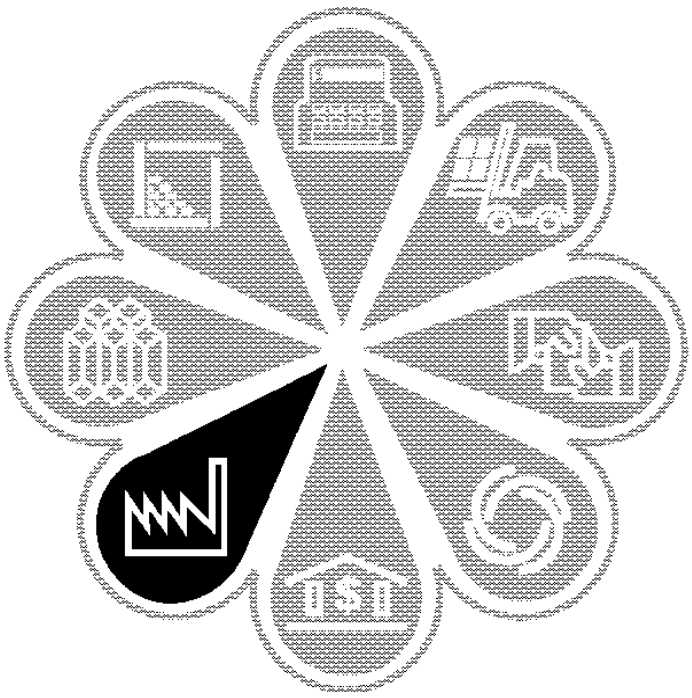
1992 Census of Manufactures

MC92-I-37A

INDUSTRY SERIES

Motor Vehicles and Equipment

Industries 3711, 3713, 3714, 3715, and 3716



U.S. Department of Commerce
Economics and Statistics Administration
BUREAU OF THE CENSUS

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U.S. Department of Commerce
Ronald H. Brown, Secretary
David J. Barram, Deputy Secretary

Economics and Statistics Administration
Everett M. Ehrlich, Under Secretary
for Economic Affairs

BUREAU OF THE CENSUS
Martha Farnsworth Riche, Director

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Manufacturing and Construction Division prepared this report. **David W. Cartwright**, Assistant Chief for Census and Related Programs, was responsible for the overall planning, management, and coordination of the census of manufactures. Planning and implementation were under the direction of **Bruce M. Goldhirsch,** Chief, Electrical and Transportation Branch, assisted by **Raphael S. Corrado**, Section Chief, with primary staff assistance by **Richard A. Keach.**

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If you have any questions concerning the statistics in this report, call 301-457-4817.

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Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product, input/ output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions.

Policymaking agencies of the Federal Government use the data, especially in monitoring economic activity and providing assistance to business.

State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.

Trade associations study trends in their own and competing industries and keep their members informed of market changes.

Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

AUTHORITY AND SCOPE

Title 13 of the United States Code (sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7. The 1992 Economic Census consists of the following eight censuses:

- Census of Retail Trade
- Census of Wholesale Trade
- Census of Service Industries
- Census of Financial, Insurance, and Real Estate Industries
- Census of Transportation, Communications, and Utilities
- Census of Manufactures
- Census of Mineral Industries
- Census of Construction Industries

Special programs also cover enterprise statistics and minority-owned and women-owned businesses. (The 1992 Census of Agriculture and 1992 Census of Governments are conducted separately.) The next economic census is scheduled to be taken in 1998 covering the year 1997.

AVAILABILITY OF THE DATA

The results of the economic census are available in printed reports for sale by the U.S. Government Printing Office and on compact discs for sale by the Census Bureau. Order forms for all types of products are available on request from Customer Services, Bureau of the Census, Washington, DC 20233-8300. A more complete description of publications being issued from this census is on the inside back cover of this document.

Census facts are also widely disseminated by trade associations, business journals, and newspapers. Volumes containing census statistics are available in most major public and college libraries. Finally, State data centers in every State as well as business and industry data centers in many States also supply economic census statistics.

WHAT'S NEW IN 1992

The 1992 Economic Census covers more of the economy than any previous census. New for 1992 are data on communications, utilities, financial, insurance, and real estate, as well as coverage of more transportation industries. The economic, agriculture, and governments censuses now collectively cover nearly 98 percent of all economic activity.

Among other changes, new 1992 definitions affect the boundaries of about a third of all metropolitan areas. Also, the Survey of Women-Owned Businesses has now been expanded to include all corporations.

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1963, 1958, and 1954. Prior to that time, the individual subcomponents of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for 1840 and subsequent censuses to include mining and some commercial activities. In 1902, Congress established a permanent Census Bureau and directed that a census of manufactures be taken every 5 years. The 1905 Manufactures Census was the first time a census was taken apart from the regular every-10-year population census.

The first census of business was taken in 1930, covering 1929. Initially it covered retail and wholesale trade and construction industries, but it was broadened in 1933 to include some of the service trades.

The 1954 Economic Census was the first census to be fully integrated—providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires. The Enterprise Statistics Program, which publishes combined data from the economic census, was made possible with the implementation of the integrated census program in 1954.

The range of industries covered in the economic censuses has continued to expand. The census of construction industries began on a regular basis in 1967, and the scope of service industries was broadened in 1967, 1977, and 1987. The census of transportation began in 1963 as a set of surveys covering travel, transportation of commodities, and trucks, but expanded in 1987 to cover business establishments in several transportation industries. For 1992, these statistics are incorporated into a broadened census of transportation, communications, and utilities. Also new for 1992 is the census of financial, insurance, and real estate industries. This is part of a gradual expansion in coverage of industries previously subjected to government regulation.

The Survey of Minority-Owned Business Enterprises was first conducted as a special project in 1969 and was incorporated into the economic census in 1972 along with the Survey of Women-Owned Businesses.

An economic census has also been taken in Puerto Rico since 1909, in the Virgin Islands of the United States and Guam since 1958, and in the Commonwealth of the Northern Mariana Islands since 1982.

Statistical reports from the 1987 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census data published since 1967 are still available for sale on microfiche from the Census Bureau.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

While the census provides complete enumerations every 5 years, there are many needs for more frequent data as well. The Census Bureau conducts a number of monthly, quarterly, and annual surveys, with the results appearing in publication series such as Current Business Reports (retail and wholesale trade and service industries), the Annual Survey of Manufactures, Current Industrial Reports, and the Quarterly Financial Report. Most of these surveys, while providing more frequent observations, yield less kind-of-business and geographic detail than the census. The County Business Patterns program offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1992 Economic Census and Related Statistics*. More information on the methodology, procedures, and history of the census will be published in the *History of the 1992 Economic Census*. Contact Customer Services for information on availability.

Census of Manufactures

GENERAL

This report, from the 1992 Census of Manufactures, is one of a series of 83 industry reports, each of which provides statistics for individual industries or groups of related industries. Additional separate reports will be issued for each State and the District of Columbia and for special subjects such as manufacturers' shipments to the federal government and concentration ratios in manufacturing.

The industry reports include such statistics as number of establishments, employment, payroll, value added by manufacture, cost of materials consumed, capital expenditures, product shipments, etc.

State reports present similar statistics for each State and its important metropolitan areas (MA's), counties, and places. Selected statistical totals for ''all manufacturing'' have been shown in the State reports for MA's with 250 employees or more and for counties and places with 500 employees or more.

The *General Summary* report contains industry, product class, and geographic area statistics summarized in one report. The introduction to the *General Summary* discusses, at greater length, many of the subjects described in this introduction. For example, the *General Summary* text discusses the relationship of value added by manufacture to national income by industry of origin, the changes in statistical concepts over the history of the censuses, and the valuation problems arising from intracompany transfers between manufacturing plants of a company and between manufacturing plants and sales offices and sales branches of a company.

SCOPE OF CENSUS AND DEFINITION OF MANUFACTURING

The 1992 Census of Manufactures covers all establishments with one paid employee or more primarily engaged in manufacturing as defined in the *1987 Standard Industrial Classification (SIC) Manual*[1] This is the system of industrial classification developed by experts on classification in Government and private industry under the guidance of the Office of Information and Regulatory Affairs, Office of Management and Budget. This classification system is used by Government agencies as well as many organizations outside the Government.

The SIC Manual defines manufacturing as the mechanical or chemical transformation of substances or materials into new products. The assembly of component parts of products also is considered to be manufacturing if the resulting product is neither a structure nor other fixed improvement. These activities are usually carried on in plants, factories, or mills that characteristically use power-driven machines and materials-handling equipment.

Manufacturing production is usually carried on for the wholesale market, for transfers to other plants of the same company, or to the order of industrial users rather than for direct sale to the household consumer. Some manufacturers in a few industries sell chiefly at retail to household consumers through the mail, through house-to-house routes, or through salespersons. Some activities of a service nature (enameling, engraving, etc.) are included in manufacturing when they are performed primarily for trade. They are considered nonmanufacturing when they are performed primarily to the order of the household consumer.

RELATIONSHIP BETWEEN ANNUAL SURVEY OF MANUFACTURES AND CENSUS OF MANUFACTURES

The Bureau of the Census conducts the annual survey of manufactures (ASM) in each of the 4 years between the censuses of manufactures. The ASM is a probability-based sample of approximately 62,000 establishments and collects the same industry statistics (employment, payroll, value of shipments, etc.) as the census of manufactures. In addition to collecting the information normally requested on the census form, the establishments in the ASM sample are requested to supply information on assets, capital expenditures, retirements, depreciation, rental payments, supplemental labor costs, costs of purchased services, and foreign content of materials consumed. Except for supplemental labor costs, the extra ASM items are collected only in census years.

ESTABLISHMENT BASIS OF REPORTING

The census of manufactures is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each

[1] *Standard Industrial Classification Manual: 1987.* For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

location. The ASM also is conducted on an establishment basis, but separate reports are filed for just those establishments selected in the sample. Companies engaged in distinctly different lines of activity at one location are requested to submit separate reports if the plant records permit such a separation and if the activities are substantial in size.

In 1992, as in earlier years, a minimum size limit was set for inclusion of establishments in the census. All establishments employing one person or more at any time during the census year are included. The same size limitation has applied since 1947 in censuses and annual surveys of manufactures. In the 1939 and earlier censuses, establishments with less than $5,000 value of products were excluded. The change in the minimum size limit in 1947 does not appreciably affect the historical comparability of the census figures except for data on number of establishments for a few industries. This report excludes information for separately operated administrative offices, warehouses, garages, and other auxiliary units that service manufacturing establishments of the same company (see Auxiliaries).

MANUFACTURING UNIVERSE AND CENSUS REPORT FORMS

The 1992 Census of Manufactures universe includes approximately 380,000 establishments. The amounts of information requested from manufacturing establishments were dependent upon a number of factors. The more important considerations were the size of the company and whether it was included in the annual survey of manufactures. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. **Small single-establishment companies not sent a report form.** In the 1992 Census of Manufactures, approximately 143,000 small single-establishment companies were excused from filing reports. Selection of these small establishments was done on an industry-by-industry basis and was based on annual payroll and total shipments data as well as on the industry classification codes contained in the administrative records of Federal agencies. The cutoffs were selected so that these administrative-records cases would account for no more than 3 percent of the value of shipments for all manufacturing. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms.

