

Motor Vehicle Brake System Manufacturing: 2002

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2002 Economic Census

Manufacturing

Industry Series



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U.S. Department of Commerce
Economics and Statistics Administration
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-- Not applicable for this report.

Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year ¹	Com-panies ²	All estab-lish-ments ³	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi-tures (\$1,000)	
			Number ⁴	Payroll (\$1,000)	Number ⁴	Hours (1,000)	Wages (\$1,000)					
336340, Motor vehicle brake system manufacturing	2002..	207	275	41 487	1 632 203	33 160	70 469	1 185 826	5 756 967	7 484 420	13 193 225	'568 711
	2001..	N	N	38 736	1 420 081	29 542	59 591	988 561	4 259 525	6 343 209	10 635 553	384 807
	2000..	N	N	44 331	1 610 497	34 964	66 507	1 139 154	4 766 408	7 585 631	12 201 040	455 007
	1999..	N	N	44 638	1 690 889	34 940	71 965	1 221 628	4 761 678	7 764 182	12 548 948	406 223
	1998..	N	N	45 807	1 551 511	36 800	73 136	1 130 869	4 140 406	6 906 829	11 075 700	505 226
	1997..	203	271	43 146	1 503 210	34 319	71 184	1 077 541	4 046 472	6 952 820	10 981 044	484 338

¹Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during the year.

⁴Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 2. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments ²		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
336340, Motor vehicle brake system manufacturing												
United States	-	275	159	41 487	1 632 203	33 160	70 469	1 185 826	5 756 967	7 484 420	13 193 225	'568 711
Alabama	2	5	4	956	32 200	670	1 435	19 401	82 390	110 893	194 764	'2 615
Arizona	-	7	2	150	5 370	104	168	2 250	13 581	17 007	31 437	'1 152
California	-	26	11	756	25 341	525	1 088	12 780	57 914	107 835	165 136	'3 798
Georgia	-	5	4	883	25 634	768	1 624	19 395	74 173	45 592	118 720	'8 771
Illinois	-	14	6	1 999	68 570	1 644	3 373	49 129	173 640	293 956	460 684	'7 190
Kentucky	-	15	15	3 817	140 426	3 069	8 035	95 809	560 062	508 108	1 060 572	'85 679
Massachusetts	-	6	2	254	7 463	224	517	6 195	11 235	15 601	27 752	'274
Michigan	-	33	21	5 298	251 982	4 247	9 227	194 414	1 573 694	1 465 878	3 038 962	'97 498
Missouri	1	14	11	2 243	63 177	1 770	3 233	43 562	189 311	167 050	357 137	'20 472
New York	2	10	4	367	11 539	300	600	7 806	30 688	30 923	61 681	'2 715
Ohio	-	33	24	8 944	344 416	7 505	14 729	268 095	1 053 365	1 627 913	2 679 751	'112 185
Pennsylvania	-	8	6	1 468	53 436	1 144	2 064	38 202	137 390	129 589	267 248	'11 482
South Carolina	-	8	7	4 396	217 824	3 452	9 056	166 821	734 144	895 445	1 600 477	'66 295
Tennessee	2	15	9	3 160	151 646	2 695	5 361	121 854	410 200	590 401	1 001 504	'36 846
Virginia	-	7	5	1 316	44 706	1 003	2 026	29 534	114 951	74 846	189 053	'9 419

