

Monthly Survey of Manufacturing

October 2003





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October 2003

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The following symbols are used in this Statistics Canada publication:

- . not available for any reference period.
- .. not available for a specific reference period.
- ... not applicable.
- x suppressed to meet the confidentiality requirements of the Statistics Act.

Notice to users

Estimates in this publication are subject to revision to accommodate newly received information. It is advisable to always use data from the most recent issue.

In the following tables, some components may not add exactly to the total, because of rounding.

For a complete description of concepts, methodology and definitions, please refer to the "Survey Documentation" section at the end of this publication or consult Statistics Canada's Website at www.statcan.ca/english/sdds/2101.htm .

A note on CANSIM

The data published in Monthly Survey of Manufacturing (Tables 304-0014 and 304-0015) (Catalogue No. 31-001-XIE) are also available in machine-readable form through CANSIM (Canadian Socio-Economic Information Management System). Users interested in accessing data via CANSIM should contact one of Statistics Canada's regional centres at the numbers listed on the inside front cover of this Publication, or contact the Marketing Division, Statistics Canada R.H. Coats Building, Ottawa, Ontario, KIA 0T6 (613) 951-8200.

Acknowledgement

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Highlights

Shipments decreased 1.1% to \$42.5 billion in October, as manufacturers gave back some of the large gains of September. Against the backdrop of a rising Canadian dollar, manufacturers managed to reduce inventories (-0.6%) for the sixth consecutive month, but failed to fill their books with new orders (-3.2%).

Shipments tumble in October

October's decrease in shipments was broadly based, spanning 15 of 21 industries, accounting for 71% of total shipments.

A number of factors contributed to the pause in shipments. In some industries, October marked the return to more normal shipments levels following quarter-end boosts to production in September and the large bounce-back (+5.4%) after the Ontario blackout. Lower industrial prices in October also contributed to decreases in some industries.

Another key factor impacting export-reliant manufacturers was the appreciating value of the Canadian dollar against the US greenback, which reached a 10-year high in October. Many of Canada's manufacturing outputs are destined for US markets.

Ontario and British Columbia report the biggest decreases

Ontario led the eight provinces reporting lower shipments in October. Shipments fell \$221 million (-1.0%) to \$22.7 billion, following a 9.0% blackout-related recovery in September. Decreases in Ontario's computer and chemical industries offset a strong boost in food manufacturing.

Lower prices for paper and wood products contributed to a \$107 million (-3.7%) decrease in shipments by British Columbia manufacturers. Quebec's shipments receded \$100 million (-1.0%) in October, as a result of decreases in the computer and paper industries.

US manufacturing on the road to recovery

In contrast to Canada's decline in shipments, manufacturers in the United States are in the midst of an economic recovery. Shipments rose 0.7% in October, the fifth increase in the last six months. Year-to-date shipments for 2003 were 2.1% above shipments in the same period of 2002. This compared with a 0.9% decrease in Canada over the same period.

The computer and electronic products industry (+2.6%) led the US durable goods sector in October and were at their highest level since April 2001. In addition, US unfilled orders jumped 1.6%, the eighth increase in the last nine months. Again, the computer industry led all industries in orders.

Shipments by province and territory

	September 2003	October 2003	September to october 2003
	Seas	onally adjust	ed
	\$1	millions	% change
Newfoundland and Labrador	219	190	-13.6
Prince Edward Island	124	114	-8.0
Nova Scotia	716	706	-1.4
New Brunswick	1,081	997	-7.8
Quebec	9,889	9,789	-1.0
Ontario	22,905	22,685	-1.0
Manitoba	994	992	-0.2
Saskatchewan	647	653	0.8
Alberta	3,515	3,581	1.9
British Columbia	2,877	2,770	-3.7
Yukon, Northwest Territories and Nunavut	5	6	8.6

Time will tell if the robust recovery of the US manufacturing sector and of the economy in general will translate into increased production for their Canadian counterparts. The appreciated dollar will continue to challenge Canada's competitiveness in manufacturing.

Manufacturers hire workers in November

On a positive note, in November, Canadian manufacturers posted the largest employment gain in 12 months. According to the Labour Force Survey, manufacturing employment rose by 24,000 and was spread across several industries. Despite November's gain, factory employment remained 78,000 (-3.3%) below the level of November 2002. Employment was little changed in October.

November's employment increase supports the latest results of the Business Conditions Survey. The report indicated that the vast majority of manufacturers (86%) would maintain or add to their workforce in the fourth quarter.

Computer and motor vehicle manufacturing pull down shipments

Following September's quarter-end boost (+16.7%), shipments of computer and electronic products returned to more normal levels in October, dropping 12.1% to \$1.5 billion. January-to-October shipments remained 15% below levels of the same period of 2002.

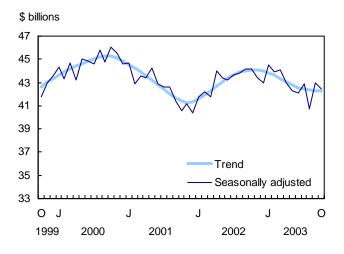
Motor vehicle manufacturing slipped 2.5% to \$5.0 billion, following September's recovery (+16.2%) from the electrical blackout. Despite the introduction of 2004 models, attractive incentives and near-record low interest rates, motor vehicle sales have been slowing both in Canada and in the United States in recent months. Lower industrial prices in October contributed to fewer shipments of chemical products (-3.0%) and petroleum and coal products (-3.3%).

Exports of boneless beef boost food shipments

Partly offsetting the decline in shipments for October, food manufacturers benefited from the re-opening of the US border to selected exports of Canadian beef products.

Shipments of boneless beef contributed to a 2.7% rise in food shipments in October, the first full month since the ban was partly lifted. Mexico also accepted Canadian beef exports as of October 2. Year-to-date shipments of animal slaughtering (excluding poultry) remained 11.3% below levels of 2002.

Manufacturers report fewer shipments in October



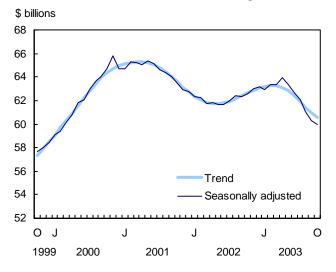
Manufacturers continue to tighten inventories

In October, inventories fell to \$59.9 billion, as manufacturers shaved another 0.6% from their stocks, the sixth decline in a row. In recent years, volatility in global demand has contributed to greater awareness and control of inventory levels. By October, manufacturers had sliced 6.2% in inventories since the recent high in April (\$63.9 billion).

Inventories at all three stages of fabrication decreased in October. Goods-in-process inventories, which have been trending down since autumn 2002, fell 1.9% to \$14.9 billion. Raw materials (-0.3%) and finished products (-0.1%) also declined.

The primary contributors to October's decrease included the aerospace (-3.5%), fabricated metal products (-2.7%) and wood products (-1.6%) industries.

Inventories decrease six months straight

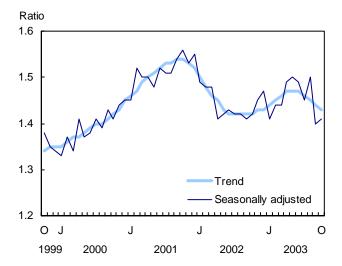


The inventory-to-shipment ratio remains near a 3-year low

October's drop in shipments offset lower inventories, contributing to a slight rise in the inventory-to-shipment ratio to 1.41, from September's three-year low (1.40). The ratio has settled down somewhat following recent volatility. Meanwhile, the trend of the inventory-to-shipment ratio has been edging down over the last few months.

The finished-product inventory-to-shipment ratio remained unchanged at 0.44 for the second consecutive month. This ratio is a measure of the time that would be required in order to exhaust finished products if shipments were to remain at their current level.

The inventory-to-shipment edges up



Unfilled orders decrease again

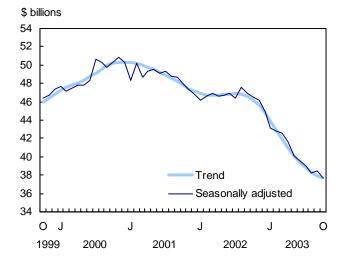
Unfilled orders fell 2.0% to \$37.7 billion in October, a sixyear low. This followed a 0.4% rise in September, the only increase in unfilled orders in the preceding 13 months. The main contributors included aerospace products and parts (-3.2%), computers (-6.1%) and plastics and rubber products manufacturing (-11.9%).

During the last year, order cancellations and weaker demand contributed to almost a 20% drop in the value of unfilled orders compared with one year ago. In October 2002, unfilled orders were \$46.5 billion.

Manufacturers receive fewer new orders in October

There were fewer new orders (-3.2%) on the books for manufacturers in October. Orders stood at \$41.7 billion, following September's big boost in new order announcements (+7.6%). Widespread decreases were reported, led by the computer and plastics and rubber products industries.

Further declines in unfilled orders



Note to readers

In addition to current-month estimates, data for the previous three months are regularly revised. Factors influencing revisions include late receipt of company data, incorrect information reported earlier, replacement of estimates with actual figures (once available), and seasonal adjustments. Consult the appropriate CANSIM tables for revised data.

Non-durable goods industries include food, beverage and tobacco products, textile mills, textile product mills, leather and allied products, paper, printing and related support activities, petroleum and coal products, chemicals and plastic and rubber products.

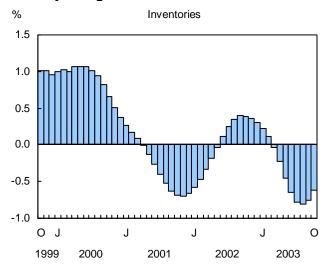
Durable goods industries include clothing, wood products, non-metallic mineral products, primary metals, fabricated metal products, machinery, computer and electronic products, electrical equipment, appliance and components, transportation equipment, furniture and related products and miscellaneous manufacturing.

Unfilled orders are a stock of orders that will contribute to future shipments assuming that the orders are not cancelled.

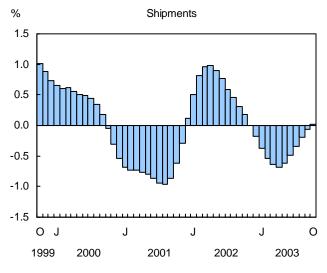
New orders are those received whether shipped in the current month or not. They are measured as the sum of shipments for the current month plus the change in unfilled orders. Some people interpret new orders as orders that will lead to future demand. This is inappropriate since the "new orders" variable includes orders that have already been shipped. Readers should take note that the month-to-month change in new orders may be volatile. This will happen particularly if the previous month's change in unfilled orders is closely related to the current month's change.

Not all orders will be translated into Canadian factory shipments because portions of large contracts can be subcontracted out to manufacturers in other countries.

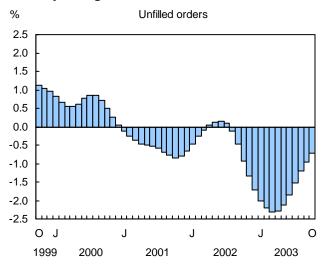
Monthly change in trend



Monthly change in trend



Monthly change in trend



Products and Services

Related Products and Data Sources

- Manufacturing Industries of Canada, 31-203-XPB
- Business Condition Survey, CANSIM (\$) tables 302-0007 and 302-0008
- Perspectives on Labour and Income, 75-001-XIE or 75-001-XPE
- Industrial Product Price Indexes, 62-011-XIE or 62-011-XPB
- Industrial Capacity Utilization Rates CANSIM II table 028-0002

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Schedule of releases	Monthly Survey of Manufacturing
Reference period	Release date
November 2002	January 22, 2003
December 2002	February 18, 2003
January 2003	March 18, 2003
February 2003	April 16, 2003
March 2003	May 15, 2003
April 2003	June 13, 2003
May 2003	July 16, 2003
June 2003	August 14, 2003
July 2003	September 16, 2003
August 2003	October 15, 2003
September 2003	November 14, 2003
October 2003	December 16, 2003
November 2003	January 21, 2004
December 2003	February 13, 2004

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To view the MSM survey questionnaire www.statcan.ca/english/sdds/2101.htm

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Table 1 All manufacturing industries

		Ur	nadjusted						Seaso	nally adju	isted		
Period	Shipments	Invento		filled rders	New orders		Shipm	ents	Invento	ries	Unfilled orders	New orders	
						\$ millio	ons						
October 2002	47,191	62	,295 46	6,773	46,640		44	,132	62,	580	46,491	43,660	
November 2002	44,305	63	,129 46	5,202	43,734		43	,385	62,	989	46,127	43,021	
December 2002	39,721	62	,389 44	,536	38,054		42	,998	63,	161	44,820	41,690	
January 2003	41,879	62	,601 42	2,643	39,986		44	,520	62,	929	43,123	42,823	
February 2003	40,817	63	,980 42	2,588	40,762		43	,901	63,	307	42,807	43,584	
March 2003	45,280	64	,512 42	2,467	45,159		44	,070	63,	368	42,616	43,879	
April 2003	43,482	64	,595 41	,315	42,330		42	,953	63,	898	41,630	41,967	
May 2003	44,714	63	,666 40	,096	43,495		42	,285	63,	358	40,057	40,711	
June 2003	43,793	62	,293 39),277	42,973		42	,128	62,	635	39,504	41,576	
July 2003	39,307	61	,423 39	,176	39,206		42	,897	62,	085	38,972	42,365	
August 2003	41,123	60	,947 38	8,586	40,533		40	,771 61		085	38,274	40,073	
September 2003	44,965	59	,925 38	8,772	45,151		42	,974	60,320		38,410	43,110	
October 2003	45,331	59	,476 37	,897	44,456		42	,481	59,930		37,660	41,731	
	Mo	Month to month % change					y to		Mor	ith to mo	nonth % change		
	Shipmer	ts	Invento	ries	sh	ipments	ratio	Unf	illed ord	lers	New or	ders	
	Seasonally adjusted	Trend	Seasonally adjusted	Trend		sonally ljusted	Trend		onally usted	Trend	Seasonally adjusted	Trend	
October 2002	0.0	0.2	0.4	0.4		1.42	1.42		-1.0	-0.9	0.3	-0.3	
November 2002	-1.7	0.0	0.7	0.4		1.45	1.43		-0.8	-1.4	-1.5	-0.4	
December 2002	-0.9	-0.2	0.3	0.3		1.47	1.43		-2.8	-1.7	-3.1	-0.6	
January 2003	3.5	-0.4	-0.4	0.2		1.41	1.44		-3.8	-2.0	2.7	-0.6	
February 2003	-1.4	-0.5	0.6	0.1		1.44	1.45		-0.7	-2.2	1.8	-0.7	
March 2003	0.4	-0.6	0.1	0.0		1.44	1.46		-0.4	-2.3	0.7	-0.7	
April 2003	-2.5	-0.7	0.8	-0.2		1.49	1.47		-2.3	-2.3	-4.4	-0.6	
May 2003	-1.6	-0.6	-0.8	-0.4		1.50	1.47		-3.8	-2.1	-3.0	-0.4	
June 2003	-0.4	-0.5	-1.1	-0.6		1.49	1.47		-1.4	-1.9	2.1	-0.2	
July 2003	1.8	-0.3	-0.9	-0.8		1.45	1.46		-1.3	-1.5	1.9	0.0	
August 2003	-5.0	-0.2	-1.6	-0.8		1.50	1.45		-1.8	-1.2	-5.4	0.1	
September 2003	5.4	-0.1	-1.3	-0.7		1.40	1.44		0.4	-0.9	7.6	0.2	
October 2003	-1.1	0.0	-0.6	-0.6		1.41	1.43		-2.0	-0.7	-3.2	0.2	