   Information on the physical location of the establishment, as well as information on payrolls, receipts (shipments), and industry classification, was obtained from the administrative records of other Federal agencies under special arrangements, which safeguarded their confidentiality. Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and cost of materials were not distributed among specific products and materials for these establishments but were included in the product and material ''not specified by kind'' (n.s.k.) categories.

   The industry classification codes included in the administrative-records files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded at the four-digit SIC level. This was especially true whenever there was a relatively fine line of demarcation between industries or between manufacturing and nonmanufacturing activity.

   Sometimes these administrative-records cases were only given a two- or three-digit SIC group. For the 1992 Census of Manufactures, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the four-digit SIC level. Establishments that did not return the classification form were coded later to those four-digit SIC industries identified as ''not elsewhere classified'' (n.e.c.) within the given two- or three-digit industry groups.

   As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

   The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. **Establishments sent a report form.** The over 237,000 establishments covered in the mail canvass were divided into three groups:

   a. **ASM sample establishments.** This group consisted of approximately 62,000 establishments covering all the units of large manufacturing establishments as well as a sample of the medium and smaller establishments. The probability of selection was proportionate to size (see Appendix B, Annual Survey of Manufactures).

      In a census of manufactures year, the ASM report form (MA-1000) replaces the first page of the regular census form for those establishments included in the ASM. In addition to information on employment, payroll, and other items normally requested on the regular census form, establishments in the ASM sample were requested to supply information on assets, capital expenditures, retirements, depreciation, rental payments, supplemental labor costs, and costs of purchased services. See appendix A, section 2, for an explanation of these items.

The census part of the report form is 1 of approximately 200 versions containing product, material, and special inquiries. The diversity of manufacturing activities necessitated the use of these many forms to canvass the 459 manufacturing industries. Each form was developed for a group of related industries.

Appearing on each form was a list of products primary to the group of related industries as well as secondary products and miscellaneous services that establishments classified in these industries were likely to be performing. Respondents were requested to identify the products, the value of each product, and, in a large number of cases, the quantity of the product shipped during the survey year. Space also was provided for the respondent to describe products not specifically identified on the form.

The report form also contained a materials-consumed inquiry, which varied from form to form depending on the industries being canvassed. The respondents were asked to review a list of materials generally used in their production processes. From this list, each establishment was requested to identify those materials consumed during the survey year, the cost of each, and, in certain cases, the quantity consumed. Once again, space was provided for the respondent to describe significant material not identified on the form.

Finally, a wide variety of special inquiries was included to measure activities peculiar to a given industry, such as operations performed and equipment used.

b. **Large and medium establishments (non-ASM).** Approximately 112,000 establishments were included in this group. A variable cutoff, based on administrative-records payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the approximately 200 census of manufactures regular forms. The first page, requesting establishment data for items such as employment and payroll, was standard but did not contain the detailed statistics included on the ASM form. The product, material, and special inquiry sections supplied were based on the historical industry classification of the establishment.

c. **Small single-establishment companies (non-ASM).** This group consisted of approximately 63,000 establishments. For those industries where application of the variable cutoff for administrative-records cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or ''short'' form was used. These establishments received 1 of the approximately 80 versions of the short form, which requested summary product and material data and totals but no details on employment, payrolls, cost of materials, inventories, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics; the same data were collected on the short form as on the long form. However, detailed information on materials consumed was not collected on the short form; thus its use would increase the value of the n.s.k. categories.

AUXILIARIES

In this industry report, the data on employment and payroll are limited to operating manufacturing establishments. The census report form filed for auxiliaries (ES-9200) requested a description of the activity of the establishments serviced. However, the manufacturing auxiliaries were coded only to the two-digit major group of the establishments they served; whereas, the operating establishments were coded to a four-digit manufacturing industry. Data for the approximately 11,000 separately operated auxiliaries are included in the geographic area series and in a report issued as part of the 1992 Enterprise Statistics Survey.

Auxiliaries are establishments whose employees are primarily engaged in performing supporting services for other establishments of the same company, rather than for the general public or for other business firms. They can be at different locations from the establishments served or at the same location as one of those establishments but not operating as an integral part thereof and serving two establishments or more. Where auxiliary operations are conducted at the same location as the manufacturing operation and operate as an integral part thereof, they usually are included in the report for the operating manufacturing establishment.

Included in the broad category of auxiliaries are administrative offices. Employees in administrative offices are concerned with the general management of multiestablishment companies, i.e., with the general supervision and control of two units or more, such as manufacturing plants, mines, sales branches, or stores. The functions of these employees may include the following:

1. Program planning, including sales research and coordination of purchasing, production, and distribution
2. Company purchasing, including general contracts and purchasing methods
3. Company financial policy and accounting
4. General engineering, including design of product machinery and equipment, and direction of engineering effort conducted at the individual operation locations
5. Company personnel matters
6. Legal and patent matters

Other types of auxiliaries serving the plants or central management of the company include purchasing offices, sales promotion offices, research and development organizations, etc.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the census was classified in 1 of 459 manufacturing industries in accordance with the industry definitions in the 1987 SIC Manual. The 1987 edition of this manual represents a major revision for manufacturing industries from the 1972 edition and its 1977 supplement. Appendix A of the 1987 Manual notes the revisions in the four-digit industry levels between 1972/ 77 and 1987.

An industry is generally defined as a group of establishments producing the same product or a closely related group of products. The product groupings from which industry classifications are derived are based on considerations such as similarity of manufacturing processes, types of materials used, types of customers, and the like. The resulting group of establishments must be significant in terms of number, value added by manufacture, value of shipments, and number of employees. The system operates in such a way that the definitions progressively become narrower with successive additions of numerical digits. For 1992, there are 20 major groups (two-digit SIC), 139 industry groups (three-digit SIC), and 459 industries (four-digit SIC). This represents an expansion of four-digit industries from 452 in 1972/ 77 and a reduction of three-digit groups from 143 in 1972/ 77. Product classes and products of the manufacturing industries have been assigned codes based on the industry from which they originate. There are about 11,000 products identified by a seven-digit code. The seven-digit products are considered the primary products of the industry with the same four digits.

Accordingly, an establishment is usually classified in a particular industry on the basis of its major activity during a particular year, i.e., production of the products primary to that industry exceeds, in value, production of the products primary to any other single industry. In a few instances, however, the industry classification of an establishment is not only determined by the products it makes but also by the process employed in operations. Refining of nonferrous metals from ore or rolling and drawing of nonferrous metals (processes which involve heavy capitalization in specialized equipment) would be classified according to the process used during a census year. These establishments then would be ''frozen'' in that industry during the following ASM years.

In either a census or ASM year, establishments included in the ASM sample with certainty weight, other than those involved with heavily capitalized activities described above, are reclassified by industry only if the change in the primary activity from the prior year is significant or if the change has occurred for 2 successive years. This procedure prevents reclassification when there are minor shifts in product mix.

In ASM years, establishments included in the ASM sample with noncertainty weight are not shifted from one industry classification to another. They are retained in the industry where they were classified in the base census year (see Appendix B, Annual Survey of Manufactures). However, in the following census year, these ASM plants are allowed to shift from one industry to another.

The results of these rules covering the switching of plants from one industry classification to another are that, at the aggregate level, some industries comprise different mixes of establishments between survey years and establishment data for such industry statistics as employment and payroll may be tabulated in different industries between survey years. Hence, comparisons between prior-year and current-year published totals, particularly at the four-digit SIC level, should be viewed with caution. This is particularly true for the comparison between the data shown for a census year versus the data shown for the previous ASM year.

As previously noted, the small establishments that may have been misclassified by industry are usually administrative-records cases whose industry codes were assigned on the basis of incomplete descriptions of the general activity of the establishment. Such possible misclassifications have no significant effect on the statistics other than on the number of companies and establishments.

While some establishments produce only the primary products of the industry in which they are classified, all establishments of an industry rarely specialize to this extent. The industry statistics (employment, inventories, value added by manufacture, total value of shipments including resales and miscellaneous receipts, etc.) shown in tables 1a through 5a, therefore, reflect not only the primary activities of the establishments in that industry but also their secondary activities. The product statistics in table 6a represent the output of all establishments whether or not they are classified in the same industry as the product. For this reason, in relating the industry statistics, especially the value of shipments to the product statistics, the composition of the industry's output shown in table 5b should be considered.

The extent to which industry and product statistics may be matched with each other is measured by two ratios which are computed from the figures shown in table 5b. The first of these ratios, called the primary product specialization ratio, measures the proportion of product shipments (both primary and secondary) of the establishments classified in the industry represented by the primary products of those establishments. The second ratio, called the coverage ratio, is the proportion of primary products shipped by the establishments classified in the industry to total shipments of such products by all manufacturing establishments.

However, establishments making products falling into the same industry category may use a variety of processes and materials to produce them. Also, the same industry classification (based on end products) may include both establishments that are highly integrated and those that

put only the finishing touches on an already highly fabricated item. For example, the refrigeration equipment industry includes instances of almost complete integration (production of the compressor, condensing unit, electric motor, casting, stamping of the case, and final assembly) all carried on at one plant. On the other hand, the condensing unit, the motor, and the case may be purchased and only assembled into the finished product.

In some instances, separate industry categories have been established for integrated and nonintegrated establishments. For other industries, the census provides separate statistics on the production of intermediate commodities made and used in the producing plant. For some industries characterized by many plants of the same company, separate figures on interplant transfers of products usually are shown.

Differences in the integration of production processes, types of operations, and alternatives in types of materials used should be considered when relating the industry statistics (employment, payrolls, value added, etc.) to the product and material data.

VALUE OF SHIPMENTS FOR THE INDUSTRY COMPARED WITH VALUE OF PRODUCT SHIPMENTS

This report shows value of shipments data for industries and products. In tables 1a through 5b, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in table 6a represents the total value of all products shipped that are classified as primary to an industry.

CENSUS DISCLOSURE RULES

In accordance with Federal law governing census reports, no data are published that would disclose the data for an individual establishment or company. However, the number of establishments classified in a specific industry is not considered a disclosure, so this information may be released even though other information is withheld.

The disclosure analysis for the industry statistics in tables 1a through 5a of this report is based on the total value of shipments. When the total value of shipments cannot be shown without disclosing information for individual companies, the complete line is suppressed except for new capital expenditures. However, the suppressed data are included in higher-level totals. A separate disclosure analysis is performed for new capital expenditures that can be suppressed even though value of shipments data are publishable.

SPECIAL TABULATIONS

Special tabulations of data collected in the 1992 Census of Manufactures may be obtained on computer diskette or in tabular form. The data will be in summary form and subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) as are the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief, Manufacturing and Construction Division, Bureau of the Census, Washington, DC 20233.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in this publication:

–	Represents zero.
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(NC)	Not comparable.
(S)	Withheld because estimate did not meet publication standards.
(X)	Not applicable.
(Z)	Less than half the unit shown.
n.e.c.	Not elsewhere classified.
n.s.k.	Not specified by kind.
pt.	Part.
r	Revised.
SIC	Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, doz, bbl, and s tons, are used in the customary sense.

