</u>	<u>\$ 986,906,000</u>
Additions to long-lived assets			
Environmental Products	\$ 100,899,000	\$ 13,754,000	\$ 5,574,000
Fire Rescue	5,178,000	6,466,000	4,958,000
Safety Products	5,817,000	4,105,000	5,333,000
Tool	11,421,000	19,373,000	19,857,000
Corporate	2,442,000	30,000	23,000
Total additions to long-lived assets	<u>\$ 125,757,000</u>	<u>\$ 43,728,000</u>	<u>\$ 35,745,000</u>
Financial revenues (included in net sales)			
Environmental Products	\$ 6,511,000	\$ 6,049,000	\$ 6,113,000
Fire Rescue	9,632,000	9,490,000	8,082,000
Total financial revenues	<u>\$ 16,143,000</u>	<u>\$ 15,539,000</u>	<u>\$ 14,195,000</u>

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Due to the nature of the company's customers, a significant portion of the Environmental Products and Fire Rescue financial revenues is exempt from federal income tax.

A summary of the company's continuing operations by geographic area for the three-year period ended December 31, 2002 is as follows:

	<u>2002</u>	<u>2001</u>	<u>2000</u>
United States			
Net sales	\$841,470,000	\$891,708,000	\$934,361,000
Operating income	66,130,000	76,630,000	103,704,000
Long-lived assets	408,822,000	376,890,000	344,367,000
All non-U.S. (principally Europe)			
Net sales	\$215,731,000	\$180,467,000	\$171,766,000
Operating income	15,813,000	15,374,000	12,950,000
Long-lived assets	127,591,000	42,883,000	69,027,000

The company had no significant amounts of sales to or long-lived assets in an individual country outside of the United States.

During 2000, the company decided to divest the operations of the Sign Group and began to search for a qualified buyer of that business. The Sign Group manufactures for sale or lease illuminated, non-illuminated and electronic advertising sign displays primarily for commercial and industrial markets. It also enters into contracts to provide maintenance service for the signs it manufactures as well as for signs manufactured by others. The results of the Sign operations are reported as discontinued operations in the financial statements. Sign revenues for the years ended December 31, 2002, 2001 and 2000 were \$43,245,000, \$58,817,000 and \$59,846,000, respectively. The company is currently reviewing offers by potential acquirers of the Sign Group. The company does not expect to record a loss on this sale.

The company incurred \$3,627,000 in restructuring charges during 2001 principally resulting from reductions in work force through early retirement and job eliminations. Of this amount, the Environmental Products Group incurred costs of \$798,000, the Fire Rescue Group incurred costs of \$854,000, the Safety Products Group incurred costs of \$461,000 and the Tool Group incurred costs of \$1,514,000. In 2000, the company also incurred \$3,744,000 in restructuring charges relating to the consolidation of facilities and operations. Of this amount, the Environmental Products Group incurred costs of \$2,773,000 and the Tool Group incurred \$971,000. There was no remaining liability at December 31, 2002.

NOTE N—NET INCOME PER SHARE

The following table summarizes the information used in computing basic and diluted income per share for the three-year period ending December 31, 2002:

	<u>2002</u>	<u>2001</u>	<u>2000</u>
Numerator for both basic and diluted income per share computations—net income	<u>\$38,195,000</u>	<u>\$47,573,000</u>	<u>\$57,537,000</u>
Denominator for basic income per share—weighted average shares outstanding	45,824,000	45,314,000	45,388,000
Effect of employee stock options (dilutive potential common shares)	<u>115,000</u>	<u>129,000</u>	<u>133,000</u>
Denominator for diluted income per share—adjusted shares	<u>45,939,000</u>	<u>45,443,000</u>	<u>45,521,000</u>

NOTE O—COMMITMENTS AND GUARANTEES

The company leases certain facilities and equipment under operating leases, some of which contain options to renew. Total rental expense on all operating leases was \$8,483,000 in 2002, \$7,985,000 in 2001 and \$8,297,000 in 2000. Sublease income and contingent rentals relating to operating leases were insignificant. At December 31, 2002, minimum future rental commitments under operating leases having noncancelable lease terms in excess of

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

one year aggregated \$29,574,000 payable as follows: \$8,047,000 in 2003, \$5,762,000 in 2004, \$3,922,000 in 2005, \$3,128,000 in 2006, \$2,731,000 in 2007 and \$5,984,000 thereafter.

At December 31, 2002 and 2001, the company had outstanding standby letters of credit aggregating \$21,472,000 and \$19,858,000, respectively, principally to act as security for retention levels related to casualty insurance policies and to guarantee the performance of subsidiaries that engage in export transactions to foreign governments and municipalities.