Motor vehicle, and parts and accessories industries

		I	Unadjusted						Seaso	asonally adjusted			
Period	Shipments	Inver		nfilled orders	New orders		Ship	ments	Invento	ories	Unfilled orders	New orders	
						\$ millio	ons						
October 2002	9,054		3,445	1,968	8,962			8,298	3	,450	1,959	8,226	
November 2002	8,695		3,660	1,933	8,660			8,124	3	,586	1,932	8,097	
December 2002	6,157		3,689	1,855	6,079			7,258	3	,751	1,853	7,179	
January 2003	8,166		3,585	1,834	8,145			8,236	3	,552	1,816	8,199	
February 2003	8,211		3,630	1,787	8,164			8,076	3	,580	1,779	8,039	
March 2003	8,926		3,529	1,724	8,863			8,335	3	,495	1,730	8,286	
April 2003	8,538		3,500	1,630	8,443			8,039	3	,489	1,680	7,989	
May 2003	8,733		3,420	1,581	8,684			7,935	3	,395	1,606	7,861	
June 2003	8,405		3,238	1,583	8,407		7,800		3,312		1,600	7,794	
July 2003	5,340		3,160	1,607		364		8,351	3	,221	1,589	8,340	
August 2003	6,895		3,046	1,602	6,889		6,903		3,067		1,597	6,911	
September 2003	8,161		3,166	1,565				7,837	37 3,155		1,546	7,787	
October 2003	8,478		3,084	1,566				7,792	3,120		1,571	7,817	
	Mo	Month to month % change					y to		Мог	nth to mo	nonth % change		
	Shipmer	its	Inven	tories	sh	ipments	ratio	U	nfilled or	ders	New ord	ders	
	Seasonally adjusted	Trend	Seasonall adjuste			sonally ljusted	Trend		asonally idjusted	Trend	Seasonally adjusted	Trend	
October 2002	-0.6	-0.6	-1.	3 0.6		0.42	0.42		-3.5	0.6	-3.1	-0.9	
November 2002	-2.1	-0.8	3.			0.44	0.43		-1.4	-0.6	-1.6	-1.1	
December 2002	-10.7	-0.8	4.0			0.52	0.43		-4.1	-1.7	-11.3	-1.0	
January 2003	13.5	-0.7	-5.1			0.43	0.43		-2.0	-2.5	14.2	-0.9	
February 2003	-1.9	-0.7	0.1			0.44	0.43		-2.1	-2.9	-2.0	-0.7	
March 2003	3.2	-0.7	-2.4			0.42	0.43		-2.8	-3.0	3.1	-0.7	
April 2003	-3.5	-0.8	-0.			0.43	0.43		-2.9	-2.8	-3.6	-0.7	
May 2003	-1.3	-0.8	-2.			0.43	0.42		-4.4	-2.3	-1.6	-0.7	
June 2003	-1.7	-0.8	-2.4			0.42	0.42		-0.4	-1.7	-0.8	-0.7	
July 2003	7.1	-0.7	-2.			0.39	0.41		-0.7	-1.1	7.0	-0.6	
August 2003	-17.3	-0.5	-4.5			0.44	0.41		0.5	-0.7	-17.1	-0.4	
September 2003	13.5	-0.3	2.9			0.40	0.41		-3.2	-0.5	12.7	-0.2	
October 2003	-0.6	0.0	-1.1			0.40	0.40		1.6	-0.5	0.4	0.0	

Table 3All manufacturing industries except motor vehicle, parts and accessories industries

		U	nadjusted						Seaso	nally adju	ly adjusted		y adjusted				
Period	Shipments	Invent		nfilled Irders	New orders		Shipm	ents	Invento	ories	Unfilled orders	New orders					
						\$ millio	ons										
October 2002	38,137	58	,850 4	4,804	37,678		35	,834	59,	,130	44,532	35,434					
November 2002	35,610	59	,468 4	4,269	35,075		35	,260	59,	,403	44,195	34,923					
December 2002	33,564	58	,700 4	2,681	31,975		35	,740	59,	,410	42,967	34,511					
January 2003	33,713	59	,016 4	0,809	31,841		36	,284	59,	,376	41,307	34,624					
February 2003	32,607	60	,350 4	0,801	32,598		35	,825	59,	,728	41,027	35,546					
March 2003	36,354	60	,983 4	0,743	36,296		35	,735	59,	,873	40,886	35,593					
April 2003	34,945	61	,095 3	9,685	33,887		34	,914	60,	,409	39,950	33,979					
May 2003	35,981	60	,246 3	8,515	34,811		34,350		59,	,963	38,451	32,850					
June 2003	35,388	59	,055 3	7,694	34,566		34,328				37,904	33,781					
July 2003	33,968	58	,263 3	37,694 37,569 36,984 37,207			34,547		58,864		37,383	34,025					
August 2003	34,228	57	,900 3	6,984	33,644		33,868		58,018		36,677	33,162					
September 2003	36,805	56	,759 3				35	,136	36 57,165		36,864	35,323					
October 2003	36,853	56	,393 3	6,331	35,977		34	,689	56,	,810	36,089	33,914					
	Mo	Month to month % change					y to		Mor	nth to mo	nth % change						
	Shipmer	ts	Invent	ories	sh	ipments	ratio	Un	filled or	ders	New or	ders					
	Seasonally adjusted	Trend	Seasonally adjusted			sonally ljusted	Trend		sonally ljusted	Trend	Seasonally adjusted	Trend					
October 2002	0.1	0.4	0.5	0.4		1.65	1.66		-0.9	-1.0	1.1	-0.1					
November 2002	-1.6	0.2	0.5			1.68	1.66		-0.8	-1.4	-1.4	-0.3					
December 2002	1.4	0.0	0.0			1.66	1.66		-2.8	-1.7	-1.2	-0.4					
January 2003	1.5	-0.3	-0.1	0.2		1.64	1.67		-3.9	-2.0	0.3	-0.6					
February 2003	-1.3	-0.5	0.6			1.67	1.68		-0.7	-2.2	2.7	-0.7					
March 2003	-0.3	-0.6	0.2			1.68	1.70		-0.3	-2.3	0.1	-0.7					
April 2003	-2.3	-0.7	0.9			1.73	1.70		-2.3	-2.3	-4.5	-0.6					
May 2003	-1.6	-0.6	-0.7			1.75	1.71		-3.8	-2.1	-3.3	-0.4					
June 2003	-0.1	-0.4	-1.1			1.73	1.70		-1.4	-1.9	2.8	-0.1					
July 2003	0.6	-0.3	-0.8	-0.7		1.70	1.70		-1.4	-1.5	0.7	0.1					
August 2003	-2.0	-0.1	-1.4			1.71	1.69		-1.9	-1.2	-2.5	0.3					
September 2003	3.7	0.0	-1.5	-0.7		1.63	1.67		0.5	-1.0	6.5	0.3					
October 2003	-1.3	0.0	-0.6	-0.6		1.64	1.66		-2.1	-0.7	-4.0	0.3					

Shipments by major group and selected industries

				Unadjusted	ł		
				Curre	ent periods		
	NAICS Code	October 2003	Se	eptember 2003	August 2003		July 2003
				\$ millions			
Food manufacturing Beverage and tobacco product manufacturing Textile mills Textile product mills Clothing manufacturing Leather and allied product manufacturing Wood product manufacturing Paper manufacturing Paper manufacturing Paper manufacturing Paper manufacturing Paper manufacturing Piniting and related support activities Petroleum and coal products manufacturing Chemical manufacturing Plastics and rubber products manufacturing Non-metallic mineral product manufacturing Primary metal manufacturing Fabricated metal product manufacturing Computer and electronic product manufacturing Electrical equipment, appliance and component manufacturing Transportation equipment manufacturing Motor vehicle manufacturing Motor vehicle parts manufacturing Aerospace product and parts manufacturing Railroad rolling stock manufacturing Ship and boat building Furniture and related product manufacturing Miscellaneous manufacturing	311 312 313 314 321 322 323 324 325 326 327 331 332 333 334 335 336 3361 3362 3363 3364 3365 3366 3366 3366 337	5,829 1,132 242 200 591 75 2,653 2,615 914 2,818 3,355 2,135 1,245 2,923 2,649 2,013 1,504 768 10,103 5,464 233 3,014 952 1,94 69 1,056		5,558 1,139 258 189 576 91 2,622 2,652 895 2,942 3,267 2,050 1,222 2,854 2,639 2,023 1,875 822 9,723 5,362 2,11 2,799 855 235 63 1,080	5,348 1,245 240 182 562 80 2,482 2,627 797 3,133 2,972 1,866 1,165 2,514 2,329 1,662 1,434 697 8,322 4,370 184 2,525 8433 156 64 1,006		5,358 1,316 193 187 493 2,366 2,611 787 2,937 3,145 1,887 1,186 2,507 2,277 1,831 1,297 698 6,781 3,456 210 1,883 850 149 76 946
Non-durable goods industries Durable goods industries Manufacturing	339	510 19,316 26,015 45,331		489 19,040 25,926 44,965	459 18,490 22,633 41,123		456 18,468 20,839 39,307
lanuracturing		Previo	ous year	Year-to-da	ite	Annua	
		October 2002	September 2002	% Change from 2002	2003	% Change from 2001	2002
				\$ millions			
Food manufacturing Beverage and tobacco product manufacturing Textile mills Textile product mills Clothing manufacturing Leather and allied product manufacturing Wood product manufacturing Paper manufacturing Paper manufacturing Paper manufacturing Petroleum and coal products manufacturing Chemical manufacturing Plastics and rubber products manufacturing Non-metallic mineral product manufacturing Primary metal manufacturing Fabricated metal product manufacturing Electrical equipment, appliance and component manufacturing Transportation equipment manufacturing Motor vehicle manufacturing Motor vehicle body and trailer manufacturing Motor vehicle body and parts manufacturing Rairoad rolling stock manufacturing Ship and boat building Furniture and related product manufacturing Miscellaneous manufacturing	311 312 313 314 315 321 322 323 324 325 326 327 331 332 333 334 335 336 3361 3362 3363 3364 3365 3366 3365 3366 337 339	5,615 1,106 278 229 681 85 2,622 2,911 922 3,213 3,386 2,071 1,212 2,943 2,571 2,943 2,572 2,943 2,572 2,943 2,572 2,943 2,572 2,943 2,572 2,943 2,572 2,762 2,943 2,572 2,943 2,576 2,949 1,099 2,533 700 1,147 533	5,420 1,164 282 215 625 98 2,430 2,851 3,086 3,160 1,953 1,165 2,725 2,506 2,146 1,922 808 10,220 5,587 2,340 1,072 272 234 2,830 1,072 272 2,430 1,072 272 2,430 1,072 2,725 2,460 1,925 2,460 2,146 1,922 808 10,220 5,587 2,546 2,146 1,922 808 10,220 5,587 2,430 1,072 2,725 2,400 1,072 2,725 2,400 1,072 2,725 2,400 1,072 2,725 2,400 2,146 1,922 808 10,220 5,587 2,430 1,072 2,725 2,400 2,725 2,506 2,146 2,146 1,922 808 10,220 5,587 2,590 1,072 2,725 2,400 1,072 2,725 2,400 1,072 2,725 2,400 1,072 2,725 2,400 1,072 2,725 2,500 495 1,042 495	$\begin{array}{c} 1.6\\ 1.7\\ -10.6\\ -10.0\\ -8.8\\ -13.5\\ -4.8\\ -3.0\\ 0.5\\ 14.0\\ 6.1\\ 1.2\\ 5.1\\ 2.6\\ 1.2\\ -5.9\\ -15.1\\ -4.4\\ -4.7\\ -4.8\\ -0.1\\ -4.1\\ -6.9\\ -3.8\\ -26.3\\ -0.6\\ -0.4\end{array}$	$\begin{array}{c} 53,078\\ 11,214\\ 2,442\\ 1,921\\ 5,204\\ 565\\ 23,935\\ 26,448\\ 8,381\\ 30,086\\ 33,351\\ 19,729\\ 10,305\\ 27,640\\ 23,522\\ 19,020\\ 15,089\\ 7,505\\ 96,407\\ 53,206\\ 2,273\\ 26,645\\ 9,532\\ 2,289\\ 824\\ 10,281\\ 4,569\\ \end{array}$	$\begin{array}{c} 1.1\\ 3.7\\ -3.7\\ 0.5\\ -3.0\\ -9.9\\ 7.2\\ -4.4\\ -4.1\\ 1.1\\ 4.0\\ 6.7\\ 9.7\\ 8.8\\ 2.8\\ 1.3\\ -16.5\\ -7.6\\ 4.6\\ 5.7\\ 8.5\\ 10.2\\ -15.0\\ 5.4\\ 20.6\\ 2.4\\ 8.5\end{array}$	$\begin{array}{c} 62,911\\ 13,304\\ 3,210\\ 2,520\\ 6,785\\ 777\\ 29,498\\ 32,726\\ 10,061\\ 32,350\\ 37,769\\ 23,002\\ 11,586\\ 32,216\\ 27,510\\ 24,113\\ 21,255\\ 9,335\\ 119,746\\ 65,797\\ 2,704\\ 32,741\\ 12,472\\ 2,878\\ 1,242\\ 12,303\\ 5,527\\ \end{array}$
Non-durable goods industries Durable goods industries Manufacturing		19,815 27,377 47,191	19,065 26,084 45,149	3.0 -3.7 -0.9	187,215 243,477 430,692	1.1 2.5 1.9	218,631 299,874 518,505

Shipments by major group and selected industries - concluded

				Sea	asonally adjuste	ed		
		Ohanaa			Current	periods		
	NAICS Code	Change from September	0	october 2003	September 2003		August 2003	July 2003
					\$ mil	lions		
Food manufacturing	311	143		5,493	5,350		5,224	5,211
Beverage and tobacco product manufacturing Textile mills	312 313	23 -9		1,136 228	1,113 237		1,136 234	1,135 234
Textile product mills Clothing manufacturing	314 315	3 -11		183 494	181 504		180 490	195 513
Leather and allied product manufacturing	316	-3		56	58		55	55
Wood product manufacturing Paper manufacturing	321 322	-33 -90		2,502 2,489	2,534 2,579		2,432 2,588	2,335 2,631
Printing and related support activities Petroleum and coal products manufacturing	323 324	-9 -94		832 2,739	841 2,834		814 2.955	845 2.879
Chemical manufacturing	325	-99		3,236	3,335		3,060	3,261
Plastics and rubber products manufacturing Non-metallic mineral product manufacturing	326 327	-12 -12		1,954 1,012	1,966 1,024		1,814 992	1,960 1,033
Primary metal manufacturing Fabricated metal product manufacturing	331 332	6 16		2,776 2,398	2,770 2,383		2,614 2,278	2,698 2.350
Machinery manufacturing	333	-8		1,896	1,905		1,811	1,936
Computer and electronic product manufacturing Electrical equipment, appliance and component manufacturing	334 335	-211 -26		1,524 731	1,735 757		1,487 732	1,413 740
Transportation equipment manufacturing Motor vehicle manufacturing	336 3361	-25 -128		9,371 5,040	9,396 5,168		8,452 4,449	10,019 5,778
Motor vehicle body and trailer manufacturing	3362	16		227	211		217	230
Motor vehicle parts manufacturing Aerospace product and parts manufacturing	3363 3364	82 38		2,752 909	2,669 871		2,454 895	2,573 1,004
Railroad rolling stock manufacturing Ship and boat building	3365 3366	-6 -6		188 79	194 85		183 73	196 83
Furniture and related product manufacturing Miscellaneous manufacturing	337 339	-56 14		976 455	1,031 442		977 448	993 459
Non-durable goods industries Durable goods industries Manufacturing		-147 -346 -493	2	18,346 24,135 42,481	18,493 24,480 42,974	:	18,059 22,712 40,771	18,406 24,491 42,897
		Change f	rom previous i	month	Tre	nd change fror	n previous mo	nth
		October 2003	September 2003	August 2003	October 2003	September 2003	August 2003	July 2003
					percentage			
Food manufacturing	311 312	2.7 2.1	2.4 -2.1	0.3 0.1	0.3 0.1	0.2 0.2	0.1 0.3	0.0 0.2
Beverage and tobacco product manufacturing Textile mills	313	-3.8	1.1	0.0	-0.6	-0.8	-1.0	-1.1
Textile product mills Clothing manufacturing	314 315	1.4 -2.1	0.7 3.0	-7.8 -4.6	-0.8 -0.1	-0.9 -0.4	-0.9 -0.7	-0.8 -1.1
Leather and allied product manufacturing	316 321	-4.5 -1.3	5.3 4.2	-0.1 4.1	0.1 1.3	0.3 1.6	0.3 1.8	0.2 1.6
Wood product manufacturing Paper manufacturing	322	-3.5	-0.4	-1.6	-1.1	-1.2	-1.2	-1.1
Printing and related support activities Petroleum and coal products manufacturing	323 324	-1.1 -3.3	3.3 -4.1	-3.7 2.6	-0.1 -1.1	-0.2 -1.3	-0.2 -1.4	-0.2 -1.5
Chemical manufacturing	325 326	-3.0 -0.6	9.0 8.4	-6.2 -7.5	-0.2 0.3	-0.4 0.3	-0.5	-0.7
Plastics and rubber products manufacturing Non-metallic mineral product manufacturing	327	-1.2	3.2	-4.0	0.2	0.1	0.3 0.0	0.2 -0.1
Primary metal manufacturing Fabricated metal product manufacturing	331 332	0.2 0.7	6.0 4.6	-3.1 -3.1	0.8 0.3	0.6 0.5	0.2 0.6	-0.3 0.6
Machinery manufacturing	333	-0.4	5.2	-6.4	-0.1	0.0	0.0	0.0
Computer and electronic product manufacturing Electrical equipment, appliance and component manufacturing	334 335	-12.1 -3.4	16.7 3.4	5.2 -1.1	0.8 -0.2	0.9 -0.2	0.7 -0.2	0.2 -0.2
Transportation equipment manufacturing Motor vehicle manufacturing	336 3361	-0.3 -2.5	11.2 16.2	-15.6 -23.0	-0.2 -0.7	-0.4 -0.9	-0.6 -1.1	-0.8 -1.1
Motor vehicle body and trailer manufacturing	3362	7.4	-2.6	-5.7	0.1	-0.1	-0.3	-0.5
Motor vehicle parts manufacturing Aerospace product and parts manufacturing	3363 3364	3.1 4.4	8.8 -2.7	-4.6 -10.8	1.2 -1.4	1.0 -1.7	0.7 -1.7	0.1 -1.5
Railroad rolling stock manufacturing	3365	-3.0	5.8	-6.4	-2.9	-4.1	-4.8	-4.9
Shin and hoat hullding	3366	-67	16 /	-100	-05	-0.8	-0.8	-05
Ship and boat building Furniture and related product manufacturing Miscellaneous manufacturing	3366 337 339	-6.7 -5.4 3.1	16.4 5.6 -1.3	-12.2 -1.6 -2.6	-0.5 -0.7 0.2	-0.8 -0.9 0.1	-0.8 -0.9 0.0	-0.5 -0.9 -0.2