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SIC's 33-35 (exc. 357)	Kenneth Hansen	301-457-4755
SIC's 357, 36-39	Bruce Goldhirsch	301-457-4817
Import/ export publications	Foreign Trade Division	301-457-3041
Industry analysis and forecasting	International Trade Administration	202-377-4356

Users' Guide for Locating Statistics in This Report by Table Number

For explanation of terms, see appendixes

Item	Four-digit industry statistics							Five-digit product class and seven-digit product statistics			
	Historical	Operating ratios	By geographic area	Summary and supplemental	By employment size	By industry and product class specialization	Materials consumed by kind	Industry-product analysis	Product shipments	Product class by geographic area	Historical product class
Number of companies	1a			3a					*6a		
Number of establishments	1a		2	3a	4	5a					
Employment and payroll:											
Number of employees	1a	1b	2	3a	4	5a					
Payroll	1a	1b	2	3a	4	5a					
Supplemental labor costs				3a							
Production workers	1a	1b	2	3a	4	5a					
Production-worker hours	1a	1b	2	3a	4	5a					
Production-worker wages	1a	1b	2	3a	4	5a					
Shipments, cost of materials, and value added:											
Value of shipments (four-digit)	1a	1b	2	3a	4	5a		5b			
Product class shipments (five-digit)									6a	6b	6c
Product shipments (seven-digit)									6a		
Value added by manufacture	1a	1b	2	3a	4	5a					
Cost of materials	1a	1b	2	3a	4	5a					
Fuels and electric energy				3a							
Materials consumed by kind							7				
Inventories:											
Total, end of year	1a			3a	4						
By stage of fabrication				3a							
Capital expenditures, assets, rental payments, and purchased services:											
New capital expenditures	1a		2	3b	4	5a					
Used plant and equipment expenditures				3b							
Gross assets				3b							
Depreciation				3b							
Retirements of buildings and machinery				3b							
Rental payments				3b							
Foreign content of materials consumed				3c							
Purchased services				3c							
Ratios:											
Specialization	1a							5b			
Coverage	1a							5b			

*Number of companies with shipments of more than $100 thousand.

Contents
Motor Vehicles and Equipment

[Page numbers listed here omit the prefix that appears as part of the number of each page]

Description of Industries and Summary of Findings

This report shows 1992 Census of Manufactures statistics for establishments classified in each of the following industries:

SIC code	and title
3711	Motor Vehicles and Car Bodies
3713	Truck and Bus Bodies
3714	Motor Vehicle Parts and Accessories
3715	Truck Trailers
3716	Motor Homes

The industry statistics (employment, payroll, cost of materials, value of shipments, inventories, etc.) are reported for each establishment as a whole. Aggregates of such data for an industry reflect not only the primary activities of the establishments but also their activities in the manufacture of secondary products as well as their miscellaneous activities (contract work on materials owned by others, repair work, etc.). This fact should be taken into account in comparing industry statistics (tables 1 through 5a) with product statistics (table 6) showing shipments by all industries of the primary products of the specified industry. The extent of the ''product mix'' is indicated in table 5b, which shows the value of primary and secondary products shipped by establishments classified in the specified industry and the value of primary products of the industry shipped as secondary products by establishments classified in other industries.

Establishment data were tabulated based on industry definitions included in the *1987 Standard Industrial Classification (SIC) Manual*[1]. The 1987 edition represents a major revision for manufacturing industries from the 1972 edition and its 1977 supplement. In addition to the 1987 SIC revision, changes were made to the product class (five-digit) and product code (seven-digit) categories. The product class and product code comparability between the 1992 and 1987 censuses is shown in appendix C. This appendix presents, in tabular form, the linkage from 1992 to 1987, and 1987 to 1992.

All dollar figures included in this report are at prices current for the year specified and, therefore, unadjusted for changes in price levels. Consequently, when making comparisons to prior years, users should take into consideration the inflation that has occurred.

[1] *Standard Industrial Classification Manual: 1987.* For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES

This industry is made up of establishments primarily engaged in manufacturing or assembling complete passenger automobiles, trucks, commercial cars and buses, and special-purpose motor vehicles which are for highway use. This industry also includes establishments primarily engaged in manufacturing chassis and passenger car bodies. Such establishments may also manufacture motor vehicle parts, but establishments primarily engaged in manufacturing motor vehicle parts except chassis and passenger car bodies are classified in industry 3714. Establishments primarily engaged in manufacturing truck and bus bodies and in assembling them on purchased chassis are classified in industry 3713; those manufacturing motor homes on purchased chassis are classified in industry 3716; those manufacturing motorcycles are classified in industry 3751; those manufacturing industrial tractors are classified in industry 3537; those manufacturing other wheel tractors, except contractors off-highway types, are classified in industry 3523; those manufacturing tracklaying and contractors' off-highway type tractors are classified in industry 3531; those manufacturing combat tanks and self-propelled weapons are classified in industry 3795; and those manufacturing stamped body parts for passenger cars are classified in industry 3465.

The 1992 definition of this industry is the same as that used in the 1987 Standard Industrial Classification (SIC) system. The SIC number and title also are the same.

In the 1992 Census of Manufactures, Industry 3711, Motor Vehicles and Car Bodies, had employment of 228.4 thousand. The employment figure was 19 percent below the 281.3 thousand reported in 1987. Compared with 1991, employment increased 5 percent. The 1991 data are based on the Census Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The leading States in employment in 1992 were Michigan, Missouri, Ohio, and Tennessee. This represents a shift from 1987 when Michigan, Ohio, Missouri, and Wisconsin were the leading States.

The total value of shipments for establishments classified in this industry was $152.9 billion.

Establishments in virtually all industries ship secondary products as well as products primary to the industry in which they are classified and have some miscellaneous

receipts, such as resales and contract receipts. Industry 3711 shipped $147.3 billion of motor vehicles and car bodies considered primary to the industry, $4.0 billion of secondary products, and had $1.7 billion of miscellaneous receipts, resales, and contract work. Thus, the ratio of primary products to the total of both secondary and primary products shipped by establishments in this industry was 97 percent (specialization ratio). In 1987, the specialization ratio also was 97 percent.

Establishments in this industry also accounted for 99 percent of products considered primary to the industry no matter where they were actually produced (coverage ratio). In 1987, the coverage ratio was 98 percent.

The products primary to industry 3711, no matter in what industry they were produced, appear in table 6a and aggregate to $147.5 billion. For further explanation of specialization and coverage ratios, see table 5b and the appendixes.

The total cost of materials, services, and fuels and energy used by establishments classified in the motor vehicles and car bodies industry amounted to $107.6 billion. Data on specific materials consumed appear in table 7.

Single-establishment companies in this industry with less than 10 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were obtained from administrative records of other agencies or developed from industry averages. These establishments accounted for less than 1 percent of the total value of shipments.

INDUSTRY 3713, TRUCK AND BUS BODIES

This industry is made up of establishments primarily engaged in manufacturing truck and bus bodies and cabs for sale separately or for assembly on purchased chassis, or in assembling truck and bus bodies on purchased chassis. Establishments primarily engaged in manufacturing complete trucks and buses are classified in industry 3711; those manufacturing stamped body parts for trucks and buses are classified in industry 3465; those manufacturing truck trailers and demountable cargo containers are classified in industry 3715; those manufacturing cabs for agricultural tractors are classified in industry 3523; those manufacturing cabs for industrial trucks are classified in industry 3537; and those manufacturing cabs for off-highway construction trucks are classified in industry 3531.

The 1992 definition of this industry is the same as that used in the 1987 Standard Industrial Classification (SIC) system. The SIC number and title also are the same.

In the 1992 Census of Manufactures, Industry 3713, Truck and Bus Bodies, had employment of 35.9 thousand. The employment figure was 5 percent below the 37.8 thousand reported in 1987. Compared with 1991, employment increased 15 percent. The 1991 data are based on the Census Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The leading States in employment in 1992 were Indiana, Pennsylvania, California, and Wisconsin, accounting for approximately 38 percent of the industry's employment. This represents a shift from 1987 when Pennsylvania, Indiana, Ohio, and California were the leading States.

The total value of shipments for establishments classified in this industry was $4.6 billion.

Establishments in virtually all industries ship secondary products as well as products primary to the industry in which they are classified and have some miscellaneous receipts, such as resales and contract receipts. Industry 3713 shipped $4.0 billion of truck and bus bodies considered primary to the industry, $275.5 million of secondary products, and had $306.3 million of miscellaneous receipts, resales, and contract work. Thus, the ratio of primary products to the total of both secondary and primary products shipped by establishments in this industry was 94 percent (specialization ratio). In 1987, the specialization ratio was 96 percent.

Establishments in this industry also accounted for 97 percent of products considered primary to the industry no matter where they were actually produced (coverage ratio). In 1987, the coverage ratio was 93 percent.

The products primary to industry 3713, no matter in what industry they were produced, appear in table 6a and aggregate to $4.2 billion. For further explanation of specialization and coverage ratios, see table 5b and the appendixes.

The total cost of materials, services, and fuels and energy used by establishments classified in the truck and bus body industry amounted to $2.8 billion. Data on specific materials consumed appear in table 7.

Single-establishment companies in this industry with less than 10 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were obtained from administrative records of other agencies or developed from industry averages. These establishments accounted for 12 percent of the total value of shipments.

INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES

This industry is made up of establishments primarily engaged in manufacturing motor vehicle parts and accessories, but not engaged in manufacturing complete motor vehicles or passenger car bodies. Establishments primarily engaged in manufacturing or assembling complete automobiles and trucks are classified in industry 3711; those manufacturing tire and tubes are classified in industry 3011; those manufacturing automobile glass are classified in major group 32; those manufacturing automobile stampings are classified in industry 3465; those manufacturing

vehicular lighting equipment are classified in industry 3647; those manufacturing ignition systems are classified in industry 3694; those manufacturing storage batteries are classified in industry 3691; and those manufacturing carburetors, piston rings, and engine intake and exhaust valves are classified in industry 3592.

The 1992 definition of this industry is the same as that used in the 1987 Standard Industrial Classification (SIC) system. The SIC number and title also are the same.

In the 1992 Census of Manufactures, Industry 3714, Motor Vehicle Parts and Accessories, had employment of 400.2 thousand. The employment figure was 3 percent above the 389.6 thousand reported in 1987. Compared with 1991, employment increased 8 percent. The 1991 data are based on the Census Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The leading States in employment in 1992 were Indiana, Michigan, Ohio, and Tennessee. This represents a shift from 1987 when Michigan, Ohio, Indiana, and New York were the leading States.

The total value of shipments for establishments classified in this industry was $75.1 billion.

Establishments in virtually all industries ship secondary products as well as products primary to the industry in which they are classified and have some miscellaneous receipts, such as resales and contract receipts. Industry 3714 shipped $69.3 billion of motor vehicle parts and accessories considered primary to the industry, $2.2 billion of secondary products, and had $3.5 billion of miscellaneous receipts, resales, and contract work. Thus, the ratio of primary products to the total of both secondary and primary products shipped by establishments in this industry was 97 percent (specialization ratio). In 1987, the specialization ratio was 91 percent.