The company issues product performance warranties to customers with the sale of its products. The specific terms and conditions of these warranties vary depending upon the product sold and country in which the company does business with warranty periods generally ranging from 6 months to 5 years. The company estimates the costs that may be incurred under its basic limited warranty and records a liability in the amount of such costs at the time the sale of the related product is recognized. Factors that affect the company's warranty liability include the number of units under warranty from time to time, historical and anticipated rates of warranty claims and costs per claim. The company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary. Changes in the company's warranty liabilities for the years ended December 31, 2002 and 2001 were as follows:

	<u>2002</u>	<u>2001</u>
Balance at January 1	\$ 6,786,000	\$ 4,689,000
Provisions to expense	11,098,000	13,339,000
Actual costs incurred	(12,608,000)	(11,242,000)
Liabilities assumed in business acquisitions	8,438,000	
Balance at December 31	<u>\$ 13,714,000</u>	<u>\$ 6,786,000</u>

NOTE P—CHANGE IN ACCOUNTING-REVENUE RECOGNITION

In the fourth quarter of 2000, the company changed its method of accounting for recognizing revenues for product sales. Effective with this change, retroactively applied to January 1, 2000, the company recognizes revenues based upon the respective terms of delivery for each sale agreement. This change was required by Staff Accounting Bulletin (SAB) No. 101 issued by the Securities and Exchange Commission. In years prior to 2000, the company recognized substantially all of its revenues for product sales as products were shipped, as this method was then in compliance with generally accepted accounting principles.

For the year ended December 31, 2000, the company recognized sales of \$10,052,000 and the related operating income of \$1,362,000 resulting from the change in accounting method; these amounts were previously recognized in sales and income in 1999 under the company's previous accounting method. These sales and the related income also account for the cumulative effect of the change in accounting method on prior years, which resulted in a charge to net income of \$844,000 (net of taxes of \$518,000), or \$.02 per diluted share. This charge reflects the adoption of SAB No. 101 and is included in the year ended December 31, 2000. Pro-forma net income amounts for the three-year period ending December 31, 2002, assuming the change in method was retroactively applied to the beginning of that period, are as follows:

	<u>2002</u>	<u>2001</u>	<u>2000</u>
Net income	\$38,195,000	\$47,573,000	\$58,381,000
Diluted net income per share	\$.83	\$ 1.05	\$ 1.28

NOTE Q—GOODWILL

In June 2001, the Financial Accounting Standards Board issued SFAS No. 141, "Business Combinations", and No. 142, "Goodwill and Other Intangible Assets", effective for fiscal years beginning after December 15, 2001. Under the new rules, goodwill and intangible assets deemed to have indefinite lives are no longer amortized but are subject to annual impairment tests in accordance with these statements. Other intangible assets continue to be amortized over their useful lives.

The company adopted SFAS No. 142 effective January 1, 2002 and accordingly discontinued the amortization of goodwill. A reconciliation of previously reported net income and earnings per share to the

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

amounts adjusted for the exclusion of goodwill amortization, net of the related income tax effect, for the three-year period ended December 31, 2002 follows:

	<u>2002</u>	<u>2001</u>	<u>2000</u>
Reported net income	\$38,195,000	\$47,573,000	\$57,537,000
Add back: goodwill amortization, net of tax	<u> </u>	<u>5,503,000</u>	<u>5,174,000</u>
Adjusted net income	<u>\$38,195,000</u>	<u>\$53,076,000</u>	<u>\$62,711,000</u>
Basic net income per common share			
Reported net income	\$.83	\$ 1.05	\$ 1.27
Goodwill amortization, net of tax	<u> </u>	<u>.12</u>	<u>.11</u>
Adjusted net income	<u>\$.83</u>	<u>\$ 1.17</u>	<u>\$ 1.38</u>
Diluted net income per common share			
Reported net income	\$.83	\$ 1.05	\$ 1.26
Goodwill amortization, net of tax	<u> </u>	<u>.12</u>	<u>.11</u>
Adjusted net income	<u>\$.83</u>	<u>\$ 1.17</u>	<u>\$ 1.37</u>

As part of the adoption of SFAS No. 142, the company also completed a transitional goodwill impairment test and determined that \$7,984,000 of goodwill related to a niche Tool Group business was impaired. This amount was recognized in the first quarter of 2002 as a charge to net income resulting from a cumulative effect of a change in accounting. The company determined the fair value of the reporting unit by calculating the present value of expected future cash flows. Changes in the carrying amount of goodwill for the year ended December 31, 2002, by operating segment, were as follows:

	<u>Environmental Products</u>	<u>Fire Rescue</u>	<u>Safety Products</u>	<u>Tool</u>	<u>Total</u>
Goodwill balance, December 31, 2001	\$ 61,722,000	\$33,356,000	\$98,900,000	\$86,910,000	\$280,888,000
Impairment				(7,984,000)	(7,984,000)
Goodwill acquired	65,051,000				65,051,000
Translation and other	<u>2,084,000</u>	<u>3,574,000</u>	<u>1,085,000</u>	<u>3,737,000</u>	<u>10,480,000</u>
Goodwill balance, December 31, 2002	<u>\$128,857,000</u>	<u>\$36,930,000</u>	<u>\$99,985,000</u>	<u>\$82,663,000</u>	<u>\$348,435,000</u>

Other intangible assets (amortized and not amortized) were insignificant for the year ended December 31, 2002.