2.4 7.8 5.4

-0.8 -1.4 -1.1 -1.9 -7.3 -5.0 -0.3 0.2 0.0 -0.3 0.1 -0.1 -0.4 0.0 -0.2 -0.5 -0.2 -0.3

Inventories by major group and selected industries

				Unadjusted	t		
				Curr	ent periods		
	NAICS Code	October 2003	Se	eptember 2003	August 2003		July 2003
				\$ millions			
Food manufacturing Beverage and tobacco product manufacturing Textile mills Textile product mills Clothing manufacturing Leather and allied product manufacturing Wood product manufacturing Paper manufacturing Paper manufacturing Petroleum and coal products manufacturing Chemical manufacturing Plastics and rubber products manufacturing Primary metal manufacturing Primary metal manufacturing Fabricated metal product manufacturing Electrical equipment, appliance and component manufacturing Transportation equipment manufacturing Motor vehicle body and trailer manufacturing Motor vehicle parts manufacturing Aerospace product and parts manufacturing Bailroad rolling stock manufacturing Ship and boat building Furniture and related product manufacturing Miscellaneous manufacturing	311 312 313 314 315 321 322 323 324 325 326 327 331 332 333 334 335 3361 3362 3361 3362 3363 3364 3365 3366 337 339	5,013 1,727 425 300 1,179 115 3,843 3,498 702 1,507 5,635 2,089 1,139 4,477 3,329 4,332 4,070 1,332 1,214 442 1,869 7,424 1,047 1,33 1,427 992		4,974 1,692 435 305 1,249 124 3,945 3,476 701 1,533 5,508 2,070 1,155 4,511 3,413 4,284 3,994 1,291 12,822 1,297 437 1,869 7,829 1,076 124 1,449 994	4,864 1,713 445 299 1,245 141 3,959 3,515 716 1,719 5,865 2,110 1,172 4,653 3,543 4,346 4,082 1,323 1,210 4,2808 1,210 428 1,837 7,938 1,210 428 1,837 7,938		4,820 1,752 457 307 1,274 155 4,186 3,588 722 1,776 5,706 2,115 1,210 4,725 3,550 4,372 4,080 1,308 12,848 1,229 4,00 1,932 7,840 1,932 7,840 1,131 1,476 995
Non-durable goods industries Durable goods industries Manufacturing		21,010 38,466 59,476		20,817 39,108 59,925	21,386 39,560 60,947		21,398 40,025 61,423
		Previous year		Year-to-date		Average per	month
		October 2002	September 2002	% Change from 2002	Average 2003	% Change from 2001	2002
				\$ millions			
Food manufacturing Beverage and tobacco product manufacturing Textile mills Textile product mills Clothing manufacturing Leather and allied product manufacturing Wood product manufacturing Paper manufacturing Paroleum and coal products manufacturing Chemical manufacturing Plastics and rubber products manufacturing Non-metallic mineral product manufacturing Primary metal manufacturing Fabricated metal product manufacturing Electrical equipment, appliance and component manufacturing Transportation equipment manufacturing Motor vehicle manufacturing Motor vehicle body and trailer manufacturing Aerospace product and parts manufacturing Ship and boat building Furniture and related product manufacturing Miscellaneous manufacturing	311 312 313 314 321 322 323 324 325 326 327 331 332 333 334 335 336 3361 3362 3363 3364 3365 3366 3366 337 339	5,033 1,752 462 323 1,138 132 4,158 3,491 719 1,565 5,377 2,041 1,140 4,922 3,501 4,710 4,412 1,375 13,487 1,677 4,13 1,768 7,853 1,414 1,341 1,401 1,099	$\begin{array}{c} 4,981\\ 1,692\\ 461\\ 327\\ 1,197\\ 1,41\\ 4,172\\ 3,474\\ 703\\ 1,673\\ 5,328\\ 2,033\\ 1,673\\ 5,328\\ 2,033\\ 1,77\\ 4,786\\ 3,489\\ 4,497\\ 4,322\\ 1,371\\ 13,763\\ 1,797\\ 4,122\\ 1,728\\ 8,050\\ 1,391\\ 126\\ 1,489\\ 1,116\end{array}$	$\begin{array}{c} 1.3\\ 2.0\\ -8.6\\ -4.1\\ 3.2\\ -6.1\\ 0.8\\ 0.2\\ -1.1\\ 0.6\\ 11.5\\ 6.5\\ -0.5\\ 4.1\\ 2.1\\ -3.5\\ -10.6\\ -3.2\\ -1.7\\ -17.5\\ 11.9\\ 10.4\\ 0.6\\ -11.1\\ -16.2\\ 5.2\\ -2.5\end{array}$	$\begin{array}{c} 4,865\\ 1,754\\ 451\\ 312\\ 1,222\\ 1,32\\ 4,517\\ 3,568\\ 698\\ 1,652\\ 5,832\\ 2,155\\ 1,207\\ 4,770\\ 3,573\\ 4,458\\ 4,198\\ 1,347\\ 13,110\\ 1,418\\ 463\\ 1,918\\ 7,819\\ 1,170\\ 123\\ 1,492\\ 1,029\\ 1,029\\ \end{array}$	$\begin{array}{c} 3.4\\ 5.0\\ -9.3\\ -13.1\\ -12.5\\ -8.9\\ -6.3\\ -7.0\\ -10.6\\ 4.0\\ 0.8\\ 2.0\\ 0.4\\ 2.1\\ 1.2\\ -22.5\\ -16.3\\ -1.3\\ 2.9\\ -6.3\\ 3.9\\ 0.3\\ -14.0\\ -35.7\\ 1.1\\ 3.3\end{array}$	$\begin{array}{c} 4,832\\ 1,717\\ 486\\ 324\\ 1,174\\ 1,37\\ 4,449\\ 3,548\\ 702\\ 1,614\\ 5,277\\ 2,039\\ 1,206\\ 4,657\\ 3,492\\ 4,609\\ 4,654\\ 1,384\\ 13,441\\ 1,730\\ 1,762\\ 7,817\\ 1,762\\ 7,817\\ 1,338\\ 145\\ 1,427\\ 1,059\end{array}$
Non-durable goods industries Durable goods industries Manufacturing		20,894 41,401 62,295	20,814 41,379 62,193	3.8 -1.3 0.4	21,419 40,923 62,342	-0.7 -4.7 -3.4	20,676 41,553 62,229

Inventories by major group and selected industries - concluded

				Sea	isonally adjuste	d		
		Ohanna			Current	periods		
	NAICS Code	Change from September	00	ctober 2003	September 2003		August 2003	July 2003
					\$ mil	lions		
Food manufacturing Beverage and tobacco product manufacturing	311 312	4 -10		4,860 1,746	4,856 1,756		4,849 1,762	4,882 1,773
Textile mills	313	-15		428	443		449	463
Textile product mills Clothing manufacturing	314 315	-4 -7		302 1,226	306 1,232		301 1,210	309 1,196
Leather and allied product manufacturing Wood product manufacturing	316 321	1 -66		123 4,158	122 4,224		127 4,285	131 4,503
Paper manufacturing	322	11		3,569	3,558		3,549	3,589
Printing and related support activities Petroleum and coal products manufacturing	323 324	-13 3		678 1,545	691 1,542		697 1,665	727 1,720
Chemical manufacturing Plastics and rubber products manufacturing	325 326	141 17		5,747 2,142	5,606 2,125		5,883 2,133	5,803 2,131
Non-metallic mineral product manufacturing	327	9		1,201	1,192		1,181	1,194
Primary metal manufacturing Fabricated metal product manufacturing	331 332	-56 -92		4,404 3,354	4,459 3,447		4,614 3,546	4,713 3,549
Machinery manufacturing Computer and electronic product manufacturing	333 334	-19 -47		4,260 4,061	4,279 4,108		4,304 4,075	4,367 4,144
Electrical equipment, appliance and component manufacturing	335	27		1,336	1.309		1,328	1,306
Transportation equipment manufacturing Motor vehicle manufacturing	336 3361	-281 -37		2,350 1,230	12,632 1,266		12,707 1,210	13,113 1,275
Motor vehicle body and trailer manufacturing Motor vehicle parts manufacturing	3362 3363	2 1		453 1,890	451 1,889		445 1,857	455 1,947
Aerospace product and parts manufacturing Railroad rolling stock manufacturing	3364 3365	-266		7,378	7,644		7,796	8,017 1,131
Ship and boat building	3366	-29 3		129	126		117	122
Furniture and related product manufacturing Miscellaneous manufacturing	337 339	-5 14		1,437 1,003	1,442 989		1,447 973	1,481 992
Non-durable goods industries Durable goods industries Manufacturing		133 -523 -390	3	1,140 8,790 9,930	21,007 39,313 60,320		21,415 39,670 61,085	21,528 40,557 62,085
		Change from previous month		nonth	Trer	id change fror	n previous mo	nth
		October 2003	September 2003	August 2003	October 2003	September 2003	August 2003	July 2003
					percentage			
Food manufacturing	311 312	0.1 -0.6	0.1 -0.3	-0.7 -0.6	0.0 0.1	-0.1 0.1	-0.1 0.2	-0.2 0.2
Beverage and tobacco product manufacturing Textile mills	313	-3.3	-1.4	-3.0	-0.7	-0.7	-0.6	-0.4
Textile product mills Clothing manufacturing	314 315	-1.4 -0.5	1.7 1.9	-2.8 1.1	-0.7 0.1	-0.8 0.1	-0.9 0.1	-0.8 0.1
Leather and allied product manufacturing Wood product manufacturing	316 321	0.4 -1.6	-3.9 -1.4	-2.9 -4.8	-1.0 -1.5	-1.1 -1.7	-1.0 -1.7	-0.9 -1.5
Paper manufacturing	322	0.3	0.3	-1.1	0.0	0.0	0.0	0.1
Printing and related support activities Petroleum and coal products manufacturing	323 324	-1.9 0.2	-0.8 -7.4	-4.2 -3.2	-0.7 -1.2	-0.6 -1.1	-0.4 -0.9	-0.2 -0.6
Chemical manufacturing Plastics and rubber products manufacturing	325 326	2.5 0.8	-4.7 -0.3	1.4 0.1	-0.5 -0.2	-0.6 -0.3	-0.5 -0.4	-0.3 -0.4
Non-metallic mineral product manufacturing	327	0.7	1.0	-1.0	0.0	0.0	-0.1	-0.2
Primary metal manufacturing Fabricated metal product manufacturing	331 332	-1.2 -2.7	-3.4 -2.8	-2.1 -0.1	-1.1 -0.7	-1.5 -0.8	-1.7 -0.9	-1.8 -0.8
Machinery manufacturing Computer and electronic product manufacturing	333 334	-0.4 -1.1	-0.6 0.8	-1.4 -1.7	-0.6 -0.5	-0.8 -0.6	-1.0 -0.7	-1.0 -0.8
Electrical equipment, appliance and component manufacturing Transportation equipment manufacturing	335 336	2.1 -2.2	-1.4 -0.6	1.7 -3.1	-0.1 -1.0	-0.3 -1.1	-0.5 -1.1	-0.7
Motor vehicle manufacturing	3361	-2.9	4.6	-5.1	-2.0	-2.8	-3.4	-1.1 -3.9
Motor vehicle body and trailer manufacturing Motor vehicle parts manufacturing	3362 3363	0.4 0.1	1.4 1.7	-2.1 -4.6	-0.5 -0.4	-0.6 -0.5	-0.7 -0.5	-0.7 -0.4
Aerospace product and parts manufacturing	3364 3365	-3.5 -2.7	-2.0 -2.2	-2.7 -2.7	-1.0 -1.6	-0.9 -1.7	-0.8 -2.0	-0.6 -2.2
Railroad rolling stock manufacturing Ship and boat building	3366	2.6	7.8	-4.4	0.7	0.6	0.4	0.1
Furniture and related product manufacturing						0.7	0.0	0.0
Furniture and related product manufacturing Miscellaneous manufacturing	337 339	-0.3 1.4	-0.4 1.7	-2.3 -1.9	-0.6 0.0	-0.7 -0.2	-0.9 -0.5	-0.9 -0.8

0.6 -1.3 -0.6 -1.9 -0.9 -1.3 -0.5 -2.2 -1.6 -0.3 -0.8 -0.6 -0.3 -1.0 -0.7

-0.3 -1.1 -0.8 -0.2 -1.1 -0.8

Unfilled orders by selected major group and industries

				Unadjuste	d		
				Current peri	ods		
	NAICS Code	October 2003	Se	eptember 2003	August 2003		July 2003
				\$ millions	3		
Textile mills	313	201		208	224		209
Textile product mills	314	62		58	49		60
Clothing manufacturing	315	286		309	326		332
Leather and allied product manufacturing	316	27		26	32		36
Plastics and rubber products manufacturing	326	1,439		1,398	1,201		1,025
Primary metal manufacturing	331	1,689		1,670	1,650		1,638
Fabricated metal product manufacturing	332	3,026		2,939	2,801		2,742
Machinery manufacturing	333	5,727		5,705	5,950		6,105
Computer and electronic product manufacturing	334	3,718		3,961	3,576		3,636
Electrical equipment, appliance and component manufacturing	335	934		929	960		950
Transportation equipment manufacturing	336	17,771		18,512	18,680		19,259
Motor vehicle manufacturing	3361	822		784	807		782
Motor vehicle body and trailer manufacturing	3362	567		565	561		567
Motor vehicle parts manufacturing	3363	744		781	795		825
Aerospace product and parts manufacturing	3364 3366	11,050		11,716	11,547		11,944
Ship and boat building Miscellaneous manufacturing	3366	43 198		47 203	44 207		49 171
wiscenaneous manufacturing	228	190		203	207		171
Non-durable goods industries Durable goods industries		3,106 34,791		3,155 35,617	2,987 35,599		2,861 36,315
Manufacturing		37,897		38,772	38,586		39,176
	-	Previous year Year-to-		ate	Average per	month	
	-	October 2002	September 2002	% Change from 2002	Average 2003	% Change from 2001	2002
	-			\$ millions	;		
Textile mills	313	271	277	-18.0	228	9.3	276
Textile product mills	314	61	58	19.2	64	2.7	55
Clothing manufacturing	315	272	282	-3.6	321	-7.0	324
Leather and allied product manufacturing	316	23	27	-5.6	31	-18.2	3
Plastics and rubber products manufacturing	326	1,504	1,211	1.4	1,245	15.6	1,254
Primary metal manufacturing	331	1,734	1,795	-6.0	1,684	25.1	1,79
Fabricated metal product manufacturing	332	2,818	2,867	-2.0	2,826	0.3	2,878
Machinery manufacturing	333	6,420	6,643	-6.7	6,311	4.3	6,709
Computer and electronic product manufacturing	334	4,236	4,024	-2.1	3,859	-8.4	3,97
Electrical equipment, appliance and component manufacturing	335	1,004	1,011	0.9	980	-30.5	97
Fransportation equipment manufacturing	336	25,341	26,117	-23.7	19,711	-8.7	25,560
Motor vehicle manufacturing	3361	1,134	1,226	-22.5	823	4.2	1,052
Motor vehicle body and trailer manufacturing	3362	569	580	1.8	604	8.4	590
Notor vehicle parts manufacturing	3363	834	834	18.4	825	24.2	729
Aerospace product and parts manufacturing	3364	16,928	17,541	-31.2	12,501	-12.0	17,877
Ship and boat building	3366	20	21	147.4	44	-37.0	18
Miscellaneous manufacturing	339	283	300	-17.8	185	-12.1	226
Non-durable goods industries		3,226	2,892	5.3	2,989	15.3	2,867
Durable goods industries		43,547	44,433	-15.3	37,293	-5.4	43,740
Manufacturing		46,773	47,324	-14.0	40,282	-4.3	46,600