Establishments in this industry also accounted for 93 percent of products considered primary to the industry no matter where they were actually produced (coverage ratio). In 1987, the coverage ratio was 90 percent.

The products primary to industry 3714, no matter in what industry they were produced, appear in table 6a and aggregate to $74.6 billion. For further explanation of specialization and coverage ratios, see table 5b and the appendixes.

The total cost of materials, services, and fuels and energy used by establishments classified in the motor vehicle parts and accessories industry amounted to $44.0 billion. Data on specific materials consumed appear in table 7.

Single-establishment companies in this industry with less than 10 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were obtained from administrative records of other agencies or developed from industry averages. These establishments accounted for 3 percent of the total value of shipments.

INDUSTRY 3715, TRUCK TRAILERS

This industry is made up of establishments primarily engaged in manufacturing truck trailers, truck trailer chassis for sale separately, detachable trailer bodies (cargo containers) for sale separately, and detachable trailer (cargo container) chassis, for sale separately.

The 1992 definition of this industry is the same as that used in the 1987 Standard Industrial Classification (SIC) system. The SIC number and title also are the same.

In the 1992 Census of Manufactures, Industry 3715, Truck Trailers, had employment of 23.4 thousand. The employment figure was 15 percent below the 27.5 thousand reported in 1987. Compared with 1991, employment increased 6 percent. The 1991 data are based on the Census Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The leading States in employment in 1992 were Alabama, Illinois, Indiana, and Wisconsin. This represents a shift from 1987 when Texas, Indiana, California, and Pennsylvania were the leading States.

The total value of shipments for establishments classified in this industry was $3.5 billion.

Establishments in virtually all industries ship secondary products as well as products primary to the industry in which they are classified and have some miscellaneous receipts, such as resales and contract receipts. Industry 3715 shipped $3.1 billion of truck trailers considered primary to the industry, $226.1 million of secondary products, and had $220.0 million of miscellaneous receipts, resales, and contract work. Thus, the ratio of primary products to the total of both secondary and primary products shipped by establishments in this industry was 93 percent (specialization ratio). In 1987, the specialization ratio was 96 percent.

Establishments in this industry also accounted for 98 percent of products considered primary to the industry no matter where they were actually produced (coverage ratio). In 1987, the coverage ratio was 99 percent.

The products primary to industry 3715, no matter in what industry they were produced, appear in table 6a and aggregate to $3.2 billion. For further explanation of specialization and coverage ratios, see table 5b and the appendixes.

The total cost of materials, services, and fuels and energy used by establishments classified in the truck trailer industry amounted to $2.5 billion. Data on specific materials consumed appear in table 7.

Single-establishment companies in this industry with less than 15 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were obtained from administrative records of other agencies or developed from industry averages. These establishments accounted for 5 percent of the total value of shipments.

INDUSTRY 3716, MOTOR HOMES

This industry is made up of establishments primarily engaged in manufacturing self-contained motor homes on purchased chassis. Establishments primarily engaged in manufacturing self-contained motor homes on chassis manufactured in the same establishment are classified in industry 3711. Establishments primarily engaged in manufacturing mobile homes are classified in industry 2451; and those manufacturing travel trailers and pickup campers are classified in industry 3792. Establishments primarily engaged in van conversion on a custom basis are classified in services, industry 7532.

The 1992 definition of this industry is the same as that used in the 1987 Standard Industrial Classification (SIC) system. The SIC number and title also are the same.

In the 1992 Census of Manufactures, Industry 3716, Motor Homes, had employment of 16.1 thousand. The employment figure was 7 percent above the 15.1 thousand reported in 1987. Compared with 1991, employment increased 36 percent. The 1991 data are based on the Census Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The leading States in employment in 1992 were California, Iowa, Indiana, and Florida. This represents a shift from 1987 when Indiana, Iowa, California, and Michigan were the leading States.

The total value of shipments for establishments classified in this industry was $3.0 billion.

Establishments in virtually all industries ship secondary products as well as products primary to the industry in which they are classified and have some miscellaneous receipts, such as resales and contract receipts. Industry 3716 shipped $2.7 billion of motor homes considered primary to the industry, $126.6 million of secondary products, and had $138.1 million of miscellaneous receipts, resales, and contract work. Thus, the ratio of primary products to the total of both secondary and primary products shipped by establishments in this industry was 96 percent (specialization ratio). In 1987, the specialization ratio was 95 percent.

Establishments in this industry also accounted for 97 percent of products considered primary to the industry no matter where they were actually produced (coverage ratio). In 1987, the coverage ratio was 96 percent.

The products primary to industry 3716, no matter in what industry they were produced, appear in table 6a and aggregate to $2.8 billion. For further explanation of specialization and coverage ratios, see table 5b and the appendixes.

The total cost of materials, services, and fuels and energy used by establishments classified in the motor homes industry amounted to $2.1 billion. Data on specific materials consumed appear in table 7.

Single-establishment companies in this industry with less than 10 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were obtained from administrative records of other agencies or developed from industry averages. These establishments accounted for 4 percent of the total value of shipments.