Under SFAS 142, the company is required to test its goodwill annually for impairment, which is performed at the beginning of the fourth quarter. The company performed this testing as required in the fourth quarter of 2002 and determined that there was no impairment.

NOTE R—NEW ACCOUNTING PRONOUNCEMENTS

In September 2002, the Financial Accounting Standards Board issued SFAS No. 146, "Accounting for Exit or Disposal Activities". SFAS No. 146 addresses significant issues regarding the recognition, measurement and reporting of costs that are associated with exit and disposal activities, including restructuring activities that are currently accounted for under EITF No. 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (Including Certain Costs Incurred in a Restructuring)". The scope of SFAS No. 146 also includes costs related to terminating a contract that is not a capital lease and termination benefits that employees who are involuntarily terminated receive under the terms of a one-time benefit arrangement that is not an ongoing benefit arrangement or an individual deferred-compensation contract. SFAS No. 146 will be effective for exit or disposal activities that are initiated after December 31, 2002. The company has no current exit or disposal activities planned that would be affected by this statement.

In December 2002, the FASB issued SFAS No. 148, "Accounting for Stock-Based Compensation—Transition and Disclosure—An Amendment of FASB Statement No. 123". This statement provides for

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

transitions if a company elects to adopt SFAS No. 123 and also provides for some additional disclosures in the financial statements for the year ended December 31, 2002. The company has adopted this statement. The company accounts for its stock compensation under APB 25, and accordingly has added the additional disclosures.

NOTE S—SELECTED QUARTERLY DATA (UNAUDITED)

(in thousands of dollars except per share amounts)

	For the three-month period ended							
	2002				2001			
	March 31	June 30	September 30	December 31	March 31	June 30	September 30	December 31
Net sales	\$245,644	\$257,864	\$261,615	\$292,078	\$258,007	\$286,817	\$253,403	\$273,948
Gross margin	69,890	74,747	74,062	80,297	79,940	85,681	72,129	74,511
Income from continuing operations	9,794	10,712	12,493	13,180	11,626	16,712	8,853	9,399
Income from discontinued operations						307	298	378
Cumulative effect of change in accounting	(7,984)							
Net income	1,810	10,712	12,493	13,180	11,626	17,019	9,151	9,777
Per share data—diluted:								
Income from continuing operations	.22	.24	.28	.28	.26	.37	.20	.21
Income from discontinued operations						.01	.01	.01
Cumulative effect of change in accounting	(.18)							
Net income*	.04	.24	.28	.28	.26	.37	.20	.22
Dividends paid per share	.20	.20	.20	.20	.195	.195	.195	.195
Market price range per share								
High	27.07	25.98	24.50	19.93	24.15	24.63	24.01	22.94
Low	19.90	21.55	18.10	16.00	18.40	18.80	17.00	17.20

* amounts may not add due to rounding

The company incurred pre-tax restructuring charges (see Note M) of \$3,627,000 for the three-month period and year ending December 31, 2001.

REPORT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

To the Shareholders and Board of Directors
of Federal Signal Corporation

We have audited the accompanying consolidated balance sheets of Federal Signal Corporation and subsidiaries as of December 31, 2002 and 2001 and the related consolidated statements of income, comprehensive income and cash flows for each of the three years in the period ended December 31, 2002. These financial statements are the responsibility of the company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Federal Signal Corporation and subsidiaries as of December 31, 2002 and 2001, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2002 in conformity with accounting principles generally accepted in the United States.

As discussed in Notes A, P and Q to the financial statements, the company changed its method of accounting for goodwill and other intangibles and revenue recognition in 2002 and 2000, respectively.

Ernst + Young LLP

Chicago, Illinois
January 28, 2003

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
FINANCIAL REVIEW

Consolidated Results of Operations

Federal Signal Corporation's diluted income per share from continuing operations for 2002 totaled \$1.01 on sales of \$1.06 billion. This compares to earnings per share of \$1.03 in 2001 on sales of \$1.07 billion. The 1% sales decline reflected essentially flat selling prices in 2002 on continued weak industrial market conditions; the refuse body acquisitions in the fourth quarter of 2002 increased sales approximately 2%. Sales to customers in the United States declined 5% in 2002 and sales to non-U.S. customers increased 10% (3% in functional currency). Orders increased 4% in 2002 to \$1.1 billion, due to the addition of the refuse truck body orders in the fourth quarter, and strength in safety products markets, particularly the \$19 million initial installment on the Dallas/Fort Worth International Airport parking revenue control system award received in the third quarter. Net income in 2002 included an \$8.0 million after-tax charge relating to the cumulative effect of a change in accounting for goodwill required by Statement of Financial Accounting Standards (SFAS) No. 142, "Goodwill and Other Intangible Assets". Net income in 2001 included \$5.5 million of after-tax expense relating to goodwill amortization; goodwill was not amortized in 2002 in accordance with SFAS No. 142.