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
336340, Motor vehicle brake system manufacturing	
Companies ¹	number.. 207
All establishments ²	number.. 275
Establishments with 1 to 19 employees	number.. 116
Establishments with 20 to 99 employees	number.. 59
Establishments with 100 employees or more	number.. 100
All employees ³	number.. 41 487
Total compensation	\$1,000.. 2 201 075
Annual payroll	\$1,000.. 1 632 203
Total fringe benefits	\$1,000.. 568 872
Production workers, average for year	number.. 33 160
Production workers on March 12	number.. 33 015
Production workers on May 12	number.. 33 455
Production workers on August 12	number.. 33 472
Production workers on November 12	number.. 32 657
Production worker hours	1,000.. 70 469
Production worker wages	\$1,000.. 1 185 826
Total cost of materials	\$1,000.. 7 484 420
Materials, parts, containers, packaging, etc., used	\$1,000.. 6 504 329
Resales	\$1,000.. 808 002
Purchased fuels	\$1,000.. 21 962
Purchased electricity	\$1,000.. 85 261
Contract work	\$1,000.. 64 866
Quantity of electricity purchased for heat and power	1,000 kWh.. 1 732 743
Quantity of electricity generated less sold for heat and power	1,000 kWh.. S
Total value of shipments	\$1,000.. 13 193 225
Primary products value of shipments	\$1,000.. 11 301 772
Secondary products value of shipments	\$1,000.. 948 748
Total miscellaneous receipts	\$1,000.. 942 705
Value of resales	\$1,000.. 898 928
Contract receipts	\$1,000.. D
Other miscellaneous receipts	\$1,000.. D
Primary products specialization ratio	percent.. 92
Value of primary products shipments made in all industries	\$1,000.. 12 119 188
Value of primary products shipments made in this industry	\$1,000.. 11 301 772
Value of primary products shipments made in other industries	\$1,000.. 817 416
Coverage ratio	percent.. 93
Value added	\$1,000.. 5 756 967
Total inventories, beginning of year	\$1,000.. 802 407
Finished goods inventories	\$1,000.. 311 573
Work-in-process inventories	\$1,000.. 114 628
Materials and supplies inventories	\$1,000.. 376 206
Total inventories, end of year	\$1,000.. 896 290
Finished goods inventories	\$1,000.. 347 051
Work-in-process inventories	\$1,000.. 127 312
Materials and supplies inventories	\$1,000.. 421 927
Gross value of depreciable assets (acquisition costs) at beginning of year	\$1,000.. ⁵ 6 643 900
Total capital expenditures (new and used)	\$1,000.. ⁵ 568 711
Buildings and other structures (new and used)	\$1,000.. ⁴ 46 331
Machinery and equipment (new and used)	\$1,000.. ⁵ 522 380
Automobiles, trucks, etc., for highway use	\$1,000.. ⁶ 6 836
Computers and peripheral data processing equipment	\$1,000.. ¹⁷ 17 907
All other expenditures for machinery and equipment	\$1,000.. ⁴ 497 637
Total retirements	\$1,000.. ⁴ 486 399
Gross value of depreciable assets at end of year	\$1,000.. ⁵ 6 726 212
Depreciation charges during year	\$1,000.. ⁴ 474 307
Total rental payments	\$1,000.. 74 354
Buildings and other structures	\$1,000.. 29 069
Machinery and equipment	\$1,000.. 45 285
Total other expenses ⁴	\$1,000.. 517 759
Response coverage ratio ⁵	percent.. 79
Repair and maintenance services of buildings and/or machinery ⁴	\$1,000.. 79 563
Communications services ⁴	\$1,000.. 6 702
Legal services ⁴	\$1,000.. 3 295
Accounting, auditing, and bookkeeping services ⁴	\$1,000.. 3 278
Advertising and promotional services ⁴	\$1,000.. 4 965
Expensed computer hardware and supplies and purchased computer services ⁴	\$1,000.. 7 525
Refuse removal (including hazardous waste) services ⁴	\$1,000.. 7 520
Management consulting and administrative services ⁴	\$1,000.. 26 583
Taxes and license fees ⁴	\$1,000.. 15 077
All other expenses ⁴	\$1,000.. 363 484

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Based on 2002 Annual Survey of Manufactures (ASM) sample data.