Unfilled orders by selected major group and industries - concluded

			5	Seasonally adjusted		
		Change		Current period	ls	
1	NAICS Code	Change — from September	October 2003	September 2003	August 2003	July 2003
				\$ millions		
Textile mills	313	-3	209	212	226	215
Textile product mills	314	3	60	57	47	61
Clothing manufacturing	315	-7	318	325	326	310
Leather and allied product manufacturing	316	4	33	30	31	28
Plastics and rubber products manufacturing	326	-166	1,232	1,398	1,214	1,135
Primary metal manufacturing	331	59	1,766	1,707	1,641	1,632
Fabricated metal product manufacturing	332	88	3,026	2,939	2,801	2,742
Machinery manufacturing	333	22	5,727	5,705	5,950	6,105
Computer and electronic product manufacturing	334	-242	3,718	3,961	3,576	3,636
Electrical equipment, appliance and component manufacturing	335	5	934	929	960	950
Transportation equipment manufacturing	336	-418	17,679	18,097	18,408	19,017
Motor vehicle manufacturing	3361	37	822	784	807	782
Motor vehicle body and trailer manufacturing	3362	-6	604	609	594	585
Motor vehicle parts manufacturing	3363	-12	750	762	790	807
Aerospace product and parts manufacturing	3364	-363	10,917	11,280	11,247	11,702
Ship and boat building	3366	-1	42	43	44	49
Miscellaneous manufacturing	339	-9	180	190	209	188
Non-durable goods industries		-249	2,911	3,160	2,998	2,969
Durable goods industries		-502	34,748	35,250	35,275	36,003
Manufacturing		-750	37,660	38,410	38,274	38,972

	_	Change f	rom previous m	onth	Tre	end change from	previous mont	h
		October 2003	September 2003	August 2003	October 2003	September 2003	August 2003	July 2003
					percentage			
Textile mills	313	-1.5	-6.3	5.2	-0.1	-0.6	-1.2	-2.0
Textile product mills	314	6.0	21.1	-22.9	-1.7	-2.1	-2.7	-3.3
Clothing manufacturing	315	-2.3	-0.2	5.1	0.0	0.0	0.1	0.3
Leather and allied product manufacturing	316	13.4	-5.9	14.1	5.1	4.3	2.8	0.9
Plastics and rubber products manufacturing	326	-11.9	15.2	6.9	0.5	0.2	-0.3	-0.8
Primary metal manufacturing	331	3.5	4.0	0.5	1.7	1.5	1.1	0.4
Fabricated metal product manufacturing	332	3.0	4.9	2.2	0.4	0.5	0.6	0.5
Machinery manufacturing	333	0.4	-4.1	-2.5	-1.0	-1.4	-1.6	-2.0
Computer and electronic product manufacturing	334	-6.1	10.8	-1.6	0.8	0.4	-0.3	-1.3
Electrical equipment, appliance and component manufacturing	335	0.5	-3.2	1.0	-0.8	-1.1	-1.4	-1.4
Transportation equipment manufacturing	336	-2.3	-1.7	-3.2	-1.5	-1.8	-2.0	-2.3
Motor vehicle manufacturing	3361	4.8	-2.8	3.2	0.7	1.0	0.9	0.1
Motor vehicle body and trailer manufacturing	3362	-0.9	2.5	1.5	0.6	0.6	0.5	0.2
Motor vehicle parts manufacturing	3363	-1.6	-3.5	-2.1	-1.7	-2.0	-2.2	-2.2
Aerospace product and parts manufacturing	3364	-3.2	0.3	-3.9	-1.9	-2.4	-2.8	-3.2
Ship and boat building	3366	-1.8	-4.1	-8.7	-1.5	-1.0	-0.6	0.3
Miscellaneous manufacturing	339	-5.0	-9.1	10.8	-0.7	-0.2	0.3	0.5
Non-durable goods industries		-7.9	5.4	1.0	0.1	0.1	0.1	0.0
Durable goods industries		-1.4	-0.1	-2.0	-0.8	-1.0	-1.3	-1.7
Manufacturing		-2.0	0.4	-1.8	-0.7	-0.9	-1.2	-1.5

New orders by selected major group and industries

	-			Unadjuste	d		
				Current perio	ods		
	NAICS Code	October 2003	Se	ptember 2003	August 2003		July 2003
				\$ millions	;		
Textile mills	313	236		242	254		189
Textile product mills	314	204		197	172		192
Clothing manufacturing	315	568		560	556		479
Leather and allied product manufacturing	316	77		85	76		4
Plastics and rubber products manufacturing	326	2,176		2,247	2,043		1,89
Primary metal manufacturing	331	2,942		2,875	2,526		2,51
Fabricated metal product manufacturing Machinery manufacturing	332 333	2,736 2,035		2,776 1,779	2,389 1,507		2,314 1,913
Computer and electronic product manufacturing	333	1,261		2,260	1,307		1,31
Electrical equipment, appliance and component manufacturing	335	773		791	707		728
Transportation equipment manufacturing	336	9,362		9,555	7,743		6,424
Notor vehicle manufacturing	3361	5,501		5,339	4,395		3,473
Notor vehicle body and trailer manufacturing	3362	235		215	178		193
Notor vehicle parts manufacturing	3363	2,978		2,785	2,494		1,89
Aerospace product and parts manufacturing	3364	286		1,024	447		632
Ship and boat building	3366	64		67	59		73
Miscellaneous manufacturing	339	504		486	495		457
Von-durable goods industries Durable goods industries Vanufacturing		19,268 25,188 44,456		19,208 25,943 45,151	18,616 21,917 40,533		18,513 20,693 39,200
	-			Year-to-da		Annua	
	-	October	September	% Change		% Change	
	-	2002	2002	from 2002	2003	from 2001	2002
				\$ millions			
Textile mills	313	272	280	-14.4	2,382	-0.8	3,253
Textile product mills	314	232	213	-10.2	1,923	2.0	2,527
Clothing manufacturing	315	672	562	-8.4	5,214	-2.2	6,769
_eather and allied product manufacturing	316	81	91	-11.8	570	-10.6	770
Plastics and rubber products manufacturing	326	2,363	1,865	0.5	19,806	6.2	23,082
Primary metal manufacturing	331	2,882	2,761	0.8	27,530	10.9	32,65
abricated metal product manufacturing	332	2,522	2,475	1.8	23,763	2.6	27,584
Machinery manufacturing	333	1,961	1,818	-6.6	18,250	-3.3	23,50
Computer and electronic product manufacturing	334	1,949	1,722 792	-19.8	14,710	-8.9	21,693
Electrical equipment, appliance and component manufacturing Fransportation equipment manufacturing	335 336	805 10,159	9,921	-4.5 -9.7	7,436 90,599	1.6 3.6	9,275 117,133
Notor vehicle manufacturing	3361	5,973	9,921 5,623	-9.7	90,399 53,041	5.0 6.4	65,879
Notor vehicle body and trailer manufacturing	3362	225	225	-1.7	2,265	8.7	2,74
Notor vehicle parts manufacturing	3363	2,990	2,915	-5.4	26,521	11.0	33,000
Aerospace product and parts manufacturing	3364	486	747	-40.6	4,581	-39.5	9,017
Ship and boat building	3366	69	71	-24.8	844	24.0	1,248
Miscellaneous manufacturing	339	516	608	-1.9	4,553	8.5	5,508
Non-durable goods industries		20,149	18,982	2.9	187,353	1.0	218,790
Durable goods industries		26,491	25,326 44,308	-6.3 -2.5	236,700 424,053	3.2 2.3	297,812 516,608
Manufacturing		46,640					

New orders by selected major group and industries - concluded

			S	Seasonally adjusted		
		Change		Current period	ls	
	NAICS Code	Change — from September	October 2003	September 2003	August 2003	July 2003
				\$ millions		
Textile mills	313	2	225	223	246	233
Textile product mills	314	-4	187	191	166	199
Clothing manufacturing	315	-17	486	503	506	509
Leather and allied product manufacturing	316	3	59	56	59	54
Plastics and rubber products manufacturing	326	-362	1,789	2,151	1,892	1,847
Primary metal manufacturing	331	-1	2,835	2,836	2,623	2,737
Fabricated metal product manufacturing	332	-35	2,486	2,520	2,337	2,387
Machinery manufacturing	333	259	1,919	1,660	1,655	2,017
Computer and electronic product manufacturing	334	-838	1,282	2,120	1,427	1,431
Electrical equipment, appliance and component manufacturing	335	10	736	726	742	770
Transportation equipment manufacturing	336	-132	8,953	9,085	7,843	9,347
Motor vehicle manufacturing	3361	-68	5,077	5,145	4,474	5,794
Motor vehicle body and trailer manufacturing	3362	-5	221	226	226	224
Motor vehicle parts manufacturing	3363	98	2,739	2,642	2,437	2,546
Aerospace product and parts manufacturing	3364	-358	546	904	440	492
Ship and boat building	3366	-5	78	83	68	82
Miscellaneous manufacturing	339	23	446	423	468	454
Non-durable goods industries		-558	18,097	18,655	18,089	18,339
Durable goods industries		-822	23,633	24,455	21,984	24,026
Manufacturing		-1,380	41,731	43,110	40,073	42,365

	_	Change f	rom previous m	onth	Tre	end change from	previous mont	:h
		October 2003	September 2003	August 2003	October 2003	September 2003	August 2003	July 2003
					percentage			
Textile mills	313	1.0	-9.4	5.2	-0.1	-0.2	-0.3	-0.3
Textile product mills	314	-2.0	15.1	-16.7	-0.7	-0.7	-0.7	-0.7
Clothing manufacturing	315	-3.4	-0.4	-0.6	-0.1	-0.4	-0.9	-1.3
Leather and allied product manufacturing	316	5.7	-4.7	9.0	0.6	1.1	1.3	1.1
Plastics and rubber products manufacturing	326	-16.8	13.7	2.5	0.5	0.7	0.6	0.4
Primary metal manufacturing	331	0.0	8.1	-4.2	0.9	0.8	0.6	0.2
Fabricated metal product manufacturing	332	-1.4	7.8	-2.1	0.1	0.4	0.7	1.0
Machinery manufacturing	333	15.6	0.3	-17.9	0.9	1.0	1.3	0.9
Computer and electronic product manufacturing	334	-39.5	48.6	-0.3	1.7	2.7	3.1	2.3
Electrical equipment, appliance and component manufacturing	335	1.3	-2.1	-3.7	0.3	0.1	-0.1	-0.3
Transportation equipment manufacturing	336	-1.4	15.8	-16.1	0.5	0.2	0.0	-0.1
Motor vehicle manufacturing	3361	-1.3	15.0	-22.8	-0.7	-0.9	-1.0	-1.0
Motor vehicle body and trailer manufacturing	3362	-2.2	0.2	0.6	0.0	0.3	0.4	0.3
Motor vehicle parts manufacturing	3363	3.7	8.4	-4.3	1.3	1.1	0.7	0.1
Aerospace product and parts manufacturing	3364	-39.6	105.5	-10.7	7.1	6.6	7.1	8.4
Ship and boat building	3366	-5.6	21.0	-16.9	-0.8	-1.0	-1.3	-1.6
Miscellaneous manufacturing	339	5.5	-9.7	3.1	0.0	-0.1	-0.1	0.0
Non-durable goods industries		-3.0	3.1	-1.4	-0.3	-0.3	-0.4	-0.5
Durable goods industries		-3.4	11.2	-8.5	0.6	0.6	0.6	0.4
Manufacturing		-3.2	7.6	-5.4	0.2	0.2	0.1	0.0

Shipments for selected industries, unadjusted

			Current per	iods	
	NAICS Code	October 2003	September 2003	August 2003	July 2003
			\$ millior	IS	
Food manufacturing	311				
Animal food manufacturing	3111	481	444	411	434
Starch and vegetable fat and oil manufacturing	31122	300	277	254	261
Sugar and confectionery product manufacturing	3113	420	393	367	328
Fruit and vegetable preserving and specialty food manufacturing	3114	522	500	459	454
Dairy product manufacturing	3115	978	950	968	989
Meat product manufacturing	3116	1,494	1,345	1,348	1,329
Cookie, cracker and pasta manufacturing Other food manufacturing	31182 3119	129 568	117 554	111 500	104 504
Beverage and tobacco product manufacturing	312	000	004	000	004
Soft drink and ice manufacturing	31211	299	313	368	394
Breweries	31212	358	342	396	448
Wineries	31213	51	54	50	50
Distilleries	31214	104	92	86	79
Tobacco manufacturing	3122	320	338	345	346
Textile mills	313				
Fibre, yarn and thread mills	3131	30	33	31	24
Fabric mills	3132	159	174	159	126
Textile and fabric finishing and fabric coating	3133	53	51	49	43
Taxtila product millo	314				
Textile product mills Carpet and rug mills	314 31411	71	66	63	62
Textile bag and canvas mills	31491	24	25	26	33
Ū		24	20	20	00
Clothing manufacturing	315	47	40	40	0.0
Hosiery and sock mills	31511 31519	47 62	42 56	43 52	39 48
Other clothing knitting mills Men's and boys' cut and sew clothing manufacturing	31522	212	197	185	161
Women's and girls' cut and sew clothing manufacturing	31523	181	202	204	174
Clothing accessories and other clothing manufacturing	3159	26	22	19	20
Leather and allied product manufacturing	316				
Footwear manufacturing	3162	57	72	63	30
Wood product manufacturing	321				
Sawmills and wood preservation	3211	1,321	1,352	1,287	1,238
Veneer, plywood and engineered wood product manufacturing	3212	798	739	670	619
Other wood product manufacturing	3219	534	531	526	509
Paper manufacturing	322				
Pulp, paper and paperboard mills	3221	1,804	1,832	1,850	1,811
Paperboard container manufacturing	32221	446	462	439	453
Paper bag and coated and treated paper manufacturing	32222	182	175	159	158
Other converted paper product manufacturing	32229	141	142	133	135
Printing and related support activities	323				
Printing	32311	869	853	759	749
Support activities for printing	32312	45	42	38	39
Petroleum and coal products manufacturing	324				
Petroleum refineries	32411	2,506	2,611	2,846	2,641
Chemical manufacturing	325				
Other basic inorganic chemical manufacturing	32518	243	234	228	239
Other basic organic chemical manufacturing	32519	199	176	211	198
Resin, synthetic rubber, and artificial and synthetic fibres and					
filaments manufacturing	3252	533	524	493	499
Pesticide and other agricultural chemical manufacturing	32532	11	12	12	33
Pharmaceutical and medicine manufacturing	3254	710	737	605	714
Paint and coating manufacturing	32551	169	179	169	176
Adhesive manufacturing	32552	62	62	59	60
Soap and cleaning compound manufacturing	32561	102	115	116	117
Toilet preparation manufacturing	32562	164	174	153	143
Printing ink manufacturing	32591	41	36	36	33
All other chemical product manufacturing	32599	388	376	319	345