Net sales declined 3% in 2001 to \$1.07 billion compared to the \$1.11 billion in 2000. Income from continuing operations was \$46.6 million in 2001 compared to \$57.7 million in 2000. Diluted income per share from continuing operations was \$1.03 in 2001 compared to \$1.27 in 2000; earnings were adversely affected by \$.05 in restructuring charges in both 2001 and 2000. Net income in 2001 was \$47.6 million, or \$1.05 per diluted share compared to \$57.5 million, or \$1.26 per diluted share, in 2000. Net income per share amounts included \$.02 per share in both 2001 and 2000 from the discontinued operations of the Sign Group. Net income in 2000 also included a \$.02 per share charge relating to the cumulative effect of a change in accounting for revenue recognition required by Staff Accounting Bulletin (SAB) No. 101 issued by the Securities and Exchange Commission. The 2001 sales results of the company's continuing operations reflected a very weak industrial economy in the U.S. as well as order and sales delays in the company's Fire Rescue and Safety Products groups. Sales prices in 2001 were essentially flat with the prior year reflecting the weaker industrial market conditions; the effects of acquisitions on 2001 sales comparisons to 2000 were insignificant. Sales to customers in the United States declined 3% in 2001 and sales to non-U.S. customers declined 2% (1% in functional currency). Incoming orders declined 3% in 2001 with orders from U.S. customers off 3% from a year ago and orders from non-U.S. customers down 1%.

The company focuses on operating margin, rather than either the gross margin component or the selling, general, and administrative (SG&A) cost component of operating margin when setting overall Federal Signal performance targets and monitoring results. The reasons for this focus are: 1) the distinct differences in the cost structures of the company's businesses, and 2) the varying growth rates of these individual businesses. This combination dictates that the separate operating margin components are only useful in managing individual business performance. In looking at total profitability of the company's U.S. and non-U.S. operations, the company recognizes that some of its U.S. operations have benefited from selling their products through distribution channels of non-U.S. operations. The following table summarizes the company's gross margins and operating margins for the last five years (percent of sales):

	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>
Net sales	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of sales	<u>71.7</u>	<u>70.9</u>	<u>69.5</u>	<u>69.2</u>	<u>69.0</u>
Gross profit margin	28.3	29.1	30.5	30.8	31.0
SG&A expenses	<u>20.5</u>	<u>20.5</u>	<u>20.0</u>	<u>20.4</u>	<u>20.6</u>
Operating margin	<u>7.8%</u>	<u>8.6%</u>	<u>10.5%</u>	<u>10.4%</u>	<u>10.4%</u>

Gross profit margins of 28.3% in 2002 are somewhat lower than the average of the 1998-2001 period (30.3%) largely reflecting three significant factors: a very slow industrial economy reduced sales of the company's high-margin industrial products and resulted in a temporary shift to lower gross margin products; reduced throughput and higher production costs adversely affected Fire Rescue Group profitability; and competitive price pressures reduced the potential for price increases on the company's products. SG&A expenses as a percent of sales were 20.5% in 2002, essentially flat with the average of the preceding four-year period. Operating margin

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

FINANCIAL REVIEW (Continued)

was 7.8% in 2002 compared to 2001's 8.6%. This compares to the average of 10.0% for the 1998-2001 period. Operating margins in 2002 declined largely as a result of the same reasons gross margins declined.

Certain of the company's businesses are susceptible to the influences of seasonal buying or delivery patterns. The company's businesses which tend to have lower sales in the first calendar quarter compared to other quarters as a result of these influences are street sweeping, fire rescue products, outdoor warning, municipal emergency signal products, parking systems and signage.

Group Operations

Environmental Products

In 2002, orders were 7% above the prior year, due mainly to the refuse truck body acquisitions. Global sweeper orders declined 2%, as increased international business was more than offset by a 15% reduction in U.S. orders. U.S. municipal orders trended down during the course of the year in light of deteriorating state and local governmental budgets. Revenues rose 6%, mainly due to the refuse truck body acquisitions. Operating income increased 3%, with improved operating results for sweepers, more than offsetting lower margins on other product lines resulting from product mix and lower volumes.