⁵A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 4. Industry Statistics by Employment Size: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E ¹	All establishments ²	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
336340, Motor vehicle brake system manufacturing											
All establishments	—	275	41 487	1 632 203	33 160	70 469	1 185 826	5 756 967	7 484 420	13 193 225	'568 711
Establishments with—											
1 to 4 employees	9	63	138	4 425	107	210	3 295	10 581	17 259	27 840	'806
5 to 9 employees	7	28	188	6 990	152	308	4 958	16 616	24 333	41 179	'1 016
10 to 19 employees	5	25	337	11 574	258	496	7 531	26 685	39 468	66 580	'1 616
20 to 49 employees	2	30	986	33 232	707	1 451	18 716	101 134	137 379	239 758	'14 772
50 to 99 employees	1	29	2 095	68 390	1 674	3 354	46 221	196 928	259 650	452 002	'13 394
100 to 249 employees	—	46	8 021	276 009	6 111	12 591	180 157	957 051	1 261 422	2 214 565	'71 819
250 to 499 employees	—	38	13 587	485 069	10 796	22 477	340 227	1 447 078	2 682 554	4 140 563	'238 426
500 to 999 employees	—	10	6 649	303 594	5 461	13 115	237 218	779 538	1 081 458	1 845 781	'129 750
1,000 to 2,499 employees	—	6	9 486	442 920	7 894	16 467	347 503	2 221 356	1 980 897	4 164 957	'97 112
2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—
Administrative records ⁴	9	84	388	13 412	319	640	10 205	33 591	54 959	88 550	'2 560

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 5. Industry Statistics by Primary Product Class Specialization: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments ¹	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ²	Payroll (\$1,000)	Number ²	Hours (1,000)	Wages (\$1,000)				
336340	Motor vehicle brake system manufacturing	275	41 487	1 632 203	33 160	70 469	1 185 826	5 756 967	7 484 420	13 193 225	'568 711
3363401	Motor vehicle brake parts and assemblies, new	143	37 573	1 510 421	29 908	64 172	1 094 904	5 457 699	7 125 292	12 535 047	'528 873
3363403	Motor vehicle brake parts and assemblies, rebuilt	24	2 703	81 166	2 240	4 277	60 085	211 857	224 433	435 599	'23 158

¹Includes establishments with payroll at any time during the year.

²Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. Products Statistics: 2002 and 1997