Shipments for selected industries, unadjusted - continued

			Current per	riods	
	NAICS Code	October 2003	September 2003	August 2003	July 2003
			\$ millior	IS	
Plastics and rubber products manufacturing	326				
Plastic pipe, pipe fitting and unsupported profile shape	00010	170	100	170	475
manufacturing	32612	178	180	179	175
Polystyrene foam product manufacturing	32614	37	34	34	35
Other plastic product manufacturing	32619	893	852	773	777
Other rubber product manufacturing	32629	229	220	197	177
Non-metallic mineral product manufacturing	327				
Clay product and refractory manufacturing	3271	55	57	57	63
Glass and glass product manufacturing	3272	236	229	218	206
Cement manufacturing	32731	166	156	155	161
Ready-mix concrete manufacturing	32732	291	285	264	276
Other concrete product manufacturing	32739	136	125	126	119
Abrasive product manufacturing	32791	29	28	27	32
All other non-metallic mineral product manufacturing	32799	151	140	118	116
Primary metal manufacturing	331				
Iron and steel mills and ferro-alloy manufacturing	3311	953	895	790	810
Iron and steel pipes and tubes manufacturing from					
purchased steel	33121	269	241	227	211
Foundries	3315	278	291	248	215
Web for the formula to the state of the formula form					
Fabricated metal product manufacturing	332				
Cutlery and hand tool manufacturing	3322	47	45	38	41
Plate work and fabricated structural product manufacturing	33231	433	434	392	386
Power boiler and heat exchanger manufacturing	33241	114	152	101	125
Spring and wire product manufacturing	3326	111	111	105	97
Coating, engraving, heat treating and allied activities	3328	242	230	203	188
Other fabricated metal product manufacturing	3329	253	260	237	230
Machinery manufacturing	333				
Agricultural implement manufacturing	33311	154	166	129	152
	33311	134	100	129	152
Ventilation, heating, air-conditioning and commercial	0004	000	212	187	177
refrigeration equipment manufacturing	3334	229			177
All other general-purpose machinery manufacturing	33399	191	157	134	133
Computer and electronic product manufacturing	334				
Computer and peripheral equipment manufacturing	3341	247	407	298	256
Communications equipment manufacturing	3342	405	525	380	345
Audio and video equipment manufacturing	3343	19	17	14	14
	0040	10	17	17	11
Electrical equipment, appliance and component manufacturing	335				
Lighting fixture manufacturing	33512	76	77	70	68
Small electrical appliance manufacturing	33521	25	24	20	19
Major appliance manufacturing	33522	131	118	109	113
Battery manufacturing	33591	13	14	12	12
Communication and energy wire and cable manufacturing	33592	109	112	97	91
All other electrical equipment and component manufacturing	33599	65	74	67	65
To a second state of the second state sta	000				
Transportation equipment manufacturing	336	5 404	F 000	4.070	0.450
Motor vehicle manufacturing	3361	5,464	5,362	4,370	3,456
Motor vehicle parts manufacturing	3363	3,014	2,799	2,525	1,883
Aerospace product and parts manufacturing	3364	952	855	843	850
Railroad rolling stock manufacturing	3365	194	235	156	149
Ship and boat building	3366	69	63	64	76
Furniture and related product manufacturing Household and institutional furniture and kitchen cabinet	337				
	2271	000	COF	E 67	E00
manufacturing Office furniture (including fixturee) manufacturing	3371	626	625	567	523
Office furniture (including fixtures) manufacturing	3372	356	373	357	340
Miscellaneous manufacturing	339				
Medical equipment and supplies manufacturing	3391	125	127	106	111
Other miscellaneous manufacturing	3399	385	362	353	345
	~~~~	500	002	000	0-10

#### Shipments for selected industries, unadjusted - continued

		Previo	ous year	Year-to-d	late	Annual	
	NAICS Code	October 2002	September 2002	% Change from 2002	2003	% Change from 2001	2002
				\$ million	ns		
Food manufacturing	311						
Animal food manufacturing	3111	487	442	-3.4	4,330	6.1	5,392
Starch and vegetable fat and oil manufacturing	31122	263	250	11.8	2,599	3.3	2,811
Sugar and confectionery product manufacturing	3113	398	366	8.9	3,421	1.4	3,846
Fruit and vegetable preserving and specialty food manufacturing	3114	541	556	-4.1	4,722	-1.7	5,923
Dairy product manufacturing	3115	857	816	13.2	9,262	1.2	9,887
Meat product manufacturing	3116	1,451	1,421	-5.7	13,862	-6.6	17,674
Cookie, cracker and pasta manufacturing Other food manufacturing	31182 3119	131 523	130 504	-4.7 7.4	1,124 5,051	-7.7 11.9	1,425 5,723
	312	020	001		0,001	11.0	0,720
Beverage and tobacco product manufacturing Soft drink and ice manufacturing	31211	296	308	6.2	3,268	5.2	3,688
Breweries	31211	356	336	-0.4	3,200	2.0	4,103
Wineries	31213	68	54	-1.6	464	11.8	585
Distilleries	31214	133	115	-12.2	889	9.1	1,265
Tobacco manufacturing	3122	252	350	4.7	3,182	1.3	3,663
Textile mills	313						
Fibre, yarn and thread mills	3131	40	44	-17.3	329	-5.0	465
Fabric mills	3132	176	178	-8.2	1,610	-3.2	2,067
Textile and fabric finishing and fabric coating	3133	62	60	-13.1	503	-4.1	678
Textile product mills	314						
Carpet and rug mills	31411	81	75	-6.7	698	-3.6	890
Textile bag and canvas mills	31491	34	32	-31.0	259	7.2	429
Clothing manufacturing	315						
Hosiery and sock mills	31511	52	42	-3.2	400	0.4	511
Other clothing knitting mills	31519	71	58	12.9	463	0.1	519
Men's and boys' cut and sew clothing manufacturing	31522	232	219	-9.4	1,762	-4.9	2,360
Women's and girls' cut and sew clothing manufacturing	31523	204	207	-7.7	1,781	-3.7	2,221
Clothing accessories and other clothing manufacturing	3159	27	22	-2.0	200	-4.0	242
Leather and allied product manufacturing Footwear manufacturing	<b>316</b> 3162	62	75	-13.2	376	-5.8	518
Wood product manufacturing	321						
Sawmills and wood preservation	3211	1,492	1,383	-15.6	12,861	4.4	17,697
Veneer, plywood and engineered wood product manufacturing	3211	573	537	14.4	6,016	6.1	6,230
Other wood product manufacturing	3219	557	510	9.1	5,058	18.2	5,571
Paper manufacturing	322						
Pulp, paper and paperboard mills	3221	2,050	2,025	-5.7	18,462	-6.8	23,505
Paperboard container manufacturing	32221	486	458	9.5	4,458	3.4	4,914
Paper bag and coated and treated paper manufacturing	32222	187	188	-6.6	1,749	3.0	2,212
Other converted paper product manufacturing	32229	148	141	0.9	1,351	0.6	1,610
Printing and related support activities	323						
Printing	32311	871	801	0.5	7,967	-1.4	9,557
Support activities for printing	32312	50	36	-0.2	414	-37.0	504
Petroleum and coal products manufacturing	324						
Petroleum refineries	32411	2,869	2,749	16.1	27,604	0.8	29,276
Chemical manufacturing	325						
Other basic inorganic chemical manufacturing	32518	243	233	5.8	2,387	6.8	2,726
Other basic organic chemical manufacturing	32519	224	187	5.8	2,172	1.8	2,521
Resin, synthetic rubber, and artificial and synthetic fibres and	2050	EE A	F 40	0.0	E 177	0.0	6 970
filaments manufacturing Pesticide and other agricultural chemical manufacturing	3252 32532	554 4	548 6	2.0 32.2	5,477 432	0.6 -13.4	6,379 341
Pharmaceutical and medicine manufacturing	32532	4 728	775	32.2 5.2	432 7,153	-13.4 22.0	8,402
Paint and coating manufacturing	32551	159	156	2.4	1,674	-1.4	1,875
Adhesive manufacturing	32552	55	52	6.4	578	12.2	624
Soap and cleaning compound manufacturing	32561	138	128	-8.5	1,174	-7.5	1,516
Toilet preparation manufacturing	32562	157	126	9.6	1,529	3.2	1,663
Printing ink manufacturing	32591	40	37	1.4	356	13.3	419
All other chemical product manufacturing	32599	389	340	2.6	3,514	2.6	4,104
					-,		.,

#### Shipments for selected industries, unadjusted - continued

		Previo	us year	Year-to-c	late	Annual	
	NAICS Code	October 2002	September 2002	% Change from 2002	2003	% Change from 2001	2002
				\$ millio	ns		
Plastics and rubber products manufacturing	326						
Plastic pipe, pipe fitting and unsupported profile shape							
manufacturing	32612	172	162	5.8	1,597	4.2	1,758
Polystyrene foam product manufacturing	32614	30	29	10.8	302	3.8	321
Other plastic product manufacturing	32619	842	801	1.1	8,087	8.6	9,435
Other rubber product manufacturing	32629	225	210	-0.3	2,046	0.0	2,409
Non-metallic mineral product manufacturing	327						
Clay product and refractory manufacturing	3271	61	54	8.8	565	5.0	613
Glass and glass product manufacturing	3272	225	219	3.6	2,111	6.2	2,396
Cement manufacturing	32731	158	151	0.8	1,237	5.7	1,425
Ready-mix concrete manufacturing	32732	271	252	4.6	2,081	9.1	2,337
Other concrete product manufacturing	32739	122	125	5.7	992	1.3	1,127
Abrasive product manufacturing	32791	43	38	-7.0	338	36.5	450
All other non-metallic mineral product manufacturing	32799	140	132	11.6	1,209	28.8	1,314
Primary metal manufacturing	331						
Iron and steel mills and ferro-alloy manufacturing	3311	935	894	3.0	8,945	11.3	10,368
Iron and steel pipes and tubes manufacturing from							
purchased steel	33121	224	209	12.8	2,359	1.4	2,529
Foundries	3315	296	271	1.6	2,709	8.7	3,161
Fabricated metal product manufacturing	332						
Cutlery and hand tool manufacturing	3322	46	37	15.5	438	6.3	467
Plate work and fabricated structural product manufacturing	33231	411	394	-1.0	3,587	0.4	4,286
Power boiler and heat exchanger manufacturing	33241	98	107	34.7	1,143	7.6	1,022
Spring and wire product manufacturing	3326	139	130	-10.3	1,125	9.8	1,477
Coating, engraving, heat treating and allied activities	3328	258	236	0.1	2,213	20.0	2,633
Other fabricated metal product manufacturing	3329	280	268	-2.9	2,492	9.5	3,005
Mashinawa manufasturing	222						
Machinery manufacturing Agricultural implement manufacturing	<b>333</b> 33311	182	173	-14.1	1,726	6.1	2,323
Ventilation, heating, air-conditioning and commercial	33311	102	175	-14.1	1,720	0.1	2,323
refrigeration equipment manufacturing	3334	223	197	-3.3	1,870	9.7	2,298
All other general-purpose machinery manufacturing	33399	270	201	-24.5	1,456	15.4	2,275
		2.0	201	2.110	1,100		2,270
Computer and electronic product manufacturing	334		070		0.005	10.0	4 000
Computer and peripheral equipment manufacturing	3341	316	378	-24.0	3,035	-16.6	4,699
Communications equipment manufacturing	3342	550	651	-29.5	4,216	-23.7	7,137
Audio and video equipment manufacturing	3343	21	17	-8.2	160	-7.2	218
Electrical equipment, appliance and component manufacturing	335						
Lighting fixture manufacturing	33512	82	76	-6.6	689	-3.7	877
Small electrical appliance manufacturing	33521	28	22	0.8	206	-9.3	250
Major appliance manufacturing	33522	130	125	-4.3	1,243	12.4	1,529
Battery manufacturing	33591	12	11	6.4	122	-15.1	139
Communication and energy wire and cable manufacturing	33592	118	119	-20.6	987	-42.2	1,436
All other electrical equipment and component manufacturing	33599	66	68	3.6	668	-2.3	772
Transportation equipment manufacturing	336						
Motor vehicle manufacturing	3361	6,065	5,587	-4.8	53,206	5.7	65,797
Motor vehicle parts manufacturing	3363	2,989	2,830	-4.1	26,645	10.2	32,741
Aerospace product and parts manufacturing	3364	1,099	1,072	-6.9	9,532	-15.0	12,472
Railroad rolling stock manufacturing	3365	253	272	-3.8	2,289	5.4	2,878
Ship and boat building	3366	70	65	-26.3	824	20.6	1,242
Furniture and related product manufacturing	337						
Household and institutional furniture and kitchen cabinet							
manufacturing	3371	650	576	-3.6	5,814	7.7	7,133
Office furniture (including fixtures) manufacturing	3372	420	391	3.8	3,730	-6.0	4,319
Miscellaneous manufacturing	339						
Medical equipment and supplies manufacturing	3391	130	122	-3.9	1,156	5.3	1,432

#### Inventory owned for selected industries, unadjusted

			Current per	riods	
	NAICS Code	October 2003	September 2003	August 2003	July 2003
			\$ millior	15	
Food manufacturing	311				
Animal food manufacturing	3111	273	277	279	286
Starch and vegetable fat and oil manufacturing	31122	209	169	151	173
Sugar and confectionery product manufacturing	3113	353	370	388	387
Fruit and vegetable preserving and specialty food manufacturing	3114	988	955	881	831
Dairy product manufacturing	3115	788	791	780	801
Meat product manufacturing	3116	822	812	803	791
Cookie, cracker and pasta manufacturing Other food manufacturing	31182 3119	120 505	121 517	123 509	123 498
•		000	017	000	400
Beverage and tobacco product manufacturing Soft drink and ice manufacturing	<b>312</b> 31211	241	249	257	273
Breweries	31212	172	169	176	177
Wineries	31213	237	223	212	217
Distilleries	31214	445	473	497	516
Tobacco manufacturing	3122	631	578	570	569
Tentile mille	040				
Textile mills	313	50	47	50	E A
Fibre, yarn and thread mills Fabric mills	3131 3132	50 312	47 321	50 328	54 336
Textile and fabric finishing and fabric coating	3133	63	67	67	530 67
· ·		00	01	01	01
Textile product mills	314		0.5		
Carpet and rug mills	31411	81	85	82	83
Textile bag and canvas mills	31491	42	44	45	44
Clothing manufacturing	315				
Hosiery and sock mills	31511	152	156	157	155
Other clothing knitting mills	31519	110	119	124	132
Men's and boys' cut and sew clothing manufacturing	31522	399	423	391	418
Women's and girls' cut and sew clothing manufacturing Clothing accessories and other clothing manufacturing	31523 3159	334 79	360 82	373 83	363 81
		15	02	00	01
Leather and allied product manufacturing Footwear manufacturing	<b>316</b> 3162	77	86	102	114
·	321				
Wood product manufacturing Sawmills and wood preservation	3211	2,359	2,475	2,511	2,672
Veneer, plywood and engineered wood product manufacturing	3212	624	623	629	2,072
Other wood product manufacturing	3219	860	847	819	854
Paper manufacturing Pulp, paper and paperboard mills	<b>322</b> 3221	2,448	2,425	2,470	2,496
Paperboard container manufacturing	32221	541	541	535	2,490
Paper bag and coated and treated paper manufacturing	32222	262	272	272	278
Other converted paper product manufacturing	32229	144	144	146	152
Printing and related support activities	<b>323</b> 32311	693	694	708	714
Printing Support activities for printing	32312	8	8	708	714 8
		0	0	0	0
Petroleum and coal products manufacturing	324	1 000	4 055	4 400	
Petroleum refineries	32411	1,236	1,255	1,432	1,475
Chemical manufacturing	325				
Other basic inorganic chemical manufacturing	32518	222	190	191	192
Other basic organic chemical manufacturing	32519	153	160	150	158
Resin, synthetic rubber, and artificial and synthetic fibres and	0050		5.40		
filaments manufacturing	3252	561	549	545	574
Pesticide and other agricultural chemical manufacturing	32532	116	118	125	119
Pharmaceutical and medicine manufacturing Paint and coating manufacturing	3254 32551	2,987 251	2,850 250	3,159 259	2,971 261
Adhesive manufacturing	32552	87	250	259 87	201
Soap and cleaning compound manufacturing	32561	97	98	103	107
Toilet preparation manufacturing	32562	178	185	193	192
Printing ink manufacturing	32591	50	53	55	57
All other chemical product manufacturing	32599	292	296	295	304
	02000	202	200	200	004

#### Inventory owned for selected industries, unadjusted - continued

			Current per	riods	
	NAICS Code	October 2003	September 2003	August 2003	July 2003
			\$ millior	IS	
Plastics and rubber products manufacturing	326				
Plastic pipe, pipe fitting and unsupported profile shape	00010	100	100	010	010
manufacturing	32612	190	198	210	218
Polystyrene foam product manufacturing	32614	38	38	38	35
Other plastic product manufacturing Other rubber product manufacturing	32619 32629	878 170	856 168	869 173	866 181
	32029	170	100	175	101
Non-metallic mineral product manufacturing	327				
Clay product and refractory manufacturing	3271	74	76	81	85
Glass and glass product manufacturing	3272	271	275	274	277
Cement manufacturing	32731	137	146	153	172
Ready-mix concrete manufacturing	32732	108	100	102	104
Other concrete product manufacturing	32739	97	99	100	99
Abrasive product manufacturing	32791	111	113	116	121
All other non-metallic mineral product manufacturing	32799	140	143	145	145
Primary metal manufacturing	331				
Iron and steel mills and ferro-alloy manufacturing	3311	1,919	1,921	1,994	2,011
Iron and steel pipes and tubes manufacturing from					
purchased steel	33121	543	549	547	581
Foundries	3315	267	254	265	279
Fabricated metal product manufacturing	332				
Cutlery and hand tool manufacturing	3322	78	77	78	75
Plate work and fabricated structural product manufacturing	33231	440	461	479	479
Power boiler and heat exchanger manufacturing	33241	151	149	164	155
Spring and wire product manufacturing	3326	117	116	125	135
Coating, engraving, heat treating and allied activities	3328	149	151	162	153
Other fabricated metal product manufacturing	3329	546	555	560	569
		0.10			000
Machinery manufacturing	333	500	500	400	404
Agricultural implement manufacturing Ventilation, heating, air-conditioning and commercial	33311	522	500	489	484
	2224	345	349	262	260
refrigeration equipment manufacturing All other general-purpose machinery manufacturing	3334 33399	420	443	363 435	369 428
An other general-purpose machinery manufacturing	33333	420	440	435	420
Computer and electronic product manufacturing	334				
Computer and peripheral equipment manufacturing	3341	560	554	548	539
Communications equipment manufacturing	3342	2,024	1,989	2,023	2,031
Audio and video equipment manufacturing	3343	52	52	52	50
Electrical equipment, appliance and component manufacturing	335				
Lighting fixture manufacturing	33512	129	131	131	133
Small electrical appliance manufacturing	33521	53	50	48	48
Major appliance manufacturing	33522	174	164	168	162
Battery manufacturing	33591	79	78	71	69
Communication and energy wire and cable manufacturing	33592	245	247	263	265
All other electrical equipment and component manufacturing	33599	109	108	110	109
	336				
Transportation equipment manufacturing Motor vehicle manufacturing	3361	1,214	1,297	1,210	1,229
Motor vehicle parts manufacturing	3363	1,869	1,869	1,837	1,225