In 2001, Environmental Products Group sales rose 10% and new orders rose 2%. Earnings before restructuring charges decreased 19%. Sales growth was strong in U.S. municipal sweepers, augmented by the acquisition of the assets of Athey Products Corporation in March. Industrial vacuum truck and industrial water blaster sales were down moderately for the full year, but slowed dramatically in the last half of the year. Operating earnings declined substantially as continuing vacuum truck plant consolidation costs and new-product-related costs, plus a lower margin sales mix, reduced operating margin. The group incurred restructuring charges of \$.8 million in 2001.

Fire Rescue

In 2002, orders for Fire Rescue increased 1%, as strong orders at European businesses more than offset a modest decline elsewhere. Sales declined 11%, largely as a result of operating difficulties at U.S. production facilities. During 2002, these plants experienced reduced throughput and higher production costs resulting from a trend toward more complex units as well as development costs associated with prototype units. Operating income fell 60% as a result of the higher production costs and lower sales.

In 2001, Fire Rescue Group earnings before restructuring charges were up 12% on a 4% decline in sales. New orders declined 2%. New orders and sales declined on essentially flat worldwide markets as orders were delayed in the U.S. by a Federal government subsidy program for fire apparatus and by the September 11 events which changed fire department priorities in the fourth quarter. Earnings increased significantly as group manufacturing operations continued to improve, raising overall operating margin. The group incurred \$.9 million in restructuring charges in 2001.

Safety Products

In 2002, orders for Safety Products rose 6%, due to large airport parking and control systems awards and success in increasing market share for European police products. Revenue rose 5%, due to increased deliveries of outdoor warning systems and European police products. Operating income improved 3% due to higher revenues, partly offset by increased pension expense.

In 2001, Safety Products Group earnings before restructuring charges fell 12% on a 4% sales decline. New orders increased 4%. New orders were up for all major product lines except industrial. Sales fell as substantial projects in parking equipment and outdoor warning systems were delayed into 2002. The delay between orders and installation of these projects was the major cause of the group's reduced earnings and margins in 2001.

Tool

In 2002, sales declined 3%, a reflection of lower cutting tools sales, which represent about one-quarter of tool product sales. Despite relatively strong automotive production, low capital investment resulted in continued weakness for these products. Operating income declined 14% because of lower sales volumes, and the effect of

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

FINANCIAL REVIEW (Continued)

lower fixed cost absorption caused by inventory reductions made possible by successful lean enterprise initiatives. Pricing pressures on cutting tools also adversely affected operating income.

In 2001, Tool Group earnings, before restructuring charges of approximately \$1.5 million, fell 43% on a 17% decline in sales. New orders declined 19%. New orders, sales and earnings all declined sharply in very weak global industrial markets; the most severe decline was in North America and the earnings weakness was across all major product lines. Markets continued to weaken throughout 2001. Notwithstanding the sales decline, the group held its leading market shares and increased that share in certain product lines.

Sign (discontinued operations)

In 2000, the company decided to divest the Sign Group and began searching for a buyer of this business. The group saw markets weaken in 2002 and 2001. The results of this group are reported as discontinued operations in the company's consolidated financial statements. Due to the slower economic environment in 2002 and 2001, it has taken longer to sell the entity than originally planned. At year-end the company was in negotiations with a third party for the sale of the Sign Group. The company does not expect to record a loss on this sale.

Corporate and Other

Corporate expense was \$12.4 million in 2002, down slightly from the \$12.6 million in 2001. Interest expense declined \$6.3 million, or 24%, in 2002 largely as a result of a much lower short-term interest rate environment in 2002. The much lower interest rates were partially offset by increased borrowings in the fourth quarter of 2002 related to cash paid in the acquisitions of businesses. The decrease in interest expense of \$5.0 million in 2001 was largely as a result of the lower short-term interest rate environment that was partially offset by a significant refinancing of short-term debt with funded debt at higher interest rates. Weighted average interest rates on short-term borrowings were 2.0% in 2002, 4.6% in 2001 and 6.5% in 2000.

At the end of 2002, the company changed its assumptions for discount rates used in determining the actuarial present values of accumulated and projected benefit obligations for its postretirement plans. The company reduced the discount rate to 6.75% at the end of 2002 from the 7.3% used at the end of 2001 for its U.S. plan because of the lower interest rate environment experienced at the end of 2002. In January 2003, the company established its other significant cost assumptions for its U.S. benefits as follows: expected long-term rate of return on plan assets—9.0%; rate of increase in compensation levels—3.5%. The company expects that the change in these assumptions will increase 2003 pension costs by approximately \$.05 per share compared to 2002. The company incurred approximately \$.7 million in nonrecurring pension costs in 2001 as a result of the company's fourth quarter 2001 restructuring.