Table 1a. Historical Statistics for the Industry: 1992 and Earlier Years

[Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Year[1]	Companies[2] (no.)	All establishments[3] Total (no.)	All establishments[3] With 20 employees or more (no.)	All employees Number (1,000)	All employees Payroll (million dollars)	Production workers Number (1,000)	Production workers Hours (millions)	Production workers Wages (million dollars)	Value added by manufacture[4] (million dollars)	Cost of materials[5] (million dollars)	Value of shipments (million dollars)	New capital expenditures[6] (million dollars)	End-of-year inventories[4] (million dollars)	Ratios: Specialization[7] (percent)	Ratios: Coverage[8] (percent)
INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES															
1992 Census	400	456	161	228.4	10 438.8	193.3	397.3	8 606.8	45 262.2	107 636.6	152 948.5	2 989.5	4 101.3	97	99
1991 ASM	(NA)	(NA)	(NA)	218.1	9 802.5	178.5	367.8	7 841.8	45 146.9	88 403.2	133 861.2	3 261.9	4 207.0	(NA)	(NA)
1990 ASM	(NA)	(NA)	(NA)	239.5	10 060.0	200.0	399.7	8 118.3	39 504.4	101 130.8	140 417.0	3 004.4	4 528.0	(NA)	(NA)
1989 ASM	(NA)	(NA)	(NA)	249.9	10 390.9	212.5	440.2	8 541.2	46 873.4	102 345.2	149 315.2	2 373.9	4 116.7	(NA)	(NA)
1988 ASM	(NA)	(NA)	(NA)	250.3	10 121.2	213.6	448.2	8 373.6	39 762.2	102 364.8	142 059.6	1 136.6	4 255.9	(NA)	(NA)
1987 Census	352	413	174	281.3	10 213.7	235.5	472.7	8 192.3	36 117.7	97 520.4	133 345.6	4 121.4	4 621.6	97	98
1986 ASM	(NA)	(NA)	(NA)	280.5	10 261.7	233.8	479.5	8 257.1	31 846.0	93 965.0	125 869.6	3 912.8	4 402.8	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	295.8	10 670.3	249.7	522.4	8 724.1	28 061.1	94 220.6	122 327.4	2 904.7	4 941.8	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	296.2	10 192.2	247.6	564.4	8 159.6	27 668.1	90 435.0	118 066.0	2 420.9	5 083.7	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	260.7	8 266.6	216.5	446.2	6 583.6	22 608.0	73 818.2	95 930.8	1 106.4	4 558.7	(NA)	(NA)
1982 Census	284	355	152	240.1	6 821.9	193.5	364.2	5 261.5	15 455.8	55 520.0	70 739.7	2 368.3	3 621.2	95	99
1981 ASM	(NA)	(NA)	(NA)	271.9	7 599.8	223.4	430.8	6 007.5	15 620.6	58 326.4	74 273.1	4 697.2	3 578.5	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	274.2	6 904.0	220.6	427.4	5 399.6	13 817.4	52 297.2	66 257.4	2 290.4	4 123.1	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	348.5	8 149.5	292.0	590.9	6 496.8	20 752.7	64 226.7	85 147.4	1 905.6	4 491.8	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	359.1	7 845.7	303.5	628.4	6 358.3	20 490.6	64 614.6	84 900.9	1 876.9	4 410.4	(NA)	(NA)
1977 Census	254	322	119	343.6	7 077.6	289.9	620.4	5 724.9	18 723.7	58 131.6	76 517.8	1 706.1	4 010.8	95	99
INDUSTRY 3713, TRUCK AND BUS BODIES															
1992 Census	622	676	301	35.9	868.6	26.2	52.4	564.6	1 791.9	2 817.5	4 594.7	71.2	757.4	94	97
1991 ASM	(NA)	(NA)	(NA)	31.1	719.1	23.5	47.7	472.7	1 598.9	2 214.4	3 867.7	58.1	533.6	(NA)	(NA)
1990 ASM	(NA)	(NA)	(NA)	37.2	839.2	28.3	56.1	560.4	1 809.3	2 525.2	4 382.2	62.8	649.8	(NA)	(NA)
1989 ASM	(NA)	(NA)	(NA)	37.5	812.1	28.6	56.0	552.9	1 760.5	2 426.3	4 236.4	117.1	675.0	(NA)	(NA)
1988 ASM	(NA)	(NA)	(NA)	36.2	809.4	27.9	55.3	549.2	1 767.6	2 333.9	4 076.1	68.9	878.5	(NA)	(NA)
1987 Census	657	716	325	37.8	851.3	28.9	58.3	584.3	1 978.4	2 672.2	4 588.7	88.5	859.5	96	93
1986 ASM	(NA)	(NA)	(NA)	33.2	709.7	24.8	50.0	485.0	1 715.0	2 031.8	3 686.3	82.3	685.2	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	31.7	642.3	24.0	46.5	444.3	1 597.4	1 904.2	3 473.2	63.3	594.0	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	32.8	624.6	25.1	49.9	441.9	1 498.5	1 807.7	3 255.7	71.1	562.7	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	26.6	490.3	20.1	39.8	345.6	1 515.7	1 327.2	2 833.6	49.8	427.5	(NA)	(NA)
1982 Census	636	680	277	28.1	497.2	21.1	40.0	344.2	1 176.9	1 304.3	2 463.6	49.2	412.1	95	94
1981 ASM	(NA)	(NA)	(NA)	29.6	487.3	22.9	43.6	343.8	1 005.5	1 313.9	2 314.9	44.1	393.2	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	33.5	491.2	26.2	49.3	344.7	963.2	1 181.4	2 123.1	33.0	408.8	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	35.5	506.2	28.4	54.9	367.7	1 104.6	1 279.9	2 355.4	48.0	400.5	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	36.4	477.8	28.8	55.3	338.1	996.1	1 283.6	2 292.5	39.3	361.2	(NA)	(NA)
1977 Census	769	820	313	34.8	428.6	27.4	53.9	307.6	946.3	1 076.2	2 003.3	44.2	352.1	94	93
INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES															
1992 Census	2 713	3 246	1 454	400.2	13 955.6	313.4	647.0	10 255.1	30 927.9	43 951.9	75 070.7	3 647.6	7 122.6	97	93
1991 ASM	(NA)	(NA)	(NA)	369.9	12 586.6	290.5	586.5	9 280.2	25 212.9	38 284.2	63 604.2	3 403.1	6 976.7	(NA)	(NA)
1990 ASM	(NA)	(NA)	(NA)	388.7	13 037.0	308.4	624.1	9 789.9	26 871.4	38 354.5	64 875.4	3 446.0	7 054.2	(NA)	(NA)
1989 ASM	(NA)	(NA)	(NA)	393.3	12 856.5	315.7	648.8	9 852.3	26 458.4	39 177.0	65 682.8	2 964.0	6 194.7	(NA)	(NA)
1988 ASM	(NA)	(NA)	(NA)	400.8	13 228.6	321.3	673.3	10 108.6	28 731.4	40 664.7	69 048.5	1 932.0	6 102.7	(NA)	(NA)
1987 Census	2 306	2 807	1 323	389.6	11 957.9	309.2	637.3	9 027.4	26 451.6	35 607.0	62 068.4	2 304.1	5 638.7	91	90
1986 ASM	(NA)	(NA)	(NA)	376.6	11 537.3	298.7	622.6	8 755.0	24 373.5	33 019.5	57 393.9	2 644.0	5 428.7	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	385.4	11 649.6	308.7	645.2	8 935.4	26 093.7	31 551.5	57 931.0	2 962.0	5 443.1	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	381.6	10 649.9	306.3	645.2	8 185.5	23 887.7	28 986.1	52 583.1	1 725.0	5 272.9	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	338.0	8 876.2	267.3	549.0	6 728.4	21 592.6	23 092.6	44 415.4	1 056.2	4 424.0	(NA)	(NA)
1982 Census	2 000	2 420	1 111	321.4	7 614.0	251.1	481.8	5 614.2	16 764.6	19 007.0	36 293.1	1 791.7	3 945.2	93	86
1981 ASM	(NA)	(NA)	(NA)	359.4	8 412.6	285.2	548.5	6 332.6	17 253.6	19 847.1	37 080.9	3 309.4	4 450.6	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	369.1	7 886.4	287.2	549.3	5 869.0	14 719.3	17 974.3	32 881.2	3 060.1	4 565.3	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	459.1	9 087.0	372.9	745.7	7 008.8	18 033.5	22 062.3	39 807.2	2 750.7	5 091.3	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	475.8	9 099.3	391.1	811.3	7 145.4	18 377.0	22 193.2	40 283.3	2 457.8	4 537.3	(NA)	(NA)
1977 Census	2 194	2 623	997	450.7	8 004.0	372.5	777.2	6 284.9	16 263.8	19 749.7	35 750.8	1 833.2	4 124.1	94	87
INDUSTRY 3715, TRUCK TRAILERS															
1992 Census	310	339	157	23.4	565.9	18.7	38.4	397.2	1 093.5	2 459.0	3 545.5	30.9	438.1	93	98
1991 ASM	(NA)	(NA)	(NA)	22.1	515.2	16.9	34.5	343.8	742.0	2 066.4	2 832.4	45.6	454.6	(NA)	(NA)
1990 ASM	(NA)	(NA)	(NA)	24.8	548.2	19.4	38.7	379.1	869.0	2 248.7	3 122.0	37.7	474.4	(NA)	(NA)
1989 ASM	(NA)	(NA)	(NA)	27.6	594.1	22.0	43.1	418.8	1 070.6	2 747.6	3 828.8	45.2	513.9	(NA)	(NA)
1988 ASM	(NA)	(NA)	(NA)	27.7	573.0	21.8	42.5	402.8	1 069.7	2 566.1	3 634.8	57.2	539.8	(NA)	(NA)
1987 Census	308	337	182	27.5	570.2	21.7	43.1	406.4	1 130.8	2 314.3	3 433.5	45.7	474.1	96	99
1986 ASM	(NA)	(NA)	(NA)	23.6	492.4	18.1	36.0	347.6	786.8	1 898.8	2 714.3	31.6	370.0	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	26.4	533.1	20.4	39.6	376.0	817.1	2 116.8	2 931.8	66.1	447.0	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	27.9	524.0	22.1	43.5	378.6	1 036.5	2 302.6	3 311.1	35.8	452.1	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	21.6	394.0	16.4	32.3	272.0	670.9	1 508.3	2 171.6	38.8	454.6	(NA)	(NA)
1982 Census	286	325	154	18.8	339.6	14.0	27.1	223.2	592.2	1 193.6	1 820.6	39.7	342.8	92	95
1981 ASM	(NA)	(NA)	(NA)	25.6	410.4	20.0	39.2	288.8	653.9	1 523.5	2 206.2	55.3	369.5	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	27.7	412.2	21.1	39.4	280.5	834.3	1 580.7	2 435.8	55.2	440.6	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	35.7	476.4	28.3	53.8	341.7	1 134.9	1 993.3	3 088.2	37.1	493.4	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	32.0	403.0	25.7	49.5	286.8	939.4	1 604.0	2 498.0	39.0	448.1	(NA)	(NA)
1977 Census	316	353	165	28.1	322.0	22.5	43.1	229.9	645.9	1 285.3	1 910.1	36.2	355.0	94	96
INDUSTRY 3716, MOTOR HOMES															
1992 Census	122	145	83	16.1	367.3	13.1	24.9	246.2	842.9	2 063.3	2 960.9	19.0	367.1	96	97
1991 ASM	(NA)	(NA)	(NA)	11.8	259.9	9.5	18.4	171.2	631.9	1 334.3	1 935.4	17.2	332.0	(NA)	(NA)
1990 ASM	(NA)	(NA)	(NA)	14.1	308.0	11.0	21.0	201.7	594.5	1 571.8	2 167.2	24.9	319.6	(NA)	(NA)
1989 ASM	(NA)	(NA)	(NA)	15.5	336.0	12.3	24.2	225.1	699.4	1 853.5	2 562.7	24.2	331.2	(NA)	(NA)
1988 ASM	(NA)	(NA)	(NA)	17.0	357.1	13.5	25.9	236.9	755.1	2 032.1	2 756.4	23.6	361.2	(NA)	(NA)
1987 Census	144	165	81	15.1	316.9	11.8	23.4	211.9	688.6	1 811.4	2 486.8	18.7	315.0	95	96
1986 ASM	(NA)	(NA)	(NA)	12.0	232.4	9.5	18.2	154.0	492.0	1 382.3	1 887.2	22.3	212.9	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	12.2	223.2	9.7	18.9	149.8	558.1	1 337.1	1 872.2	41.8	236.3	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	14.2	244.4	11.7	22.4	162.4	613.9	1 446.7	2 080.1	28.3	192.2	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	11.7	246.8	9.2	19.1	139.9	582.2	1 388.4	1 934.3	13.9	191.2	(NA)	(NA)
1982 Census	79	87	55	7.2	120.6	5.7	10.2	79.3	304.0	653.1	952.7	15.5	131.9	97	88
1981 ASM	(NA)	(NA)	(NA)	9.1	117.6	6.0	10.2	74.2	299.8	815.7	1 105.7	8.7	102.5	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	9.8	137.7	5.9	11.9	68.5	188.1	660.0	863.0	8.8	101.3	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	13.4	174.9	8.4	15.9	106.8	186.0	752.6	981.4	14.3	204.1	(NA)	(NA)

See footnotes at end of table.

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Table 1a. **Historical Statistics for the Industry: 1992 and Earlier Years**—Con.

[Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Year[1]	Companies[2] (no.)	All establishments[3]		All employees		Production workers			Value added by manufacture[4] (million dollars)	Cost of materials[5] (million dollars)	Value of shipments (million dollars)	New capital expenditures[6] (million dollars)	End-of-year inventories[4] (million dollars)	Ratios	
		Total (no.)	With 20 employees or more (no.)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						Specialization[7] (percent)	Coverage[8] (percent)
	INDUSTRY 3716, MOTOR HOMES—Con.														
1978 ASM	(NA)	(NA)	(NA)	21.6	260.9	17.4	33.8	170.5	650.6	1 396.3	2 024.2	19.8	300.1	(NA)	(NA)
1977 Census	79	116	114	19.2	205.4	15.4	29.6	135.1	443.3	1 132.5	1 564.5	16.4	220.6	92	94

[1]In annual survey of manufactures (ASM) years, data are estimates based on a representative sample of establishments canvassed annually and may differ from results of a complete canvass of all establishments. ASM publication shows percentage standard errors. Unless otherwise noted, for data prior to 1977, see 1977 Census of Manufactures, vol. II, table 1 of the industry chapter.

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

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

[4]Beginning in 1982, all respondents were requested to report their inventories at cost or market prior to adjustment to LIFO cost. This is a change from prior years when respondents were permitted to value their inventories using any generally accepted accounting method. Consequently, 1982 data for inventories and value added by manufacture are not comparable to prior-year data.

[5]Cost of materials is the sum of five components: the cost of (1) parts used in the manufacture of finished goods (materials, parts, containers, and supplies incorporated into products or otherwise directly consumed in the process); (2) purchased items later resold without further manufacture; (3) fuels; (4) electricity; and (5) commissions or fees to outside parties for contract manufacturing. A separate cost for each of the five components is shown in table 3a. Detailed data on materials consumed by type, are shown in table 7.

[6]Detailed data on new machinery and equipment expenditures are provided in table 3c.

[7]Represents ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for establishments classified in the industry.

[8]Represents ratio of primary products shipped by establishments classified in industry to total shipments of such products by all manufacturing establishments, wherever classified.