Aerospace product and parts manufacturing	3364	7,424	7,829	7,938	7,840
Railroad rolling stock manufacturing	3365	1,047	1,076	1,100	1,131
Ship and boat building	3366	133	124	109	110
Furniture and related product manufacturing	337				
Household and institutional furniture and kitchen cabinet manufacturing	3371	786	794	793	803
Office furniture (including fixtures) manufacturing	3371	400	794 401	408	409
		400	401	400	409
Miscellaneous manufacturing	339		170	100	
Medical equipment and supplies manufacturing	3391	179	179	183	182
Other miscellaneous manufacturing	3399	813	815	792	813

#### Inventory owned for selected industries, unadjusted - continued

		Previous year Year-to-o		date	Average per mo	onth	
	NAICS Code	October 2002	September 2002	% Change from 2002	Average 2003	% Change from 2001	2002
				\$ millio	ns		
Food manufacturing	311						
Animal food manufacturing	3111	265	270	4.1	274	7.2	263
Starch and vegetable fat and oil manufacturing	31122	197	182	5.6	192	6.5	189
Sugar and confectionery product manufacturing	3113	375	358	1.5	364	-1.3	359
Fruit and vegetable preserving and specialty food manufacturing	3114	988	945	4.3	884	7.6	868
Dairy product manufacturing	3115	748	726	6.3	791	5.3	748
Meat product manufacturing	3116	843	855	-8.0	820	-1.6	884
Cookie, cracker and pasta manufacturing	31182	126	113	10.9	125	-1.9	115
Other food manufacturing	3119	489	505	0.4	488	4.4	482
Beverage and tobacco product manufacturing Soft drink and ice manufacturing	<b>312</b> 31211	265	271	-0.5	255	13.8	253
Breweries	31212	179	173	2.5	172	10.2	168
Wineries	31212	224	207	6.9	221	12.6	209
Distilleries	31214	522	521	5.2	506	12.0	484
Tobacco manufacturing	3122	562	520	-1.1	601	-6.2	602
		002	020			0.2	002
Textile mills	313	FC	50	11.0	50	00.0	50
Fibre, yarn and thread mills	3131	56	53	-11.0	52	-22.3	58
Fabric mills Textile and fabric finishing and fabric coating	3132 3133	343 63	344 65	-11.8 14.4	331 68	-7.1 -7.4	368 60
· ·		03	05	14.4	00	-7.4	00
Textile product mills	314	0.4	0.4	0.0	0.4	0.1.0	0.1
Carpet and rug mills	31411	84	84	2.6	84	-21.6	81
Textile bag and canvas mills	31491	66	69	-31.8	47	5.1	67
Clothing manufacturing	315						
Hosiery and sock mills	31511	142	144	8.7	149	-0.7	136
Other clothing knitting mills	31519	102	107	13.3	119	0.2	103
Men's and boys' cut and sew clothing manufacturing	31522	368	382	10.8	409	-19.9	369
Women's and girls' cut and sew clothing manufacturing Clothing accessories and other clothing manufacturing	31523 3159	338 64	356 66	-2.1 17.1	344 75	-7.8 -14.6	351 64
		04	00	17.1	75	-14.0	04
Leather and allied product manufacturing Footwear manufacturing	<b>316</b> 3162	89	98	-4.9	90	-10.9	92
Wood product manufacturing	321						
Sawmills and wood preservation	3211	2,717	2,736	-3.0	2,949	-9.8	2,996
Veneer, plywood and engineered wood product manufacturing	3212	636	617	7.2	699	-4.4	652
Other wood product manufacturing	3219	804	819	9.8	869	7.2	801
Paper manufacturing	322						
Pulp, paper and paperboard mills	3221	2,525	2,493	-2.4	2,499	-8.5	2,549
Paperboard container manufacturing	32221	490	511	5.6	546	-5.0	514
Paper bag and coated and treated paper manufacturing	32222	252	247	8.9	274	2.2	254
Other converted paper product manufacturing	32229	149	149	1.7	150	-3.8	147
Printing and related support activities	323						
Printing	32311	705	689	-0.3	689	-4.4	688
Support activities for printing	32312	15	15	-38.9	9	-42.6	14
Petroleum and coal products manufacturing	324						
Petroleum refineries	32411	1,286	1,374	0.8	1,357	-12.4	1,322
Chemical manufacturing	325						
Other basic inorganic chemical manufacturing	32518	169	170	2.9	191	-4.3	184
Other basic organic chemical manufacturing	32519	152	143	9.6	158	-23.8	146
Resin, synthetic rubber, and artificial and synthetic fibres and							
filaments manufacturing	3252	531	518	9.0	571	-18.9	525
Pesticide and other agricultural chemical manufacturing	32532	107	111	-11.9	120	-20.3	133
Pharmaceutical and medicine manufacturing	3254	2,808	2,737	17.1	3,065	32.8	2,665
Paint and coating manufacturing	32551	238	256	2.8	259	-9.1	249
Adhesive manufacturing	32552	79	81	8.0	88	15.5	81
Soap and cleaning compound manufacturing	32561	106	113	-21.7	105	-11.8	129
Toilet preparation manufacturing	32562	177	176	19.0	188	-6.8	162
Printing ink manufacturing All other chemical product manufacturing	32591 32599	49 329	50 334	4.4	52 310	-4.2	50 312
An other enernical product manufacturing	97999	329	004	-0.5	310	-0.9	312

#### Inventory owned for selected industries, unadjusted - concluded

		Previo	us year	Year-to-date		Average per mo	onth
	NAICS Code	October 2002	September 2002	% Change from 2002	Average 2003	% Change from 2001	2002
				ns			
Plastics and rubber products manufacturing	326						
Plastic pipe, pipe fitting and unsupported profile shape							
manufacturing	32612	222	226	-1.3	219	-6.3	223
Polystyrene foam product manufacturing	32614	32	32	22.1	38	1.6	31
Other plastic product manufacturing	32619	856	856	7.0	896	7.8	848
Other rubber product manufacturing	32629	185	183	-3.2	183	-7.2	189
Non-metallic mineral product manufacturing	327						
Clay product and refractory manufacturing	3271	85	87	-3.0	86	-12.2	89
Glass and glass product manufacturing	3272	256	267	0.7	276	2.8	272
Cement manufacturing	32731	152	157	-6.3	179	-1.9	187
Ready-mix concrete manufacturing	32732	95	97	-2.9	99	-8.6	102
Other concrete product manufacturing	32739	73	78	13.2	93	1.3	82
Abrasive product manufacturing	32791	155	161	-18.5	125	32.0	151
All other non-metallic mineral product manufacturing	32799	143	147	3.2	145	0.9	141
Primary metal manufacturing	331						
Iron and steel mills and ferro-alloy manufacturing	3311	2,251	2,181	2.7	2,053	-1.1	2,050
Iron and steel pipes and tubes manufacturing from							
purchased steel	33121	611	552	11.8	587	6.7	543
Foundries	3315	287	278	0.1	286	1.0	287
Fabricated metal product manufacturing	332						
Cutlery and hand tool manufacturing	3322	85	87	-1.0	82	9.3	83
Plate work and fabricated structural product manufacturing	33231	449	456	3.5	466	2.9	448
Power boiler and heat exchanger manufacturing	33241	157	150	16.0	170	2.5	148
Spring and wire product manufacturing	3326	160	160	-8.1	141	-7.4	154
Coating, engraving, heat treating and allied activities	3328	168	165	2.3	159	16.4	156
Other fabricated metal product manufacturing	3329	551	544	1.9	560	3.6	548
Machinery manufacturing	333	500	510	0.5	504	1 5	F10
Agricultural implement manufacturing	33311	522	510	3.5	524	1.5	510
Ventilation, heating, air-conditioning and commercial refrigeration equipment manufacturing	3334	342	348	0.8	352	6.8	345
All other general-purpose machinery manufacturing	33399	342	413	11.9	401	12.2	343
	00000	557	415	11.5	401	12.2	303
Computer and electronic product manufacturing	334						
Computer and peripheral equipment manufacturing	3341	591	568	-6.5	569	-42.7	607
Communications equipment manufacturing	3342	2,243	2,208	-14.8	2,108	-19.6	2,447
Audio and video equipment manufacturing	3343	60	55	8.1	54	-10.6	51
Electrical equipment, appliance and component manufacturing	335						
Lighting fixture manufacturing	33512	157	158	-15.6	137	-2.7	160
Small electrical appliance manufacturing	33521	46	47	14.7	49	-19.2	43
Major appliance manufacturing	33522	161	156	9.9	176	10.6	160
Battery manufacturing	33591	65	69	-5.5	68	44.2	70
Communication and energy wire and cable manufacturing	33592	284	283	-9.1	267	-42.2	291
All other electrical equipment and component manufacturing	33599	114	106	-3.9	108	-24.2	111
Transportation equipment manufacturing	336						
Motor vehicle manufacturing	3361	1,677	1,797	-17.5	1,418	2.9	1,730
Motor vehicle parts manufacturing	3363	1,768	1,728	10.4	1,918	3.9	1,762
Aerospace product and parts manufacturing	3364	7,853	8,050	0.6	7,819	0.3	7,817
Railroad rolling stock manufacturing	3365	1,414	1,391	-11.1	1,170	-14.0	1,338
Ship and boat building	3366	134	126	-16.2	123	-35.7	145
Furniture and related product manufacturing	337						
Household and institutional furniture and kitchen cabinet	0074	705			010	07	770
manufacturing Office functions (including finture) and fortuning	3371	795	814	7.1	819	9.7	772
Office furniture (including fixtures) manufacturing	3372	413	410	5.3	417	-11.1	398
Miscellaneous manufacturing	339						
Medical equipment and supplies manufacturing	3391	177	179	-3.3	176	-5.8	180
Other miscellaneous manufacturing	3399	921	937	-2.3	853	5.4	879

#### Inventories owned by stage of fabrication

		Unadju	sted	
Period covered	Raw materials	Goods in process	Finished products	Total inventories
October 2002	27,379	15,975	18,942	62.295
November 2002	27,237	16,282	19,610	63,129
December 2002	27,600	15,742	19,047	62,389
January 2003	27,863	15,527	19,210	62,601
February 2003	28,300	15,874	19,806	63,980
March 2003	28,431	15,820	20,261	64,512
April 2003	27,952	16,165	20,478	64,595
May 2003	27,058	16,224	20,385	63,666
June 2003	26,529	15,841	19,923	62,293
July 2003	26,620	15,470	19,333	61,423
August 2003	26,526	15,543	18,877	60,947
September 2003	25,884	15,270	18,772	59,925
October 2003	25,995	14,960	18,521	59,476
		11,000	10,021	
		Seasonally	adjusted	
	Raw	Goods in	Finished	Total
	materials	process	products	inventories
October 2002	07.450	15.010	10.017	CO 500
November 2002	27,450	15,913	19,217	62,580
December 2002	27,331	16,014	19,643	62,989
January 2003	27,591	15,943	19,626	63,161
February 2003	27,471 27,661	15,952	19,506 19,730	62,929 63,307
March 2003		15,917		
April 2003	27,779	15,774	19,815	63,368
•	27,726	16,150	20,023	63,898
May 2003	27,388	15,978	19,991	63,358
June 2003	27,085	15,773	19,777	62,635
July 2003	26,948	15,661	19,476	62,085
August 2003	26,705	15,381	18,999	61,085
September 2003	26,227	15,193	18,900	60,320
October 2003	26,147	14,911	18,872	59,930

#### Shipments by major group and province, unadjusted

	Current year					
Province	October 2003	September 2003	August 2003	July 2003		
		\$ m	illions			
Fotal Newfoundland and Labrador	195	229	237	277		
rince Edward Island	123	134	114	127		
ova Scotia	773	756	758	743		
ew Brunswick uebec	1,059 10,527	1,153 10,528	1,168 10,016	1,081 9,391		
ntario	24,282	23,891	20,797	19,679		
lanitoba	1,056	1,029	919	942		
askatchewan	680 3,801	646 3,659	596	611		
lberta ritish Columbia	2,829	3,059 2,935	3,640 2,872	3,529 2,921		
11 Food manufacturing						
ewfoundland and Labrador	54	79	93	125		
rince Edward Island	87	95	78	91		
ova Scotia ew Brunswick	209 212	205 224	203 168	192 171		
uebec	1,294	1,234	1,205	1,161		
ntario	2,358	2,212	2,063	2,114		
lanitoba	283	253	245	247		
askatchewan	169	159	151	155		
lberta ritish Columbia	791 374	716 382	747 395	698 405		
12 Beverage and tobacco product manufacturing	00	10	05	00		
lova Scotia luebec	22 346	19 364	25 396	29 409		
ntario	558	547	580	620		
askatchewan	5	5	6	7		
ritish Columbia	83	82	99	103		
13 Textile mills	140	162	157	11/		
uebec ntario	148 74	72	62	114 60		
14 Textile product mills	0.4	00	04	75		
luebec Intario	84 88	80 81	81 74	75 81		
lberta	3	3	3	3		
ritish Columbia	9	8	9	10		
15 Clothing manufacturing uebec	320	329	337	286		
Intario	178	163	148	137		
lanitoba	46	44	37	30		
askatchewan Iberta	3 9	2 6	2 6	2 7		
ritish Columbia	26	25	25	25		
16 Leather and allied product manufacturing	40	64	FC	0.4		
luebec Intario	48 19	64 19	56 17	24 15		
21 Wood product manufacturing	50	50	40	50		
ova Scotia uebec	53 746	50 708	48 678	50 541		
ntario	513	503	465	484		
lanitoba	58	58	52	50		
askatchewan	65	58	51	46		
Alberta British Columbia	247 791	242	225 798	220 810		
British Columbia	/91	835	190	010		

		Curre	ent year			
Province	October 2003	September 2003	August 2003	July 2003		
		\$ millions				
322 Paper manufacturing						
Nova Scotia	73	70	76	79		
Quebec Ontario	904 809	913 799	909 773	908 780		
Alberta	135	121	142	130		
British Columbia	390	443	425	419		
323 Printing and related support activities						
Quebec	259	238	227	219		
Ontario Manitoba	468 38	471 38	391 33	407 34		
Saskatchewan		11		34 10		
Alberta	56	58	51	45		
British Columbia	48	51	58	42		
324 Petroleum and coal products manufacturing						
Quebec	628	626	689	649		
Ontario	949	910	886	875		
Alberta British Columbia	641 64	706 62	765 66	715 69		
	04	02	00	03		
325 Chemical manufacturing Quebec	723	722	685	719		
Ontario	1,786	1,799	1,568	1,689		
Manitoba	63	75	38	45		
Saskatchewan	44	45	19	42		
Alberta	625	517	525	520		
British Columbia	95	88	115	106		
326 Plastics and rubber products manufacturing	07	0.1	0.4	0.0		
Nova Scotia Quebec	97 515	94 483	84 448	88 427		
Intario	1,244	1,198	1,055	1,087		
Manitoba	48	45	43	43		
Saskatchewan	9	9	9	10		
Alberta	101	102	111	97		
British Columbia	103	101	99	115		
327 Non-metallic mineral product manufacturing	10	10	10	10		
Nova Scotia Quebec	16 301	16 300	16 295	19 270		
Ontario	577	550	510	535		
Saskatchewan	13	14	12	15		
Alberta	150	149	145	157		
British Columbia	134	135	128	132		
331 Primary metal manufacturing	1 000	1 100	1.015	1 010		
Quebec Ontario	1,090 1,470	1,109 1,403	1,015 1,195	1,019 1,184		
Alberta	102	77	79	79		
332 Fabricated metal product manufacturing						
Newfoundland and Labrador	16	17	18	15		
Prince Edward Island	2	2	2	2		
Nova Scotia	30	29	37	30		
New Brunswick	26	26	26	25		
Quebec Ontario	542 1,467	509 1,463	468 1,258	434 1,241		
Manitoba	74	71	75	68		
Saskatchewan	45	42	41	40		
Ouskatonewan						
Alberta British Columbia	295 152	315 164	273 132	285 137		

	Current year					
Province	October 2003	September 2003	August 2003	July 2003		
333 Machinery manufacturing						
Quebec	375	437	344	325		
Ontario Manitoba	1,031 73	1,013 78	808 67	968 92		
Saskatchewan	52	49	44	41		
Alberta	283	257	219	230		
British Columbia	164	149	144	138		
334 Computer and electronic product manufacturing						
Quebec	428	566	416	355		
Ontario	883 10	1,078 9	847 9	764 8		
Saskatchewan Alberta	82	9 116	9 71	8 73		
British Columbia	65	78	65	67		
335 Electrical equipment, appliance and component manufacturing						
Quebec	269	273	244	234		
Ontario	389	435	350	361		
Manitoba	14	14	10	10 12		
Saskatchewan Alberta	15 41	13 46	13 39	41		
British Columbia	29	30	30	30		
336 Transportation equipment manufacturing						
Nova Scotia	59	56	48	41		
Quebec	1,044	942	922	862		
Ontario Manitoba	8,662 131	8,403 131	7,041 115	5,555 119		
Saskatchewan	26	24	22	27		
Alberta	78	68	68	65		
British Columbia	79	76	83	90		
337 Furniture and related product manufacturing						
Quebec	293	290	284	233		
Ontario Manitoba	556 68	587 63	533 58	521 59		
Saskatchewan	6	7	7	8		
Alberta	67	66	62	59		
British Columbia	46	49	46	47		
339 Miscellaneous manufacturing						
Newfoundland and Labrador	1	1	1	1		
Quebec Ontario	171 203	179 184	162 171	124 200		
Manitoba	10	7	6	10		
Saskatchewan	4	4	4	4		
Alberta	35	33	38	31		
British Columbia	63	59	56	64		

	Previou	Previous year		ate	Annual	
	October 2002	September 2002	% Change from 2002	2003	% Change from 2001	2002
			\$ millio	ons		
Total Newfoundland and Labrador Prince Edward Island Nova Scotia	185 128 832	182 122 787	6.8 0.5 2.3	1,997 1,117 7,331	1.3 9.5 1.3	2,234 1,316 8,646
New Brunswick Quebec Ontario Manitoba	1,162 11,145 25,338 1,021	1,134 10,739 24,052 978	3.2 -2.2 -1.6 1.2	10,909 99,683 229,495 9,746	3.1 0.9 3.4 0.6	12,632 122,059 277,581 11,538
Askatchewan Alberta British Columbia	635 3,793 2,944	613 3,669 2,870	3.2 6.0 -2.6	6,315 35,958 28,086	1.3 -3.4 0.4	7,239 40,966 34,236
<b>311 Food manufacturing</b> Newfoundland and Labrador Prince Edward Island Nova Scotia New Brunswick Quebec	70 93 218 182 1,232	65 87 214 199 1,166	-11.1 -1.3 -0.4 -5.5 4.9	693 787 1,830 1,645 11,733	10.3 8.0 2.2 4.6 1.4	891 952 2,234 2,004 13,573
Ontario Manitoba Saskatchewan Alberta British Columbia	2,246 261 164 771 377	2,146 246 159 773 364	2.0 0.5 4.4 -1.8 4.2	21,190 2,515 1,564 7,427 3,694	-0.1 4.3 3.3 -1.0 3.4	25,085 3,023 1,825 9,055 4,270
312 Beverage and tobacco product manufacturing Nova Scotia	18	16	15.0	203	1.5	213
Quebec Ditario Saskatchewan British Columbia	317 570 4 84	361 586 4 83	-38.3 3.6	3,486 5,433 52 845	5.7 2.6 -7.8 9.1	4,093 6,514 92 990
<b>313 Textile mills</b> Quebec	182	182	-11.9	1,548	-2.6	2,069
Ontario	76	78	-12.3	686	-5.3	912
<b>314 Textile product mills</b> Quebec Ontario Alberta British Columbia	97 98 3 14	90 95 2 13	-8.1 -10.8 7.4 -32.6	791 864 25 86	-2.1 3.8 -14.4 4.0	1,020 1,138 28 153
315 Clothing manufacturing		10	02.0	00		100
Quebec Ontario Manitoba Saskatchewan Alberta	388 200 45 3 8	360 181 46 2 5	-8.3 -13.1 -2.6 11.5 -4.9	3,070 1,457 302 19 67	-7.4 6.6 13.1 -5.6 -6.8	3,937 2,020 376 22 89
British Columbia 316 Leather and allied product manufacturing	27	24	1.7	228	-15.8	263
Quebec Ontario	51 22	66 21	-8.6 -20.1	335 146	-18.8 11.9	430 225
<b>321 Wood product manufacturing</b> Nova Scotia Quebec Ontario Manitoba	50 713 508 48	46 648 478 47	0.3 1.4 -3.1 7.4	451 6,539 4,646 455	10.1 11.9 7.7 -13.5	530 7,637 5,622 501
Saskatchewan Alberta British Columbia	47 198 906	42 187 839	30.2 4.5 -15.0	457 2,010 7,916	39.0 2.8 4.8	430 2,265 10,830

	Previou	ıs year	Year-to-da	ate	Annual		
	October 2002	September 2002	% Change from 2002	2003	% Change from 2001	2002	
		\$ millions					
322 Paper manufacturing							
Nova Scotia	85	82	2.9	747	-17.9	881	
Quebec Ontario	1,085 885	1,048 842	-6.1 -4.8	9,183 8,061	-2.7 -3.6	11,729 10,091	
Alberta	142	131	1.2	1,291	4.0	1,553	
British Columbia	400	415	6.7	4,214	-11.7	4,790	
323 Printing and related support activities							
Quebec Ontario	246 488	232 432	1.9 -1.4	2,324 4,372	-11.3 2.0	2,749 5,351	
Manitoba	400	38	-4.2	349	-6.4	436	
Saskatchewan	12	11	8.0	96	6.1	106	
Alberta	53	51	1.1	486	-5.4	574	
British Columbia	51	47	-11.2	457	-10.7	608	
324 Petroleum and coal products manufacturing Quebec	724	659	17.7	6,502	6.7	6,845	