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
336340	Motor vehicle brake system manufacturing	2002.. N 1997.. N	X X	X X	12 119 188 10 381 841
3363401	Motor vehicle brake parts and assemblies, new	2002.. N 1997.. N	X X	X X	11 486 222 9 833 732
33634011	Motor vehicle brake cylinders, sold separately, new	2002.. N 1997.. N	X X	X X	348 887 315 509
3363401101	Motor vehicle wheel brake cylinders, sold separately, new	2002.. 5 1997.. 9	X X	X X	142 364 74 823
3363401104	Motor vehicle master brake cylinders, sold separately, new	2002.. 12 1997.. 13	X X	X X	206 523 240 686
33634012	Motor vehicle brake assemblies (drum) (including backing plates, shoes, linings (except asbestos), cylinders, etc.), sold together, new	2002.. N 1997.. N	X X	X X	2 800 525 1 134 743
3363401211	Motor vehicle brake assemblies (drum) (including backing plates, shoes, linings (except asbestos), cylinders, etc.), sold together, new	2002.. 26 1997.. 28	X X	X X	2 800 525 1 134 743
33634013	Motor vehicle brake assemblies (disc-caliper) (including rotors, calipers, pads (except asbestos), cylinders, etc.), sold together, new	2002.. N 1997.. N	X X	X X	2 102 614 2 150 367
3363401313	Motor vehicle brake assemblies (disc-caliper) (including rotors, calipers, pads (except asbestos), cylinders, etc.), sold together, new	2002.. 33 1997.. 26	X X	X X	2 102 614 2 150 367
33634014	Motor vehicle brake drums (with or without hub), sold separately, new	2002.. N 1997.. N	X X	X X	484 883 363 224
3363401416	Motor vehicle brake drums (with or without hub), sold separately, new	2002.. 20 1997.. 14	X X	X X	484 883 363 224
33634015	Motor vehicle brake rotors-discs (with or without hub), sold separately, new	2002.. N 1997.. N	X X	X X	1 186 852 594 435
3363401519	Motor vehicle brake rotors-discs (with or without hub), sold separately, new	2002.. 18 1997.. 15	X X	X X	1 186 852 594 435
33634016	Motor vehicle metallic or semimetallic brake linings, except asbestos, new	2002.. N 1997.. N	X X	X X	382 711 545 716
3363401625	Motor vehicle metallic or semimetallic brake linings, except asbestos, new	2002.. 13 1997.. 26	X X	X X	382 711 545 716
33634017	Other motor vehicle brake parts and assemblies, new	2002.. N 1997.. N	X X	X X	4 160 223 4 701 295
3363401707	Motor vehicle brake valves, new	2002.. 9 1997.. 12	X X	X X	D 638 445
3363401722	Motor vehicle brake shoes (with or without lining), sold separately, new	2002.. 19 1997.. 21	X X	X X	414 847 266 875
3363401737	Motor vehicle air brake power actuation units, new	2002.. 10 1997.. 7	X X	X X	232 896 226 671
3363401741	Motor vehicle hydraulic brake power actuation units, new	2002.. 11 1997.. 10	X X	X X	462 443 D
3363401744	Motor vehicle vacuum brake power actuation units, new	2002.. 4 1997.. 6	X X	X X	D D
3363401745	Automotive brake hose assemblies, new	2002.. 12 1997.. 13	X X	X X	244 862 336 541
3363401747	Other motor vehicle brake parts, new	2002.. 48 1997.. 65	X X	X X	1 832 755 2 488 043
3363401Y	Motor vehicle brake parts and assemblies, new, nsk	2002.. N 1997.. N	X X	X X	19 527 28 443
3363401YWV	Motor vehicle brake parts and assemblies, new, nsk	2002.. N 1997.. N	X X	X X	19 527 28 443
3363403	Motor vehicle brake parts and assemblies, rebuilt	2002.. N 1997.. N	X X	X X	407 363 464 353
33634031	Motor vehicle brake parts and assemblies, rebuilt	2002.. N 1997.. N	X X	X X	394 959 464 353
3363403101	Motor vehicle brake shoe assemblies (drum brake), rebuilt	2002.. 10 1997.. 14	X X	X X	78 669 94 960
3363403104	Motor vehicle brake caliper assemblies (disc brake), rebuilt	2002.. 17 1997.. 26	X X	X X	169 623 180 241
3363403107	Motor vehicle brake master cylinders, rebuilt	2002.. 2 1997.. 11	X X	X X	D 52 378
3363403111	Motor vehicle air brake power actuation units, rebuilt	2002.. 3 1997.. 6	X X	X X	D D
3363403114	Motor vehicle vacuum brake power actuation units, rebuilt	2002.. 2 1997.. 2	X X	X X	D D
3363403117	Motor vehicle hydraulic brake power actuation units, rebuilt	2002.. 2 1997.. 1	X X	X X	D D
3363403121	Other brake systems and parts, rebuilt	2002.. 9 1997.. 11	X X	X X	52 913 33 252
3363403Y	Motor vehicle brake parts and assemblies, rebuilt, nsk	2002.. N 1997.. N	X X	X X	12 404 -
3363403YWV	Motor vehicle brake parts and assemblies, rebuilt, nsk	2002.. N 1997.. N	X X	X X	12 404 -
336340W	Motor vehicle brake system manufacturing, nsk, total	2002.. N 1997.. N	X X	X X	225 603 83 756
336340WY	Motor vehicle brake system manufacturing, nsk, total	2002.. N 1997.. N	X X	X X	225 603 83 756
336340WYWW	Motor vehicle brake system manufacturing, nsk, for nonadministrative-record establishments	2002.. N 1997.. N	X X	X X	138 555 27 360
336340WYWY	Motor vehicle brake system manufacturing, nsk, for administrative-record establishments	2002.. N 1997.. N	X X	X X	87 048 56 396

See footnotes at end of table.