Table 1b. **Selected Operating Ratios for the Industry: 1992 and Earlier Years**

[Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Year	Payroll per employee (dollars)	Production workers as percent of total employment (percent)	Annual hours of production workers (number)	Average hourly earnings of production workers (dollars)	Cost of materials as percent of value of shipments (percent)	Cost of materials and payroll as percent of value of shipments (percent)	Value added per employee (dollars)	Payroll as percent of value added (percent)	Value added per production worker hour (dollars)
	INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES								
1992 Census	45 704	85	2 055	21.66	70	77	198 171	23	113.92
1991 ASM	44 945	82	2 061	21.32	66	73	207 001	22	122.75
1990 ASM	42 004	84	1 999	20.31	72	79	164 945	25	98.84
1989 ASM	41 580	85	2 072	19.40	69	76	187 569	22	106.48
1988 ASM	40 436	85	2 098	18.68	72	79	158 858	25	88.72
1987 Census	36 309	84	2 007	17.33	73	81	128 396	28	76.41
1986 ASM	36 584	83	2 051	17.22	75	83	113 533	32	66.42
1985 ASM	36 073	84	2 092	16.70	77	86	94 865	38	53.72
1984 ASM	34 410	84	2 279	14.46	77	85	93 410	37	49.02
1983 ASM	31 709	83	2 061	14.75	77	86	86 720	37	50.67
1982 Census	28 413	81	1 882	14.45	78	88	64 372	44	42.44
1981 ASM	27 951	82	1 928	13.94	79	89	57 450	49	36.26
1980 ASM	25 179	80	1 937	12.63	79	89	50 392	50	32.33
1979 ASM	23 385	84	2 024	10.99	75	85	59 549	39	35.12
1978 ASM	21 848	85	2 071	10.12	76	85	57 061	38	32.61
1977 Census	20 598	84	2 140	9.23	76	85	54 493	38	30.18
	INDUSTRY 3713, TRUCK AND BUS BODIES								
1992 Census	24 195	73	2 000	10.77	61	80	49 914	48	34.20
1991 ASM	23 122	76	2 030	9.91	57	76	51 412	45	33.52
1990 ASM	22 559	76	1 982	9.99	58	77	48 637	46	32.25
1989 ASM	21 656	76	1 958	9.87	57	76	46 947	46	31.44
1988 ASM	22 359	77	1 982	9.93	57	77	48 829	46	31.96
1987 Census	22 521	76	2 017	10.02	58	77	52 339	43	33.93
1986 ASM	21 377	75	2 016	9.70	55	74	51 657	41	34.30
1985 ASM	20 262	76	1 938	9.55	55	73	50 391	40	34.35
1984 ASM	19 043	77	1 988	8.86	56	75	45 686	42	30.03
1983 ASM	18 432	76	1 980	8.68	47	64	56 981	32	38.08
1982 Census	17 694	75	1 896	8.61	53	73	41 883	42	29.42
1981 ASM	16 463	77	1 904	7.89	57	78	33 970	48	23.06
1980 ASM	14 663	78	1 882	6.99	56	79	28 752	51	19.54
1979 ASM	14 259	80	1 933	6.70	54	76	31 115	46	20.12
1978 ASM	13 126	79	1 920	6.11	56	77	27 365	48	18.01
1977 Census	12 316	79	1 967	5.71	54	75	27 193	45	17.56
	INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES								
1992 Census	34 880	78	2 064	15.85	59	77	77 300	45	47.80
1991 ASM	34 027	79	2 019	15.82	60	80	68 161	50	42.99
1990 ASM	33 540	79	2 024	15.69	59	79	69 131	49	43.06
1989 ASM	32 689	80	2 055	15.19	60	79	67 273	49	40.78
1988 ASM	33 005	80	2 096	15.01	59	78	71 685	46	42.67
1987 Census	30 693	79	2 061	14.17	57	77	67 894	45	41.51
1986 ASM	30 635	79	2 084	14.06	58	78	64 720	47	39.15
1985 ASM	30 227	80	2 090	13.85	54	75	67 706	45	40.44
1984 ASM	27 909	80	2 106	12.69	55	75	62 599	45	37.02
1983 ASM	26 261	79	2 054	12.26	52	72	63 883	41	39.33
1982 Census	23 690	78	1 919	11.65	52	73	52 161	45	34.80
1981 ASM	23 407	79	1 923	11.55	54	76	48 007	49	31.46
1980 ASM	21 367	78	1 913	10.68	55	79	39 879	54	26.80
1979 ASM	19 793	81	2 000	9.40	55	78	39 280	50	24.18
1978 ASM	19 124	82	2 074	8.81	55	78	38 623	50	22.65
1977 Census	17 759	83	2 086	8.09	55	78	36 086	49	20.93

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Table 1b. **Selected Operating Ratios for the Industry: 1992 and Earlier Years**—Con.

[Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Year	Payroll per employee (dollars)	Production workers as percent of total employment (percent)	Annual hours of production workers (number)	Average hourly earnings of production workers (dollars)	Cost of materials as percent of value of shipments (percent)	Cost of materials and payroll as percent of value of shipments (percent)	Value added per employee (dollars)	Payroll as percent of value added (percent)	Value added per production worker hour (dollars)
	INDUSTRY 3715, TRUCK TRAILERS								
1992 Census	24 184	80	2 053	10.34	69	85	46 731	52	28.48
1991 ASM	23 312	76	2 041	9.97	73	91	33 575	69	21.51
1990 ASM	22 105	78	1 995	9.80	72	90	35 040	63	22.45
1989 ASM	21 525	80	1 959	9.72	72	87	38 790	55	24.84
1988 ASM	20 686	79	1 950	9.48	71	86	38 617	54	25.17
1987 Census	20 735	79	1 986	9.43	67	84	41 120	50	26.24
1986 ASM	20 864	77	1 989	9.66	70	88	33 339	63	21.86
1985 ASM	20 193	77	1 941	9.49	72	90	30 951	65	20.63
1984 ASM	18 781	79	1 968	8.70	70	85	37 151	51	23.83
1983 ASM	18 241	76	1 970	8.42	69	88	31 060	59	20.77
1982 Census	18 064	74	1 936	8.24	66	84	31 500	57	21.85
1981 ASM	16 031	78	1 960	7.37	69	88	25 543	63	16.68
1980 ASM	14 881	76	1 867	7.12	65	82	30 119	49	21.18
1979 ASM	13 345	79	1 901	6.35	65	80	31 790	42	21.09
1978 ASM	12 594	80	1 926	5.79	64	80	29 356	43	18.98
1977 Census	11 459	80	1 916	5.33	67	84	22 986	50	14.99
	INDUSTRY 3716, MOTOR HOMES								
1992 Census	22 814	81	1 901	9.89	70	82	52 354	44	33.85
1991 ASM	22 025	81	1 937	9.30	69	82	53 551	41	34.34
1990 ASM	21 844	78	1 909	9.60	73	87	42 163	52	28.31
1989 ASM	21 677	79	1 967	9.30	72	85	45 123	48	28.90
1988 ASM	21 006	79	1 919	9.15	74	87	44 418	47	29.15
1987 Census	20 987	78	1 983	9.06	73	86	45 603	46	29.43
1986 ASM	19 367	79	1 916	8.46	73	86	41 000	47	27.03
1985 ASM	18 295	80	1 948	7.93	71	83	45 746	40	29.53
1984 ASM	17 211	82	1 915	7.25	70	81	43 232	40	27.41
1983 ASM	21 094	79	2 076	7.32	72	85	49 761	42	30.48
1982 Census	16 750	79	1 789	7.77	69	81	42 222	40	29.80
1981 ASM	12 923	66	1 700	7.27	74	84	32 945	39	29.39
1980 ASM	14 051	60	2 017	5.76	76	92	19 194	73	15.81
1979 ASM	13 052	63	1 893	6.72	77	95	13 881	94	11.70
1978 ASM	12 079	81	1 943	5.04	69	82	30 120	40	19.25
1977 Census	10 698	80	1 922	4.56	72	86	23 089	46	14.98

Note: For qualifications of data, see footnotes on table 1a.

Table 2. **Industry Statistics for Selected States: 1992 and 1987**

[Excludes data for auxiliaries. States with 100 employees or more are shown. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and geographic area	1992												1987	
		All establishments		All employees		Production workers								
	E[1]	Total (no.)	With 20 employees or more (no.)	Number[2] (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)	Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	All employees[2] (1,000)	Value added by manufacture (million dollars)
INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES														
United States	–	**456**	**161**	**228.4**	**10 438.8**	**193.3**	**397.3**	**8 606.8**	**45 262.2**	**107 636.6**	**152 948.5**	**2 989.5**	**281.3**	**36 117.7**
Alabama	E8	6	4	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	E	(D)
Arkansas	E7	6	1	.1	2.7	.1	.2	2.2	11.1	28.4	39.6	(D)	.3	7.9
California	–	57	14	8.0	349.8	7.1	15.2	309.9	645.0	2 337.7	2 980.1	(D)	(NA)	(D)
Colorado	E9	5	1	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	F	(D)
Delaware	–	2	2	I	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
Florida	E7	22	4	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.8	49.7
Georgia	–	14	4	I	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
Illinois	–	19	5	8.5	384.2	7.4	15.5	320.4	1 854.8	5 885.5	7 766.8	(D)	(NA)	(D)
Indiana	–	34	13	5.8	242.2	4.9	9.1	201.1	1 826.4	3 188.2	4 983.1	23.0	(NA)	(D)
Kansas	–	8	2	H	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
Kentucky	–	9	4	J	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
Louisiana	–	4	2	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
Maryland	–	4	1	H	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
Michigan	–	49	26	76.9	3 657.7	63.9	130.9	2 975.6	12 695.5	29 257.2	42 091.3	474.0	105.3	11 552.1
Minnesota	–	4	2	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	G	(D)
Missouri	–	14	6	15.2	732.0	13.9	27.9	647.1	4 663.3	11 456.3	16 070.7	(D)	21.8	3 829.5
New Jersey	–	10	4	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
New Mexico	–	3	1	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	G	(D)
New York	–	12	4	H	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
North Carolina	–	12	2	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	G	(D)
North Dakota	E2	4	3	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	E	(D)
Ohio	–	29	20	35.7	1 565.3	30.7	60.4	1 326.2	7 849.2	15 277.7	23 032.0	320.4	36.7	5 650.7
Oklahoma	–	7	3	H	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
Oregon	–	8	2	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	G	(D)
Pennsylvania	E3	16	4	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)

See footnotes at end of table.

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Table 2. **Industry Statistics for Selected States: 1992 and 1987**—Con.