Ontario	943	943	13.2	9,031	-2.9	0,845 9,861	
Alberta	781	744	15.3	7,100	1.0	7,491	
British Columbia	65	63	0.1	642	-4.8	754	
325 Chemical manufacturing							
Quebec Ontario	743 1,820	753 1,690	-0.1 5.4	7,278 17,655	6.8 7.8	8,711 20,076	
Manitoba	54	52	21.5	613	-12.6	20,070	
Saskatchewan	49	24	19.8	612	-10.8	562	
Alberta	606	530	12.8	5,909	-6.7	6,456	
British Columbia	98	91	16.1	1,040	7.1	1,076	
326 Plastics and rubber products manufacturing Nova Scotia	106	102	-8.2	888	6.9	1,141	
Quebec	493	458	4.9	4,616	10.7	5,208	
Ontario	1,208	1,143	-0.3	11,660	6.9	13,805	
Manitoba	45	45	1.9	439	7.5	508	
Saskatchewan Alberta	10 101	9 95	9.6 3.5	92 903	5.4 -4.0	98 1,023	
British Columbia	90	82	11.7	957	-3.1	1,008	
327 Non-metallic mineral product manufacturing							
Nova Scotia	18	15	-1.8	134	1.2	162	
Quebec Ontario	290 549	283 518	5.1 6.7	2,442 4,698	10.8 4.9	2,701 5,264	
Saskatchewan	12	14	-6.2	96	-8.2	113	
Alberta	161	158	-1.5	1,254	24.1	1,510	
British Columbia	130	129	6.3	1,223	17.0	1,357	
331 Primary metal manufacturing Quebec	1,149	1,021	0.7	10,614	7 0	12,712	
Ontario	1,149	1,021	-0.7 3.1	13,792	7.8 11.9	16,003	
Alberta	84	77	14.7	853	-10.7	896	
332 Fabricated metal product manufacturing							
Newfoundland and Labrador	9	7	84.8	132	-15.5	88	
Prince Edward Island Nova Scotia	3 30	2 25	-3.6	20	-1.5 17.2	25 264	
Nova Scotta New Brunswick	30 28	25	17.3 -3.5	251 220	-5.7	264 268	
Quebec	524	517	-1.3	4,443	1.8	5,329	
Ontario	1,491	1,425	-3.2	13,294	4.7	16,165	
Manitoba Saskatchewan	62 38	66 39	19.8 7.7	696 383	-2.0 -6.5	707 416	
Alberta	246	266	24.9	2,709	-0.5	2,637	
British Columbia	138	136	0.7	1,375	2.2	1,609	

	Previou	ıs year	Year-to-da	ite	Annual	
	October 2002	September 2002	% Change from 2002	2003	% Change from 2001	2002
			\$ million	ns		
333 Machinery manufacturing						
Quebec	386	482	-4.2	3,678	0.2	4,587
Ontario	1,217	1,124	-9.7	9,830	4.1	12,943
Manitoba	80	71	-9.7	803	9.4	1,042
Saskatchewan	55	54	-11.7	504	7.4	662
Alberta	251	241	0.1	2,409	-14.5	2,872
British Columbia	156	138	11.3	1,427	8.7	1,594
334 Computer and electronic product manufacturing						
Quebec	576	650	-19.3	4,450	-18.1	6,588
Ontario	929	997	-12.5	8,746	-13.9	11,900
Saskatchewan	8	8	7.9	84	12.7	94
Alberta	108	130	-26.5	827	-29.9	1,392
British Columbia	78	103	-8.9	659	-17.7	879
335 Electrical equipment, appliance and component manufacturing						
Quebec	261	259	0.0	2,473	10.6	2,930
Ontario	443	449	-8.1	4,021	-12.2	5,210
Manitoba	17	15	-20.7	122	-14.7	183
Saskatchewan	14	15	-34.3	122	-45.0	208
Alberta British Columbia	35 29	29 28	31.8 6.2	358 301	9.5 -32.9	328 345
	29	20	0.2	301	-32.9	545
336 Transportation equipment manufacturing		50	00 I		<b>2</b> 2 <b>-</b>	
Nova Scotia	64	58	-28.1	551	29.7	862
Quebec	1,196	1,052	-14.0	10,090	-7.0	14,134
Ontario	9,349 133	8,750 130	-3.3 2.7	82,286	6.5 0.2	100,483
Manitoba Saskatchewan	31	27	-11.2	1,367 264	21.7	1,603 349
Alberta	61	75	10.9	730	0.5	785
British Columbia	79	105	-18.8	911	-4.9	1,283
				011		1,200
337 Furniture and related product manufacturing	202	0.01	2.0	0 700	11 /	2 202
Quebec Ontario	303 621	281 554	-2.0 0.6	2,729 5,602	11.4 -2.2	3,293 6,629
Manitoba	69	66	-2.7	607	11.3	743
Saskatchewan	7	6	-9.3	69	3.3	89
Alberta	79	74	-7.8	645	-3.9	838
British Columbia	49	43	5.4	456	14.4	525
230 Miscallanaous manufacturing						
339 Miscellaneous manufacturing Newfoundland and Labrador	1	2	-36.7	11	22.1	18
Quebec	188	170	-6.6	1,359	11.3	1,785
Ontario	200	193	5.1	2,025	6.8	2,284
Manitoba	9	9	-14.1	77	-11.0	107
Saskatchewan	4	4	8.7	40	-2.0	44
Alberta	47	42	-10.3	330	7.8	440
British Columbia	61	56	5.6	524	15.0	606

# Survey documentation

- About the Monthly Survey of Manufacturing
- Concepts and definitions
- Survey Design and Methodology
- Data Quality

### About the Monthly Survey of Manufacturing

The statistics contained in this publication are based on information obtained through a sample survey of 11,000 representative manufacturing establishments across Canada. The Monthly Survey of Manufacturers started in 1947 and although its content has remained essentially the same, it underwent a major redesign with respect to the frame in 1999.

The values (in Canadian dollars) of shipments, inventories and orders are used as indicators of the economic condition of manufacturing industries; as inputs to Canada's Gross Domestic Product; as two components in the Statistics Canada composite indicator; as input to macro- and microeconomic studies and in econometric models (e.g. to determine market share, apparent domestic availability, etc.).

Since 1999, Statistics Canada's Business Register provides the sampling frame for the Monthly Survey of Manufacturing (MSM). The target population for the MSM consists of all statistical establishments on the business register that are classified to the manufacturing sector. The sampling frame for the MSM is determined from the target population after subtracting establishments that represent the bottom 2% of the total manufacturing shipments estimate for each province. These establishments are excluded from the frame so that the sample size can be reduced without significantly affecting quality.

## **Concepts and Definitions**

The Monthly Survey of Manufacturing (MSM) publishes statistical series for manufacturers – shipments, inventories, unfilled orders and new orders. The values of these characteristics represent current monthly estimates of the more complete Annual Survey of Manufactures (ASM) data.

The MSM is a sample survey of approximately 11,000 Canadian manufacturing establishments, which are categorized into over 200 industries. Industries are classified according to the 1997 North American Industrial Classification System (NAICS), which replaced the 1980 Standard Industrial Classification (SIC) system. Reference year 2000 is the last year for which data are released on a SIC basis. The MSM adopted the NAICS for its 2001 reference, while previous years' data have been re-calculated to the new classification system back to 1992. Seasonally adjusted series are available for the main aggregates. An establishment comprises the smallest manufacturing unit capable of reporting the variables of interest. Data collected by the MSM provides a current 'snapshot' of shipment values by the Canadian manufacturing sector, enabling analysis of the state of the Canadian economy, as well as the health of specific industries in the short- to medium-term. The information is used by both private and public sectors including Statistics Canada, federal and provincial governments, business and trade entities, international and domestic nongovernmental organizations, consultants, the business press and private citizens. The data are used for analyzing market share, trends, corporate benchmarking, policy analysis, program development, tax policy and trade policy.

#### 1. Shipments

Shipments are defined as the value of goods manufactured by establishments that have been shipped to a customer. Shipments exclude any wholesaling activity, and any revenues from the rental of equipment or the sale of electricity. Note that in practice, some respondents report financial trans-actions rather than payments for work done. Shipments are available by 3-digit NAICS, broken down by province.

For the aerospace product and parts, and shipbuilding industries, the value of production is used instead of shipments. This value is calculated by adjusting monthly shipments by the monthly change in goods in process and finished product inventories. Raw materials are not included in the calculation since production tries to measure "work done" during the month. This is done in order to reduce distortions caused by the shipment of high value items as completed sales.

#### 2. Inventories

Measurement of component values of inventory is important for economic studies as well as for derivation of production values. Respondents are asked to report their book values (at cost), of raw materials, any goods in process, and finished product inventories separate-ly. In some cases, respondents estimate a total inventory figure, which is allocated on the basis of proportions reported on the ASM. Inventory levels are calculated on a Canadawide basis, not by province.

#### 3. Orders

#### a) Unfilled Orders

Unfilled orders represent a backlog or stock of orders that will generate future shipments assuming that they are not cancelled. As with inventories, unfilled orders and new orders levels are calculated on a Canadawide basis, not by province.

The MSM produces estimates for unfilled orders for all industries except for those industries where orders are customarily filled from stocks on hand and order books are not gen-erally maintained. In the case of the aircraft companies, options to purchase are not treated as orders until they are entered into the account-ing system.

#### b) New Orders

New orders represent current demand for manufactured products. Estimates of new orders are derived from shipments and unfilled orders data. All shipments within a month result from either an order received during the month or at some earlier time. New orders can be calculated as the sum of shipments adjusted for the monthly change in unfilled orders.

#### 4. Non-Durable / Durable goods

#### a) Non-durable goods industries

Non-durable goods industries include Food (NAICS 311), Beverage and Tobacco Products (312), Textile Mills (313), Textile Product Mills (314), Leather and Allied Products (316), Paper (322), Printing and Related Support Activities (323), Petroleum and Coal Products (324), Chemicals (325) and Plastic and Rubber Products (326)

#### b) Durable goods industries

Durable goods industries include Clothing (NAICS 315), Wood Products (321), Non-Metallic Mineral Products (327), Primary Metals (331), Fabricated Metal Products (332), Machinery (333), Computer and Electronic Products (334), Electrical Equipment, Appliance and Components (335), Transportation Equipment (336), Furniture and Related Products (337) and Miscellaneous Manufacturing (339).

#### Survey Design and Methodology

Beginning with the August 1999 reference month, the Monthly Survey of Manufacturing (MSM) has undergone an extensive redesign.

#### Concept Review

It was decided that before any redesign work could begin the basic concepts and definitions of the program would be confirmed.

This was done in two ways: First, a review of user requirements was initiated. This involved revisiting an internal report to ensure that the user requirements from that exercise were being satisfied. As well, another round of internal review with the major users in the National Accounts was undertaken. This was to specifically focus on any data gaps that could be identified.

Secondly, with these gaps or requirements in hand, a survey was conducted in order to ascertain respondent's ability to report existing and new data. The study was also to confirm that respondents understood the definitions, which were being asked by survey analysts.

The result of the concept review was a reduction of the number of questions for the survey from sixteen to seven. Most of the questions that were dropped had to do with the reporting of shipments for work that was partially completed.

#### Methodology

The new sample design incorporates the 1997 North American Industrial Classification Standard (NAICS) and gives a much higher profile to provincial estimates. Stratification is done by province with equal quality requirements for each province. Large size units are selected with certainty and small units are selected with a probability based on the desired quality of the estimate within a cell.

The opportunity was also taken at this time to allow for the introduction of sample rotation into the survey design. Most of the smaller companies who are asked to participate in the survey will do so only for a set period.

The estimation system generates estimates using the NAICS. The estimates will also continue to be reconciled to the ASM. Provincial estimates for all variables will be produced. A measure of quality (CV) will also be produced.

#### **Components of the Redesigned Survey**

#### **Target Population and Sampling Frame**

Statistics Canada's business register provides the sampling frame for the MSM. The target population for the MSM consists of all statistical establishments on the business register that are classified to the manufacturing sector (by NAICS). The sampling frame for the MSM is determined from the target population after subtracting establishments that represent the bottom 2% of the total manufacturing shipments estimate for each province. These establishments were excluded from the frame so that the sample size could be reduced without significantly affecting quality.

#### The Sample

The MSM sample is a probability sample comprised of approximately 11,000 establishments.

Prior to selection, the sampling frame is subdivided into industry-province cells. For the most part, NAICS codes were used. Depending upon the number of establishments within each cell, further subdivisions were made to group similar sized establishments' together (called stratum). An establishment's size was based on its most recently available annual shipments or sales value.

Each industry by province cell has a 'take-all' stratum composed of establishments sampled each month with certainty. This 'take-all' stratum is composed of establishments that are the largest statistical enterprises, and have the largest impact on estimates within a particular industry by province cell. These large statistical enterprises comprise 45% of the national manufacturing shipment estimates.

Each industry - province cell can have at most three 'takesome' strata. Not all establishments within these stratums need to be sampled with certainty. A random sample is drawn from the remaining strata. The responses from these sampled establishments are weighted according to the inverse of their probability of selection. The initial sample was selected in late 1998 and has been refreshed each month by including a sample of new entrants in the frame.

#### **Data Collection**

Data collection, data capture, preliminary edit and follow-up of non-respondents are all performed in Statistics Canada regional offices. Sampled establishments are contacted by mail or telephone according to the preference of the respondent. Data capture and preliminary editing are performed simultaneously to ensure the validity of the data.

In some cases, combined reports are received from enterprises or companies with more than one establishment in the sample where respondents prefer not to provide individual establishment reports. Businesses, which do not report or whose reports contain errors, are followed up immediately.

### **Data Quality**

#### **Statistical Edit and Imputation**

Data are analyzed within each industry-province cell. Extreme values are listed for inspection by the magnitude of the deviation from average behavior. Respondents are contacted to verify extreme values. Records that fail statistical edits are considered outliers and are not used for imputation.

Values are imputed for the non-responses, for establishments that do not report or only partially complete the survey form. A number of imputation methods are used depending on the variable requiring treatment. Methods include using industryprovince cell trends, historical responses, or reference to the ASM. Following imputation, the MSM staff performs a final verification of the responses that have been imputed.

#### Revisions

In conjunction with preliminary estimates for the current month, estimates for the previous three months are revised to account for any late returns. Data are revised when late responses are received or if an incorrect response was reported earlier.

#### Estimation

Estimates are calculated by multiplying an estimation weight to an establishment's reported responses. The estimation weight is the inverse of the sampled establishment's probability of selection. Take all units are self-representative.

#### Benchmarking

The MSM is periodically benchmarked to the most recent results of the Annual Survey of Manufactures (approximately eighteen months after the end of the reference year). Benchmarking is a process designed to calibrate the monthly estimates to the level of the more complete Annual Survey of Manufacturers. The result is that the two surveys have consistent totals at the aggregated level. The MSM estimates were benchmarked to the 1998 ASM with the release of the January 2001 reference month.

#### Sampling and Non-sampling Errors

The statistics in this publication are estimates derived from a sample survey and, as such, can be subject to errors. The following material is provided to assist the reader in the interpretation of the estimates published.

Estimates derived from a sample survey are subject to a number of different kinds of errors. These errors can be broken down into two major types: sampling and nonsampling.

#### 1. Sampling Errors

Sampling errors are an inherent risk of sample surveys. They result from the difference between the value of a variable if it is randomly sampled and its value if a census is taken (or the average of all possible random values). These errors are present because observations are made only on a sample and not on the entire population.