Table 6a. **Products Statistics: 2002 and 1997—Con.**

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6b. Product Class Shipments for Selected States: 2002 and 1997

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)	
3363401	Motor vehicle brake parts and assemblies, new		
	United States	2002.. 11 486 222 1997.. 9 833 732	
	Alabama	2002.. 188 331 1997.. 127 784	
	California	2002.. 143 755 1997.. 69 746	
	Georgia	2002.. 106 738 1997.. 48 175	
	Illinois	2002.. 422 412 1997.. 328 319	
	Kentucky	2002.. 1 105 519 1997.. 768 333	
	Michigan	2002.. 2 925 248 1997.. 2 851 622	
	Missouri	2002.. 318 643 1997.. 253 650	
	New York	2002.. 60 767 1997.. 95 760	
	Ohio	2002.. 2 418 841 1997.. 1 865 085	
	South Carolina	2002.. 946 776 1997.. N	
	Tennessee	2002.. 960 046 1997.. 604 949	
	Virginia	2002.. 187 131 1997.. 163 092	
	3363403	Motor vehicle brake parts and assemblies, rebuilt	
		United States	2002.. 407 363 1997.. 464 353
		California	2002.. 52 402 1997.. N
		Kentucky	2002.. 54 256 1997.. 24 721
		Michigan	2002.. 4 334 1997.. N
Missouri		2002.. 28 663 1997.. N	

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 7. Materials Consumed by Kind: 2002 and 1997