The company's effective tax rate in 2002 of 24.4% was down from the 27.7% in 2001 and the 31.7% in 2000. The lower tax rate in 2002 reflects the increased mix of tax-exempt revenues earned by the company's Environmental Products and Fire Rescue groups, lower tax rates of the company's foreign operations, eliminating the amortization of non-deductible goodwill for financial reporting purposes due to the adoption of SFAS No. 142 and reduction in reserve needs for now-closed tax issues.

During the fourth quarter of 2002, the company recorded an after-tax charge of \$13.8 million to other comprehensive income representing the effect of an additional minimum pension liability. Like many companies, the company's pension plan performance was adversely affected by low asset returns and lower interest rates.

Financial Services Activities

The company maintains a large investment (\$227 million and \$239 million at December 31, 2002 and 2001, respectively) in lease financing and other receivables that are generated by its environmental products and fire rescue operations. For the five-year period ending December 31, 2002 these assets continued to be leveraged in accordance with the company's stated financial objectives (see further discussion in "Financial Position and Cash Flow").

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

FINANCIAL REVIEW (Continued)

Financial services assets have repayment terms ranging from one to ten years. The decrease in these assets resulted from the company's 2001 decision to cease lending to customers in certain commercial and industrial markets.

Financial Position and Cash Flow

For the full year, operating cash flow totaled \$88 million, down \$7 million from 2001 in part because of a discretionary \$5 million pension contribution made in view of the company's strong cash position and weak pension asset performance. During 2002, the company saw reductions in average working capital driven by improved collections, lower inventory levels due to lean enterprise initiatives, and the receipt of more advance payments from customers.

Improved inventory utilization should further improve cash flow in 2003 as the company continues to make process improvements in all of its groups as a part of the company-wide lean enterprise initiative.

During the 1998-2002 period, the company utilized its strong cash flows from operations and available debt capacity to: 1) fund in whole or in part strategic acquisitions of companies operating in markets related to those already served by the company; 2) purchase increasing amounts of equipment principally to provide for further cost reductions and increased productive capacity for the future as well as tooling for new products; 3) pay increasing amounts in cash dividends to shareholders; and 4) repurchase a small percentage of its outstanding common stock each year.

Cash flows for the five-year period ending December 31, 2002 are summarized as follows (in millions):

	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>
Cash provided by (used for):					
Operating activities	\$ 88.4	\$ 95.1	\$ 64.4	\$ 57.7	\$ 75.5
Investing activities	(57.3)	(59.2)	(64.8)	(105.1)	(93.0)
Financing activities	(38.1)	(32.6)	5.2	40.9	22.2

In order to show the distinct characteristics of the company's investment in its manufacturing activities and its investment in its financial services activities, the company has presented separately these investments and their related liabilities. Different ratios of debt and equity support each of these two types of activities.

At year-end, total manufacturing debt was \$296 million, representing 44% of capitalization; the ratio was unchanged from the prior year-end. The company believes that its financial assets, due to their overall quality, are capable of sustaining a leverage ratio of 87%. At both December 31, 2002 and 2001, the company's debt-to-capitalization ratio for its financial services activities was 87% for its continuing operations.

As indicated earlier, management focuses substantial effort on improving the utilization of the company's working capital. The company's current ratio for its manufacturing operations was 1.8 at both December 31, 2002 and 2001. The company anticipates that its financial resources and major sources of liquidity, including cash flow from operations, will continue to be adequate to meet its operating and capital needs in addition to its financial commitments.

During the fourth quarter of 2002, the company issued long-term debt of \$100 million at an average interest rate of 5.1%, at terms ranging from six to ten years. The company issued the debt to replace \$48 million of short-term debt incurred to fund the refuse business acquisitions and to replace other existing short-term debt.

Market Risk Management

The company is subject to risks associated with changes in interest rates and foreign exchange rates. The company principally utilizes two types of derivative financial instruments: 1) interest rate swaps and 2) foreign exchange forward contracts to manage risks associated with sales and purchase commitments denominated in foreign currencies. The company does not hold or issue derivative financial instruments for trading or speculative purposes and is not a party to leveraged derivatives.

Of the company's debt at December 31, 2002, 41% was used to support financial services assets; the average remaining life of those assets is typically under three years. The company is currently comfortable with a sizeable

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

FINANCIAL REVIEW (Continued)

portion of floating rate debt to support these financial services assets, since a rise in borrowing rates would normally correspond with a rise in lending rates within a reasonable period.

The company manages its exposure to interest rate movements by maintaining a proportionate relationship between fixed-rate debt to total debt within established percentages. The company uses funded fixed-rate borrowings as well as interest rate swap agreements to balance its overall fixed/floating interest rate mix.

At December 31, 2002 and 2001, the company was party to interest rate swap agreements with aggregate notional amounts of \$270,000,000 and \$130,000,000, respectively. See Note H to the consolidated financial statements for a description of these agreements. All of the interest rate swap agreements qualify for hedge accounting treatment.