The sampling error depends on factors such as the size of the sample, variability in the population, sampling design and method of estimation. For example, for a given sample size, the sampling error will depend on the stratification procedure employed, allocation of the sample, choice of the sampling units and method of selection. (Further, even for the same sampling design, we can make different calculations to arrive at the most efficient estimation procedure.) The most important feature of probability sampling is that the sampling error can be measured from the sample itself.

#### 2. Non-sampling Errors

Non-sampling errors result from a systematic flaw in the structure of the data-collection procedure or design of any or all variables examined. They create a difference between the value of a variable obtained by sampling or census methods and the variable's true value. These errors are present whether a sample or a complete census of the population is taken. Non-sampling errors can be attributed to one or more of the following sources:

a) Coverage error: This error can result from incomplete listing and inadequate coverage of the population of interest.

**b)** Data response error: This error may be due to questionnaire design, the characteristics of a question, inability or unwillingness of the respondent to provide correct information, misinterpretation of the questions or definitional problems.

c) Non-response error: Some respondents may refuse to answer questions, some may be unable to respond, and others may be too late in responding. Data for the non-responding units can be imputed using the data from responding units or some earlier data on the non-responding units if available.

The extent of error due to imputation is usually unknown and is very much dependent on any characteristic differences between the respondent group and the non-respondent group in the survey. This error generally decreases with increases in the response rate and attempts are therefore made to obtain as high a response rate as possible. d) Processing error: These errors may occur at various stages of processing such as coding, data entry, verification, editing, weighting, and tabulation, etc. Non-sampling errors are difficult to measure. More important, non-sampling errors require control at the level at which their presence does not impair the use and interpretation of the results.

Measures have been undertaken to minimize the nonsampling errors. For example, units have been defined in a most precise manner and the most up-to-date listings have been used. Questionnaires have been carefully designed to minimize different interpretations. As well, detailed acceptance testing has been carried out for the different stages of editing and processing and every possible effort has been made to reduce the non-response rate as well as the response burden.

#### Measures of Sampling and Non-sampling Errors

#### 1. Sampling Error Measures

The sample used in this survey is one of a large number of all possible samples of the same size that could have been selected using the same sample design under the same general conditions. If it was possible that each one of these samples could be surveyed under essentially the same conditions, with an estimate calculated from each sample, it would be expected that the sample estimates would differ from each other.

The average estimate derived from all these possible sample estimates is termed the expected value. The expected value can also be expressed as the value that would be obtained if a census enumeration were taken under identical conditions of collection and processing. An estimate calculated from a sample survey is said to be precise if it is near the expected value.

Sample estimates may differ from this expected value of the estimates. However, since the estimate is based on a probability sample, the variability of the sample estimate with respect to its expected value can be measured. The variance of an estimate is a measure of the precision of the sample estimate and is defined as the average, over all possible samples, of the squared difference of the estimate from its expected value.

The standard error is a measure of precision in absolute terms. The coefficient of variation, defined as the standard error divided by the sample estimate, is a measure of precision in relative terms. For comparison purposes, one may more readily compare the sampling error of one estimate to the sampling error of another estimate by using the coefficient of variation.

In this publication, the coefficient of variation is used to measure the sampling error of the estimates. However, since the coefficient of variation published for this survey is calculated from the responses of individual units, it also measures some non-sampling error. The formula used to calculate the published coefficients of variation (CV) in Table 1 is:

$$CV(X) = \frac{S(X)}{X}$$

where X denotes the estimate and S(X) denotes the standard error of X.

In this publication, the coefficient of variation is expressed as a percentage.

Confidence intervals can be constructed around the estimate using the estimate and the coefficient of variation. Thus, for our sample, it is possible to state with a given level of confidence that the expected value will fall within the confidence interval constructed around the estimate. For example, if an estimate of \$12,000,000 has a coefficient of variation of 10%, the standard error will be \$1,200,000 or the estimate multiplied by the coefficient of variation. It can then be stated with 68% confidence that the expected value will fall within the interval whose length equals the standard deviation about the estimate, i.e., between \$10,800,000 and \$13,200,000. Alternatively, it can be stated with 95% confidence that the expected value will fall within the interval whose length equals two standard deviations about the estimate, i.e., between \$9,600,000 and \$14,400,000.

The table below contains the national level CVs, expressed as a percentage, for all manufacturing for the MSM characteristics. For CVs at other aggregate levels, contact the Marketing and Dissemination Section at (613) 951-9497, toll free: 1-866-873-8789 or by e-mail at *manufact@statcan.ca.* 

#### National Level CVs by Characteristic

Month	Shipments	Raw Material Inven- tories	Goods in Process Inven- tories	Finished Product Inven- tories	Unfilled Orders
			%		
October 2002 November 2002 December 2002 January 2003 February 2003 March 2003 April 2003 May 2003 Jule 2003 July 2003	0.53 0.50 0.54 0.52 0.52 0.52 0.54 0.55 0.56 0.61 0.54	0.93 0.91 0.92 0.89 0.92 0.91 0.95 0.97 1.02 1.08	0.72 0.72 0.74 0.75 0.73 0.76 0.78 0.73 0.69 0.70 0.70	1.33 1.25 1.20 1.25 1.26 1.28 1.29 1.36 1.46 1.42	1.86 1.85 1.82 1.81 1.78 1.75 1.68 1.60 1.55 1.51 1.62
September 2003 October 2003		1.14 1.22	0.75 0.81	1.49 1.49	2.03 2.02

#### 2. Non-sampling Error Measures

The exact population value is aimed at or desired by both a sample survey as well as a census. We say the estimate is accurate if it is near this value. Although this value is desired, we cannot assume that the exact value of every unit in the population or sample can be obtained and processed without error. Any difference between the expected value and the exact population value is termed the bias. Systematic biases in the data cannot be measured by the probability measures of sampling error as previously described. The accuracy of a survey estimate is determined by the joint effect of sampling and non-sampling errors.

Three sources of non-sampling error in the MSM are nonresponse error, imputation error and the error due to editing. To assist users in evaluating these errors, weighted rates that are related to these three types of error are given in Table 2. The following is an example of what is meant by a weighted rate. A cell with a sample of 20 units in which five respond for a particular month would have a response rate of 25%. If these five reporting units represented \$8 million out of a total estimate of \$10 million, the weighted response rate would be 80%.

The definitions of the three weighted rates noted in Table 2 follow. The weighted response rate is the proportion of a characteristic's total estimate that is based upon reported data (excluding data that has been edited). The weighted imputation rate is the proportion of a characteristic's total estimate that is based upon imputed data. The weighted editing rate is the proportion of a characteristic's total estimate that is based upon data that was edited (edited data may have been originally reported or imputed).

The table below contains the three types of weighted rates for each of the characteristics at the national level for all of manufacturing. In the table, the rates (expressed as percentages) are averages over the last thirteen months.

#### Average National Weighted Rates by Characteristic

Characteristic	Response	Response Imputation		
		%		
Shipments Raw Materials Goods in Process Finished Products Unfilled Orders	92.09 82.87 71.55 78.76 86.06	4.92 13.53 10.57 14.18 6.85	2.99 3.60 17.89 7.06 7.10	

#### Joint Interpretation of Measures of Error

The measure of non-response error as well as the coefficient of variation must be considered jointly to have an overview of the quality of the estimates. The lower the coefficient of variation and the higher the weighted response rate, the better will be the published estimate.

#### Seasonal Adjustment

Economic time series contain the elements essential to the description, explanation and forecasting of the behavior of an economic phenomenon. They are statistical records of

the evolution of economic processes through time. In using time series to observe economic activity, economists and statisticians have identified four characteristic behavioral components: the long-term movement or trend, the cycle, the seasonal variations and the irregular fluctuations. These movements are caused by various economic, climatic or institutional factors. The seasonal variations occur periodically on a more or less regular basis over the course of a year. These variations occur as a result of seasonal changes in weather, statutory holidays and other events that occur at fairly regular intervals and thus have a significant impact on the rate of economic activity.

In the interest of accurately interpreting the fundamental evolution of an economic phenomenon and producing forecasts of superior quality, Statistics Canada uses the X11ARIMA/88 seasonal adjustment method to seasonally adjust its time series. This method minimizes the impact of seasonal variations on the series and essentially consists of adding one year of estimated raw data to the end of the original series before it is seasonally adjusted per se. The estimated data are derived from forecasts using ARIMA (Auto Regressive Integrated Moving Average) models of the Box-Jenkins type.

The X-11 part of the X11ARIMA/88 program uses primarily a ratio-to-moving average method. It is used to smooth the modified series and obtain a preliminary estimate of the trendcycle. It also calculates the ratios of the original series (fitted) to the estimates of the trend-cycle and estimates the seasonal factors from these ratios. The final seasonal factors are produced only after these operations have been repeated several times.

The procedures to determine the seasonal factors necessary to calculate the final seasonally adjusted data are executed every month. This approach ensures that the estimated seasonal factors are derived from an unadjusted series that includes all the available information about the series, i.e. the current month's unadjusted data as well as the previous month's revised unadjusted data.

While seasonal adjustment permits a better understanding of the underlying trend-cycle of a series, the seasonally adjusted series still contains an irregular component. Slight month-to-month variations in the seasonally adjusted series may be simple irregular movements. To get a better idea of the underlying trend, users should examine several months of the seasonally adjusted series.

The Canada seasonally adjusted total is derived indirectly by the summation of the individually seasonally adjusted kinds of business.

#### Trend

A seasonally adjusted series may contain the effects of irregular influences and special circumstances and these can mask the trend. The short term trend shows the underlying direction in seasonally adjusted series by averaging across months, thus smoothing out the effects of irregular influences. The result is a more stable series. The trend for the last month may be, subject to significant revision as values in future months are included in the averaging process.



Manufacturing, Construction and Energy Division

### Monthly Survey of Manufacturing

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Division de la fabrication, de la construction et de l'énergie

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#### Enquête mensuelle sur les industries manufacturières

Confidential when completed

Collected under the authority of the Statistics Act, Revised Statutes of Canada, 1985, Chapter S19.

Confidentiel une fois rempli

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Renseignements recueillis en vertu de La Loi sur la statistique, Lois révisées du Canada, 1985, chapitre S19.

If you need assistance, please call telephone No. below. Si vous avez besoin d'aide, veuillez téléphoner au n° suivant.

Telephone/Téléphone:

Toll Free/Numéro sans frais:

Fax/Télécopieur:

Toll Free Fax/Télécopieur sans frais:

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Canada

Canada

#### **INFORMATION SHARING AGREEMENTS:**

To reduce response burden and to ensure more uniform statistics, Statistics Canada has entered into agreements with government departments and agencies for the sharing of data. See the second page for details of the agreements concerning this survey.

#### ENTENTES DE PARTAGE DES DONNÉES :

Pour alléger le fardeau de réponse et assurer des statistiques plus uniformes, Statistique Canada a conclu des ententes avec des ministères et organismes publics en vue d'un échange de données. Voir la deuxième page pour détails sur les accords concernant cette enquête.

Please correct name,	address and	establishment	coverage if	f necessary -	Veuillez	corriger le n	om, l'adresse	et le regrouper	nent d'établissem	ents s'il y a lieu.

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1. Shipments – Livraisons		2. Inventories – Stocks manufac	turiers		
<ul> <li>a) Goods of own manufacture Produits de propre fabrication</li> <li>b) Goods purchased for resale Produits achetés pour la revente</li> <li>TOTAL</li> </ul>	Omit cents – Omettre les cents           01           02           03           01	<ul> <li>a) Raw materials, fuel, supplies, Matières premières, combustible, fournitures</li> <li>b) Goods in Process (gross value) Produits en cours (valeur brute)</li> <li>c) Finished products of own manufacture Produits finis de propre fabrication</li> <li>d) Goods purchased for resale Produits achetés pour la revente</li> </ul>	04       05       06       07       08		
		TOTAL			
3. Orders – Commandes		4. Period – Période			
Unfilled orders at month end Commandes non remplies à la fin du mois	09	Closing date of <b>accounting period</b> covered Date de clôture de la <b>période comptable</b>	d   10   Month – Mois 	; Day	/ – Jour
Name of contact – Nom de la personne-re	essource	Tel. No. – N° de tél. Area code. Ind. rég.	Date Y-	A M	D–J
Position – Fonction					
Thank           5-3100-1054:2002-05-14 STC/MCE 310           Statistics         Statistique		n – Merci de votre collaboration	Ca	na	dä

#### **INFORMATION SHARING AGREEMENTS:**

Section 11 of the federal Statistics Act provides for the joint collection and sharing of information with provincial statistical agencies which (1) have been established under provincial legis– lation providing substantially the same provisions for confidentiality and penalties for disclosure of confidential information as the federal Statistics Act, and (2) have the provincial or territorial legislative authority to collect this information on their own. Section 11 therefore was designed to reduce response burden and to facilitate the production of consistent and high quality national and provincial statistics.

A Section 11 agreement is in effect with the Institut de la statistique du Québec with respect to establishments located within the boundaries of that province.

#### ACCORDS DE PARTAGE DES DONNÉES :

L'article 11 de la Loi fédérale sur la statistique prévoit la collecte conjointe et le partage des données avec les organismes statistiques provinciaux qui 1) ont été établis en vertu d'une loi provinciale prévoyant essentiellement le même degré de protection de la confidentialité et les mêmes sanctions relatives à la divulgation d'information confidentielle que la Loi fédérale sur la statistique, et 2) sont autorisés légalement, par leur province ou leur territoire à recueillir eux-mêmes l'information. L'article 11 vise donc à réduire le fardeau de réponse et à faciliter la production de statistiques cohérentes et de bonne qualité aux niveaux fédéral et provincial.

L'accord en vertu de l'article 11 a été conclu avec l'Institut de la statistique du Québec en ce qui a trait aux établissements situés à l'intérieur des limites de cette province.

Comments – Commentaires