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
336340	Motor vehicle brake system manufacturing		
0090001	Total materials	X	6 504 779
	.....2002..	X	6 207 123
	.....1997..	X	1 189 192
33151001	Iron and steel castings (rough and semifinished)	X	935 083
	.....2002..	X	95 278
	.....1997..	X	185 700
33152005	Aluminum and aluminum-base alloy castings (rough and semifinished)	X	D
	.....2002..	X	D
	.....1997..	X	39 420
33120007	Steel bars, bar shapes, and plate (excluding castings, forgings, and fabricated metal products)	X	58 556
	.....2002..	X	43 112
	.....1997..	X	N
33120016	Steel sheet and strip (including tinplate)	X	187 853
	.....2002..	X	23 217
	.....1997..	X	
33120033	All other steel shapes and forms (excluding castings, forgings, and fabricated metal products)	X	7 941
	.....2002..	X	7 064
	.....1997..	X	
33142111	Copper and copper-base alloy shapes and forms (excluding castings, forgings, and fabricated metal products)	X	79 980
	.....2002..	X	N
	.....1997..	X	
33100038	Aluminum and aluminum-base alloy shapes and forms (excluding castings, forgings, and fabricated metal products)	X	73 605
	.....2002..	X	N
	.....1997..	X	N
33100082	Other nonferrous metal shapes and forms (excluding aluminum and aluminum-base alloy and copper and copper-base alloy castings, forgings, and fabricated metal products)	X	D
	.....2002..	X	D
	.....1997..	X	N
33299101	Ball and roller bearings (mounted or unmounted)	X	N
	.....2002..	X	N
	.....1997..	X	62 641
32610007	Fabricated plastics products (excluding gaskets, hoses, and belting)	X	N
	.....2002..	X	D
	.....1997..	X	14 132
32610013	Plastics products consumed in the form of sheets, rods, tubes, film, and other shapes	X	19 817
	.....2002..	X	24 900
	.....1997..	X	59 917
32521105	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc.	X	149 270
	.....2002..	X	23 818
	.....1997..	X	20 692
32600017	Fabricated rubber products (excluding tires, tubes, hose, belting, and gaskets)	X	24 338
	.....2002..	X	101 091
	.....1997..	X	D
32622001	Rubber and plastics hose and belting	X	D
	.....2002..	X	D
	.....1997..	X	69 037
32500023	Ceramic raw materials (including powders, chemicals, and fibers), excluding refractory uses	X	24 353
	.....2002..	X	5 309
	.....1997..	X	N
32700035	Ceramic and ceramic composite parts, components, and accessories	X	6 240
	.....2002..	X	N
	.....1997..	X	
33999103	Gaskets (all types), and packing and sealing devices	X	10 612
	.....2002..	X	10 076
	.....1997..	X	35 043
32551002	Paints, varnishes, stains, lacquers, shellacs, japans, enamels, and allied product	X	31 390
	.....2002..	X	D
	.....1997..	X	N
32552002	Glues and adhesives	X	N
	.....2002..	X	27 374
	.....1997..	X	N
00190003	Flexible packaging materials	X	N
	.....2002..	X	330 256
	.....1997..	X	112 301
32220015	Paper and paperboard containers	X	D
	.....2002..	X	N
	.....1997..	X	
33632201	Spark plugs for internal combustion engines	X	217 014
	.....2002..	X	435 159
	.....1997..	X	
33632203	Starting motors for internal combustion engines	X	177 695
	.....2002..	X	276 189
	.....1997..	X	185 216
33632206	Ignition harness and cable sets for internal combustion engines	X	N
	.....2002..	X	N
	.....1997..	X	N
33632219	All other engine electrical equipment for internal combustion engines	X	D
	.....2002..	X	D
	.....1997..	X	N
33441500	Resistors for electronic circuitry	X	D
	.....2002..	X	N
	.....1997..	X	D
33441400	Capacitors for electronic circuitry	X	N
	.....2002..	X	D
	.....1997..	X	N
33441300	Semiconductors (including transistors, diodes, rectifiers, and integrated circuits), for electronic circuitry	X	D
	.....2002..	X	N
	.....1997..	X	
001900D3	All other miscellaneous components and accessories, for electronic circuitry (excluding tubes)	X	27 374
	.....2002..	X	N
	.....1997..	X	N
00999826	Core parts purchased for use in remanufacturing and rebuilding	X	330 256
	.....2002..	X	112 301
	.....1997..	X	D
33441200	Printed circuit boards (without inserted components) for electronic circuitry	X	N
	.....2002..	X	N
	.....1997..	X	
33272203	Metal bolts, nuts, screws, washers, rivets, and other screw machine products	X	217 014
	.....2002..	X	435 159
	.....1997..	X	
33200019	Other fabricated metal products (excluding fluid power, forgings, automotive stamping and bolts, nuts, screws, rivets, washers, and screw machine products)	X	177 695
	.....2002..	X	276 189
	.....1997..	X	185 216
33210000	Forgings	X	N
	.....2002..	X	N
	.....1997..	X	
331000A1	Insulated wire and cable (excluding magnet wire)	X	16 448
	.....2002..	X	N
	.....1997..	X	N
33100097	Magnet wire	X	D
	.....2002..	X	N
	.....1997..	X	N
33361200	Mechanical speed changers, gears, and industrial high-speed drives	X	D
	.....2002..	X	N
	.....1997..	X	
33399601	Fluid power pumps, motors, and hydrostatic transmissions (hydraulic and pneumatic)	X	12 092
	.....2002..	X	D
	.....1997..	X	D
33291207	Fluid power valves (hydraulic and pneumatic)	X	17 091
	.....2002..	X	D
	.....1997..	X	D
33399501	Fluid power cylinders and rotary actuators (hydraulic and pneumatic)	X	40 912
	.....2002..	X	D
	.....1997..	X	
33291203	Fluid power hose and tube fittings and assemblies (hydraulic and pneumatic)	X	31 411
	.....2002..	X	D
	.....1997..	X	D
33399901	Fluid power filters (hydraulic and pneumatic)	X	D
	.....2002..	X	D
	.....1997..	X	D
00190087	Other transportation related fluid power products, hydraulic and pneumatic	X	976
	.....2002..	X	N
	.....1997..	X	

See footnotes at end of table.

Table 7. Materials Consumed by Kind: 2002 and 1997—Con.

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
336340	Motor vehicle brake system manufacturing—Con.		
33637000	Automotive stampings (including body parts, hubcaps, fenders, etc.)	X	388 480
	.....2002..	X	303 036
	.....1997..	X	
33593101	Current-carrying wiring devices	X	7 256
	.....2002..	X	N
	.....1997..	X	
32500046	Other chemicals and allied products	X	104 890
	.....2002..	X	N
	.....1997..	X	
00970099	All other materials and components, parts, containers, and supplies	X	1 603 639
	.....2002..	X	2 401 710
	.....1997..	X	
00971000	Materials, ingredients, containers, and supplies, nsk	X	1 031 841
	.....2002..	X	482 033
	.....1997..	X	

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.