Significant interest rate sensitive instruments at December 31, 2002 and 2001 were as follows (dollars in millions):

	2002							2001		
	2003	2004	2005	2006	2007	Thereafter	Total	Fair value	Total	Fair value
Long-term debt										
Fixed rate										
Principal	\$.2	\$25.2	\$17.2	\$82.2	\$27.1	\$178.6	\$330.5	\$311.8	\$239.3	\$240.3
Average interest rate	5.8%	5.8%	5.7%	5.6%	5.6%	5.5%	5.7%		6.2%	
Variable rate										
Principal	\$.5	\$.4	\$.4	\$.5	\$.5	\$ 2.3	\$ 4.6	\$ 4.5	\$ 2.2	\$ 2.2
Average interest rate	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%		3.2%	
Short-term debt—variable rate										
Principal	\$152.8						\$152.8	\$152.8	\$233.9	\$233.9
Average interest rate	1.8%						1.8%		2.7%	
Interest rate swaps (pay fixed, receive variable)										
Notional amount		\$20.0	\$20.0				\$ 25.0	\$ (2.4)	\$ 25.0	\$ (1.4)
Average pay rate		4.2%	4.8%				5.1%	4.8%	5.1%	
Average receive rate		1.4%	1.4%				1.4%	1.4%	2.0%	
Interest rate swaps (receive fixed, pay variable)										
Notional amount				\$55.0	\$10.0	\$140.0	\$205.0	\$ 3.6	\$105.0	\$ (2.5)
Average pay rate				3.5%	4.0%	2.7%	3.0%		3.2%	
Average receive rate				5.5%	6.8%	5.6%	5.6%		6.1%	

The company had \$47,126,000 of foreign exchange forward contracts outstanding at December 31, 2002. Most of these contracts were used to purchase Canadian dollars and expire at various dates in 2003; the fair value of these contracts was (\$316,000) at December 31, 2002.

Critical Accounting Policies

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. The company considers the following policies to be the most critical in understanding the judgments that are involved in the preparation of the company's consolidated financial statements and the uncertainties that could impact the company's financial condition, results of operations, and cash flows.

Allowance for doubtful accounts: The company maintains an allowance for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments on the outstanding accounts receivable. The allowance is maintained at a level considered appropriate based on historical and other factors that affect collectibility. The factors include historical trends of write-offs, recoveries and credit losses; the monitoring of portfolio credit quality; and current and projected economic and market conditions. If the financial condition of the company's customers were to deteriorate, resulting in an impairment of the ability to make payments, additional allowances may be required.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

FINANCIAL REVIEW (Continued)

Warranty: Sales of some of the company's products carry express warranties based on the terms that are generally accepted in the company's marketplaces. The company records provisions for estimated warranty at the time of sale based on historical experience and periodically adjusts these provisions to reflect actual experience. Infrequently, a material warranty issue can arise which is beyond the scope of the company's historical experience. The company provides for these issues as they become probable and estimable.

Product liability and worker's compensation: Due to the nature of the company's products, the company is subject to claims for product liability and worker's compensation in the normal course of business. The company is self-insured for a portion of these claims. The company establishes a liability using a third party actuary for any known outstanding matters, including a reserve for claims incurred but not yet reported.

Goodwill Impairment: Under SFAS No. 142, "Goodwill and Other Intangible Assets", the company is required to test its goodwill annually for impairment, which is performed at the beginning of the fourth quarter. This review for impairment requires judgment in estimating future sales, earnings and cash flows to determine the fair value of the reporting units.

Other Matters

The company has a business conduct policy applicable to all employees and regularly monitors compliance with that policy. The company has determined that it had no significant related party transactions for the three-year period ending December 31, 2002.

The company has reviewed its financial arrangements and has determined that off-balance sheet arrangements, other than disclosed in the notes to the financial statements, do not exceed \$1 million.

Shareholder Information

Annual Meeting of Shareholders

Thursday, April 17, 2003, 11:00 a.m., Oak Brook Marriott Hotel, 1401 West 22nd Street, Oak Brook, Illinois 60523.

Common Stock Data

Federal Signal Corporation's Common Stock is listed and traded on the New York Stock Exchange under the symbol FSS and is quoted in financial press listings as "FedISgnl" or "FdSgnl". The company expects to continue paying regular quarterly cash dividends as it has done since 1948, depending, of course, on future earnings, financial condition and capital requirements.

Transfer Agent and Registrar

EquiServe Trust Company is the transfer agent and registrar for Federal Signal Common Stock. Notices regarding change of address and inquiries regarding lost dividend checks, lost or stolen stock certificates and transfers of stock, other than a purchase and sale which must be handled through a broker, should be directed to EquiServe Trust Company, N.A., P.O. Box 43070, Providence, Rhode Island 02940-3070, 800-446-2617.