[Excludes data for auxiliaries. States with 100 employees or more are shown. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and geographic area	1992												1987	
		All establishments		All employees		Production workers								
	E[1]	Total (no.)	With 20 employees or more (no.)	Number[2] (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)	Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	All employees[2] (1,000)	Value added by manufacture (million dollars)
INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES—Con.														
South Carolina	–	4	2	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Tennessee	–	5	3	J	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
Texas	–	20	6	H	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
Virginia	–	5	2	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
Washington	–	8	2	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	G	(D)
Wisconsin	–	15	5	I	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	13.7	1 087.5
INDUSTRY 3713, TRUCK AND BUS BODIES														
United States	**E1**	**676**	**301**	**35.9**	**868.6**	**26.2**	**52.4**	**564.6**	**1 791.9**	**2 817.5**	**4 594.7**	**71.2**	**37.8**	**1 978.4**
Alabama	E2	18	6	.6	13.9	.5	1.3	10.5	44.3	65.6	107.5	.3	.5	28.7
Arizona	–	11	6	.4	8.6	.3	.7	5.9	28.5	39.9	66.1	(D)	(NA)	(NA)
Arkansas	E2	5	3	1.0	18.3	.8	1.1	12.8	6.3	74.4	82.6	(D)	G	(D)
California	–	95	32	2.8	68.1	2.2	4.3	44.8	258.6	322.0	578.8	(D)	(NA)	(D)
Florida	–	25	13	2.3	52.8	1.8	3.6	34.0	115.7	169.5	283.3	2.5	2.4	120.5
Georgia	E1	25	15	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.9	1.1	35.8
Illinois	–	19	9	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	F	(D)
Indiana	E2	41	28	4.9	106.6	3.1	6.1	66.1	180.5	293.4	469.5	4.4	(NA)	(D)
Iowa	–	14	11	.9	22.4	.7	1.4	16.6	43.3	92.7	135.4	1.2	F	(D)
Kansas	–	16	10	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	F	(D)
Kentucky	–	14	5	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.5	E	(D)
Massachusetts	E7	9	4	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	E	(D)
Michigan	–	19	5	.8	24.6	.7	1.6	19.5	43.6	45.4	90.4	1.5	G	(D)
Minnesota	E2	17	7	.4	9.6	.3	.5	5.9	16.9	25.8	43.4	.3	E	(D)
Mississippi	E2	9	6	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	E	(D)
Missouri	–	15	8	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	F	(D)
New Jersey	E1	11	2	.2	6.2	.2	.4	4.2	8.8	9.8	18.6	(D)	E	(D)
New York	–	28	12	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.7	G	(D)
North Carolina	–	30	14	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	G	(D)
Ohio	E1	31	21	2.4	64.7	1.7	3.5	42.0	114.7	136.8	249.6	2.5	(NA)	(D)
Oklahoma	–	13	5	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	E	(D)
Oregon	E1	10	2	C	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Pennsylvania	E1	50	27	3.5	85.9	2.6	4.9	53.7	218.1	358.8	582.3	5.7	4.5	243.5
South Carolina	–	4	1	C	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	E	(D)
Tennessee	–	14	3	.4	10.6	.3	.6	6.3	23.9	27.3	50.2	(D)	F	(D)
Texas	E2	37	14	1.6	31.4	1.2	2.3	21.0	58.3	109.2	171.9	(D)	G	(D)
Utah	–	6	1	C	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Virginia	–	14	8	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.2	37.5
Washington	E1	7	2	C	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
West Virginia	–	6	3	C	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.2	(NA)	(NA)
Wisconsin	–	19	9	2.4	75.1	1.7	3.6	49.1	117.9	187.2	300.7	(D)	1.9	91.1
INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES														
United States	**–**	**3 246**	**1 454**	**400.2**	**13 955.6**	**313.4**	**647.0**	**10 255.1**	**30 927.9**	**43 951.9**	**75 070.7**	**3 647.6**	**389.6**	**26 451.6**
Alabama	–	41	16	5.8	215.9	4.8	9.7	173.8	437.7	480.3	937.6	15.4	9.1	528.1
Arizona	–	50	9	2.0	48.9	1.2	2.4	20.1	133.5	189.4	329.1	13.5	1.0	36.6
Arkansas	–	38	20	4.9	108.1	4.1	9.2	82.1	326.2	356.4	688.7	17.1	3.3	272.4
California	E2	451	146	15.9	382.0	11.6	24.2	239.9	823.0	866.4	1 680.8	(D)	18.3	892.0
Colorado	–	46	9	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.1	56.3
Connecticut	E2	28	14	2.4	63.7	1.9	3.4	42.1	125.8	127.6	251.3	(D)	(NA)	(D)
Florida	E1	103	19	2.5	48.5	1.9	3.7	30.1	147.1	143.8	289.2	(D)	1.9	74.6
Georgia	–	73	27	4.7	111.6	3.6	7.0	71.5	304.1	318.4	626.0	21.4	(NA)	(D)
Illinois	–	133	70	14.1	349.6	10.7	21.4	228.1	981.4	1 017.9	1 998.6	(D)	(NA)	(D)
Indiana	–	194	125	50.3	1 961.1	36.6	76.7	1 276.4	4 080.1	4 403.0	8 416.9	455.8	34.4	2 497.5
Iowa	–	49	27	4.7	122.3	3.9	7.7	93.8	414.8	338.2	757.4	16.9	4.1	356.4
Kansas	–	23	8	2.0	44.6	1.8	3.7	37.1	122.3	135.8	259.0	(D)	G	(D)
Kentucky	–	55	39	I	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
Louisiana	E5	19	3	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Maine	E8	11	3	C	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Maryland	–	26	8	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.1	G	(D)
Massachusetts	E1	34	11	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	G	(D)
Michigan	–	434	255	104.9	4 448.2	86.0	180.6	3 549.1	8 345.4	13 447.9	21 907.3	898.7	(NA)	(D)
Minnesota	E1	43	16	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	G	(D)
Mississippi	–	40	22	5.7	134.6	4.8	9.2	97.9	344.3	558.4	940.0	13.7	(NA)	(D)
Missouri	–	97	53	J	(D)	(D)	(D)	(D)	(D)	(D)	(D)	52.3	(NA)	(D)
Nebraska	–	15	7	2.4	54.9	2.1	4.1	41.8	239.5	159.5	399.8	(D)	2.1	194.6
Nevada	–	12	3	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	E	(D)
New Hampshire	–	4	1	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	G	(D)
New Jersey	E2	66	23	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
New York	–	109	39	J	(D)	(D)	(D)	(D)	(D)	(D)	(D)	77.4	25.0	1 836.6
North Carolina	–	83	50	12.6	359.2	10.1	20.6	252.3	1 061.3	1 501.9	2 553.8	92.5	(NA)	(D)
Ohio	–	247	146	55.4	2 236.4	44.0	92.4	1 710.4	5 107.2	8 356.7	13 591.2	1 205.2	(NA)	(D)
Oklahoma	–	52	15	H	(D)	(D)	(D)	(D)	(D)	(D)	(D)	13.4	(NA)	(D)
Oregon	–	48	12	1.6	49.3	1.1	2.1	31.1	85.0	129.7	212.4	(D)	1.3	55.1

See footnotes at end of table.

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Table 2. **Industry Statistics for Selected States: 1992 and 1987**—Con.

[Excludes data for auxiliaries. States with 100 employees or more are shown. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and geographic area		1992											1987	
		All establishments		All employees		Production workers								
	E[1]	Total (no.)	With 20 employees or more (no.)	Number[2] (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)	Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	All employees[2] (1,000)	Value added by manufacture (million dollars)
INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES—Con.														
Pennsylvania	–	88	35	8.5	293.5	6.0	11.9	205.0	690.7	556.8	1 245.6	31.9	8.1	558.2
Rhode Island	–	8	3	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	F	(D)
South Carolina	–	32	19	I	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
South Dakota	–	6	2	C	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.2	7.9
Tennessee	–	111	67	J	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
Texas	E1	173	55	5.6	137.9	4.0	8.3	82.8	230.1	426.0	652.4	28.7	4.1	226.5
Utah	–	18	5	H	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	F	(D)
Vermont	–	3	2	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Virginia	–	34	18	5.9	168.6	4.7	9.7	119.9	390.7	540.9	930.6	27.7	(NA)	(D)
Washington	E3	56	12	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	F	(D)
Wisconsin	–	66	36	9.7	318.2	8.0	14.8	246.2	787.9	1 140.2	1 927.4	49.3	8.5	772.9
INDUSTRY 3715, TRUCK TRAILERS														
United States	**–**	**339**	**157**	**23.4**	**565.9**	**18.7**	**38.4**	**397.2**	**1 093.5**	**2 459.0**	**3 545.5**	**30.9**	**27.5**	**1 130.8**
Alabama	–	13	8	1.4	33.2	1.2	2.5	24.3	65.8	145.4	210.9	.6	1.4	61.0
Arkansas	E5	7	2	C	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.2	(NA)	(D)
California	E2	28	13	.9	27.4	.5	1.0	13.2	23.0	80.3	103.2	1.0	2.1	102.2
Colorado	–	4	4	.3	7.3	.2	.4	3.8	17.0	15.3	33.2	(D)	E	(D)
Florida	E2	16	4	.6	12.4	.4	.9	8.2	17.3	40.1	55.7	(D)	E	(D)
Georgia	–	10	7	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	G	(D)
Idaho	–	4	3	.2	2.8	.1	.2	1.9	7.2	10.8	18.1	.1	(NA)	(NA)
Illinois	–	10	8	2.3	48.2	2.0	3.8	37.2	171.4	224.3	397.5	1.2	G	(D)
Indiana	–	19	8	4.1	107.9	3.6	7.6	89.8	213.3	578.9	793.6	9.9	G	(D)
Iowa	–	11	6	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.8	21.9
Kansas	E2	8	5	.2	4.9	.2	.4	3.8	10.0	10.6	21.1	(D)	E	(D)
Kentucky	–	2	1	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	E	(D)
Minnesota	–	5	3	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
Mississippi	–	2	2	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	E	(D)
Missouri	E1	11	4	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.2	57.4
Nebraska	–	7	4	.9	19.7	.7	1.4	13.5	44.0	89.0	132.9	(D)	F	(D)
New Jersey	E7	6	3	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	F	(D)
North Carolina	E1	9	2	.3	8.3	.2	.5	5.0	16.0	24.6	40.8	.5	E	(D)
North Dakota	–	2	2	C	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Ohio	–	12	5	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	F	(D)
Oklahoma	–	11	4	.4	8.1	.3	.6	5.5	10.6	19.8	30.3	.2	.4	14.7
Oregon	E3	10	4	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	E	(D)
Pennsylvania	–	19	11	1.2	28.9	.9	1.8	20.2	53.6	211.3	260.5	(D)	2.0	91.1
South Carolina	–	6	3	.1	2.5	.1	.2	1.6	3.9	5.3	9.3	.1	(NA)	(NA)
South Dakota	–	6	5	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.5	9.6
Tennessee	–	7	3	.6	13.6	.4	.9	9.3	26.5	46.3	72.6	(D)	F	(D)
Texas	E2	33	14	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.5	3.1	91.4
Utah	–	4	2	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	E	(D)
Virginia	–	4	1	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Washington	E1	9	6	.4	9.7	.3	.7	6.4	19.9	31.5	51.6	(D)	F	(D)
Wisconsin	–	16	7	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.8	1.5	67.9
INDUSTRY 3716, MOTOR HOMES														
United States	**–**	**145**	**83**	**16.1**	**367.3**	**13.1**	**24.9**	**246.2**	**842.9**	**2 063.3**	**2 960.9**	**19.0**	**15.1**	**688.6**
Alabama	–	3	3	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	E	(D)
California	–	17	12	2.3	49.6	2.0	3.9	36.0	131.5	315.7	440.5	2.9	2.6	129.6
Florida	–	4	3	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
Indiana	–	56	34	5.7	136.7	4.7	9.0	98.4	239.8	930.2	1 233.8	5.7	6.0	296.7
Iowa	–	3	3	H	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(D)
Michigan	–	6	5	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	F	(D)
Minnesota	E7	5	2	.2	3.4	.2	.3	2.3	6.9	14.2	21.3	(D)	(NA)	(NA)
Oklahoma	–	1	1	C	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Oregon	–	4	4	1.1	24.8	.9	1.9	15.8	53.5	119.2	171.1	(D)	F	(D)
Pennsylvania	–	3	2	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	F	(D)
Texas	–	9	4	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	E	(D)
Wisconsin	–	2	2	C	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)

Note: For qualifications of data, see footnotes on table 1a.

[1]Payroll and sales data for some 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 the items shown 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 for those States where estimated value of shipments data based on administrative-record data account for 10 percent or more of figure shown: E1—10 to 19 percent; E2—20 to 29 percent; E3—30 to 39 percent; E4—40 to 49 percent; E5—50 to 59 percent; E6—60 to 69 percent; E7—70 to 79 percent; E8—80 to 89 percent; E9—90 percent or more.