Dividend Reinvestment Plan

This plan enables Federal Signal shareholders, who hold at least 50 shares in their own name to automatically and regularly apply common stock cash dividends toward the purchase of additional shares of common stock. Participants have the option of purchasing more common shares through the plan with direct cash payments. The company pays all bank service fees and brokerage commissions for common stock purchased through the plan. At year-end 2002, 1,954 shareholders (53% of record holders) were enrolled in the plan. This represents about 3% of outstanding stock or 1,414,621 shares participating in the plan. Inquiries regarding enrollment in the plan or questions concerning established accounts should be directed to EquiServe Trust Company, N.A., Dividend Reinvestment Service, P.O. Box 43081, Providence, Rhode Island 02940-3081.

Audit Committee

Nominating and Governance Committee

You may contact the Audit Committee and/or the Nominating and Governance Committee on an anonymous/confidential basis by addressing your letter to Federal Signal Corporation, P.O. Box 98277, Chicago, Illinois 60693.

Reports

A copy of the company's 10-K and financial statements may be obtained free of charge by contacting the Office of the Secretary, Federal Signal Corporation, 1415 West 22nd Street, Oak Brook, Illinois 60523-2004, 630-954-2021.

Investor Relations

Stephanie K. Kushner, Vice President and Chief Financial Officer, 630-954-2000.

Shareholders

Some of Federal Signal's shareholders have their shares registered in their broker's name or "street" name. If you are a "street" name holder and are not receiving company communications directly or in a timely manner, we would be pleased to send this information to you if you will send us your name and address. Federal Signal had a total of approximately 20,000 "street" name and record shareholders at year-end 2003.

Webcast of Quarterly Conference Call

The company anticipates quarterly earnings press releases followed by a conference call later the same day in April, July, October and January of 2004. Detailed information on the next press release and conference call will be available on Federal Signal's website at www.federalsignal.com at the end of each quarter.

Dividend Dates

Federal Signal Corporation anticipates the following cash dividend dates for 2003:

Record Date	Payment Date
March 13	April 1
June 12	July 1
September 11	October 1
December 12	January 2 (2004)

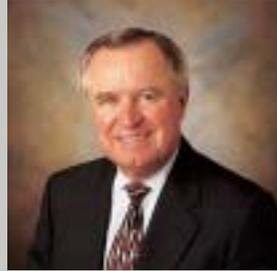
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Board of Directors and Officers



Joseph J. Ross



Charles R. Campbell



James C. Janning



Paul W. Jones



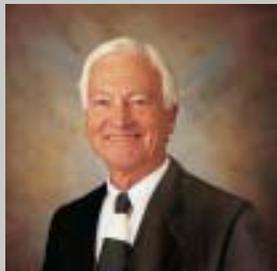
James A. Lovell, Jr.



Walden W. O'Dell



Joan E. Ryan



Richard R. Thomas

Directors

Joseph J. Ross, 57 ★
Chairman and
Chief Executive Officer
Federal Signal Corporation
Elected 1986

Charles R. Campbell, 63 ▲◆
Principal, The Everest Group
Elected 1998

James C. Janning, 54 ▲●
Group President
Harbour Group, Ltd.
Elected 1999

Paul W. Jones, 54 ●◆
Former Chairman, President
and Chief Executive Officer
U.S. Can Company
Elected 1998

James A. Lovell, Jr., 74 ★◆
President, Lovell
Communications
Elected 1984

Walden W. O'Dell, 57 ●
Chairman, President and
Chief Executive Officer
Diebold, Inc.
Elected 2001

Joan E. Ryan, 46 ▲
Senior Vice President and
Chief Financial Officer
SIRVA, Inc.
Elected 2002

Richard R. Thomas, 69 ▲★
Retired President
Tool Group
Federal Signal Corporation
Elected 1994

Committees

- ▲ Audit
- Compensation and Benefits
- ◆ Nominating and Governance
- ★ Executive

Officers

Joseph J. Ross, 57
Chairman and
Chief Executive Officer
20 years service

John DeLeonardis, 56
Vice President, Taxes
16 years service

Duane A. Doerle, 47
Vice President, Corporate
Development
18 years service

Stephanie K. Kushner, 47
Vice President and
Chief Financial Officer
1 year service

Karen N. Latham, 43
Vice President and Treasurer

Richard L. Ritz, 49
Vice President and
Controller
19 years service

Jennifer L. Sherman, 38
Deputy General Counsel
and Assistant Secretary
8 years service

Kim A. Wehrenberg, 51
Vice President, General
Counsel and Secretary
16 years service

James S. Weir, 44
Assistant Treasurer
16 years service



**Federal Signal
Corporation**

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60523-2004
630-954-2000
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FSS
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