[2]Statistics for some producing States have been withheld to avoid disclosing data for individual companies. However, for States with 100 employees or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: C—100 to 249 employees; E—250 to 499 employees; F—500 to 999 employees; G—1,000 to 2,499 employees; H—2,500 to 4,999 employees; I—5,000 to 9,999 employees; J—10,000 to 24,999 employees; K—25,000 to 49,999 employees; L—50,000 to 99,999 employees; M—100,000 employees or more.

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Table 3a. **Summary Statistics for the Industry: 1992**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Motor vehicles and car bodies (SIC 3711)	Truck and bus bodies (SIC 3713)	Motor vehicle parts and accessories (SIC 3714)	Truck trailers (SIC 3715)	Motor homes (SIC 3716)
Companies ---- number	400	622	2 713	310	122
All establishments ---- number	456	676	3 246	339	145
With 1 to 19 employees ---- number	295	375	1 792	182	62
With 20 to 99 employees ---- number	69	210	750	103	46
With 100 employees or more ---- number	92	91	704	54	37
Employment and labor costs:					
Employees ---- 1,000	228.4	35.9	400.2	23.4	16.1
Compensation, total ---- mil dol	15 459.6	1 089.6	18 992.3	711.3	442.3
Annual payroll ---- mil dol	10 438.8	868.6	13 955.6	565.9	367.3
Fringe benefits ---- mil dol	5 020.8	221.0	5 036.8	145.4	75.0
Social Security and other legally required payments ---- mil dol	1 216.9	105.7	1 423.2	70.0	42.6
Employer voluntary payments ---- mil dol	3 804.0	115.3	3 613.6	75.4	32.4
Production workers:					
Average for year ---- 1,000	193.3	26.2	313.4	18.7	13.1
March ---- 1,000	188.5	26.2	309.6	17.7	12.8
May ---- 1,000	198.9	26.9	316.5	18.6	13.4
August ---- 1,000	183.1	26.5	310.7	19.2	13.3
November ---- 1,000	202.8	25.3	317.3	19.3	13.1
Hours ---- millions	397.3	52.4	647.0	38.4	24.9
Wages ---- mil dol	8 606.8	564.6	10 255.1	397.2	246.2
Cost of materials[1] ---- mil dol	107 636.6	2 817.5	43 951.9	2 459.0	2 063.3
Materials, parts, containers, etc., consumed[2] ---- mil dol	105 521.7	2 587.4	40 220.9	2 287.3	2 033.6
Resales ---- mil dol	1 426.5	163.6	2 235.4	139.5	14.9
Fuels ---- mil dol	202.9	15.9	242.7	5.1	4.1
Purchased electricity ---- mil dol	417.1	33.7	730.6	15.2	8.2
Contract work ---- mil dol	68.4	16.8	522.4	11.9	2.5
Quantity of electric energy used for heat and power:					
Purchased ---- mil kWh	8 448.0	678.8	13 302.0	259.2	120.4
Generated less sold ---- mil kWh	(D)	(D)	(D)	(D)	(D)
Total value of shipments ---- mil dol	152 948.5	4 594.7	75 070.7	3 545.5	2 960.9
Value added ---- mil dol	45 262.2	1 791.9	30 927.9	1 093.5	842.9
Inventories by stage of fabrication:					
Beginning of 1992 ---- mil dol	4 165.4	723.6	7 240.1	403.0	408.7
Finished goods ---- mil dol	683.9	129.4	2 027.6	77.4	166.6
Work in process ---- mil dol	1 503.9	261.7	2 186.4	75.2	52.6
Materials and supplies ---- mil dol	1 977.5	332.5	3 026.1	250.4	189.5
End of 1992 ---- mil dol	4 101.3	757.4	7 122.6	438.1	367.1
Finished goods ---- mil dol	644.5	136.9	1 872.8	77.8	101.9
Work in process ---- mil dol	1 493.6	268.8	2 150.4	81.7	62.6
Materials and supplies ---- mil dol	1 963.2	351.6	3 099.4	278.6	202.6

Note: For qualifications of data, see footnotes on table 1a.

[1]Data on purchased services for the repair of buildings and machinery and for communication services are not included in cost of materials, etc., but are shown in table 3c.
[2]Data on materials consumed by type are shown in table 7. Data on amount purchased or transferred from foreign sources are shown in table 3c.

Table 3b. **Gross Book Value of Depreciable Assets, Capital Expenditures, Retirements, Depreciation, and Rental Payments: 1992**

[Million dollars. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Motor vehicles and car bodies (SIC 3711)	Truck and bus bodies (SIC 3713)	Motor vehicle parts and accessories (SIC 3714)	Truck trailers (SIC 3715)	Motor homes (SIC 3716)
Gross book value of depreciable assets:					
Total:					
Beginning of year	28 364.3	1 174.1	32 427.8	585.8	391.2
New capital expenditures[1]	2 989.5	71.2	3 647.6	30.9	19.0
Used capital expenditures	(D)	2.3	199.3	8.1	2.8
Retirements	(D)	317.0	1 003.5	18.5	16.0
End of year	30 697.4	930.7	35 271.3	606.3	397.0
Buildings and other structures:					
Beginning of year	7 268.4	274.4	5 718.4	186.6	139.6
New capital expenditures	520.4	12.1	667.4	6.2	5.9
Used capital expenditures	(D)	.8	40.4	2.3	1.4
Retirements	(D)	8.3	27.4	3.4	3.4
End of year	7 745.3	278.9	6 398.8	191.8	143.4
Machinery and equipment:					
Beginning of year	21 095.9	899.7	26 709.4	399.2	251.6
New capital expenditures[1]	2 469.1	59.1	2 980.2	24.7	13.2
Used capital expenditures	(D)	1.6	158.8	5.8	1.4
Retirements	(D)	308.6	976.0	15.1	12.6
End of year	22 952.1	651.7	28 872.4	414.6	253.6
Depreciation charges during 1992:					
Total	1 729.4	60.3	2 187.6	48.0	31.3
Buildings and other structures	243.9	11.5	227.3	9.4	6.4
Machinery and equipment	1 485.4	48.8	1 960.3	38.6	24.9
Rental payments:					
Total	387.6	34.8	472.7	22.9	16.9
Buildings and other structures	217.0	22.0	223.7	15.9	13.8
Machinery and equipment	170.7	12.8	249.1	7.0	3.1

[1]Data on new machinery and equipment expenditures by type are provided in table 3c.

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Table 3c. **Supplemental Industry Statistics Based on Sample Estimates: 1992**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Motor vehicles and car bodies (SIC 3711)		Truck and bus bodies (SIC 3713)		Motor vehicle parts and accessories (SIC 3714)		Truck trailers (SIC 3715)		Motor homes (SIC 3716)	
	Amount (million dollars)	Relative standard error of estimate[1] (percent)	Amount (million dollars)	Relative standard error of estimate[1] (percent)	Amount (million dollars)	Relative standard error of estimate[1] (percent)	Amount (million dollars)	Relative standard error of estimate[1] (percent)	Amount (million dollars)	Relative standard error of estimate[1] (percent)
Purchased services:										
Cost of purchased services for the repair of–										
Buildings and other structures	64.8	(X)	4.4	(X)	118.5	(X)	2.5	(X)	1.3	(X)
Response coverage ratio (percent)[2]	95.8	(X)	79.8	(X)	92.1	(X)	81.1	(X)	84.7	(X)
Machinery	283.5	(X)	20.3	(X)	738.5	(X)	15.4	(X)	2.8	(X)
Response coverage ratio (percent)[2]	97.3	(X)	77.3	(X)	92.3	(X)	81.9	(X)	85.6	(X)
Other purchased services:										
Communications	15.6	(X)	8.8	(X)	62.9	(X)	4.2	(X)	2.9	(X)
Response coverage ratio (percent)[2]	74.8	(X)	80.6	(X)	85.0	(X)	83.6	(X)	85.3	(X)
Legal	12.7	(X)	8.4	(X)	305.4	(X)	4.9	(X)	3.0	(X)
Response coverage ratio (percent)[2]	93.9	(X)	82.6	(X)	90.7	(X)	83.6	(X)	81.6	(X)
Accounting and bookkeeping	14.0	(X)	54.2	(X)	25.3	(X)	1.7	(X)	1.1	(X)
Response coverage ratio (percent)[2]	91.1	(X)	81.7	(X)	89.6	(X)	83.6	(X)	84.5	(X)
Advertising	225.3	(X)	10.9	(X)	815.6	(X)	5.3	(X)	13.3	(X)
Response coverage ratio (percent)[2]	89.0	(X)	81.2	(X)	89.2	(X)	83.6	(X)	85.6	(X)
Software and other data processing	25.9	(X)	2.1	(X)	83.4	(X)	1.6	(X)	1.6	(X)
Response coverage ratio (percent)[2]	89.0	(X)	72.3	(X)	91.3	(X)	80.8	(X)	84.7	(X)
Refuse removal, including hazardous waste	71.5	(X)	6.2	(X)	216.9	(X)	3.0	(X)	2.6	(X)
Response coverage ratio (percent)[2]	97.0	(X)	78.1	(X)	93.3	(X)	81.9	(X)	78.2	(X)
New machinery and equipment expenditures	2 469.1	(X)	59.1	(X)	2 980.2	(X)	24.7	(X)	13.2	(X)
Automobiles, trucks, etc., for highway use	33.4	1	1.8	36	20.4	8	1.7	19	1.0	19
Computers and peripheral data processing equipment	46.3	1	4.2	19	73.3	3	3.0	5	1.0	19
All other	2 389.5	1	53.1	3	2 886.5	1	20.1	2	11.2	4
Adjustment ratio[3]	1.0	(X)	1.0	(X)	1.0	(X)	1.1	(X)	1.7	(X)
Cost of materials, components, parts, etc., used	105 521.7	(X)	2 587.4	(X)	40 220.9	(X)	2 287.3	(X)	2 033.6	(X)
Materials purchased or transferred from foreign sources[4]	(S)	(X)	46.2	12	4 700.8	3	47.0	5	38.7	3
Materials purchased or transferred from domestic sources	(S)	(X)	2 541.2	1	35 520.1	1	2 240.3	1	1 994.9	1
Adjustment ratio[3]	(S)	(X)	1.6	(X)	1.8	(X)	1.4	(X)	1.5	(X)

Note: The amounts shown for purchased services reflect only those services that establishments purchase from other companies. Amounts purchased by separate central admnistrative offices and services provided to establishments by central administrative offices are excluded.

[1]For description of relative standard error of estimate, see Qualifications of the Data in appendixes.

[2]A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight, see appendix B) for those ASM establishments that reported to the weighted total employment for all ASM establishments classified in the industry.

[3]Detail has been adjusted upwards to account for nonresponse. Inverse of the ratio shown represents a measure of the response of the inquiry. (See appendixes for further explanation.)

[4]Data may understate the true cost of imported parts, components, and supplies since some respondents do not know the origin of these materials. Includes cases where materials were purchased from secondary suppliers or where they were transferred from company-operated warehouses or other distribution points. Direct purchases from foreign suppliers and importers by domestic manufacturing establishments are believed to be reported accurately.

Table 4. **Industry Statistics by Employment Size of Establishment: 1992**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and employment size class	E[1]	All establishments (no.)	All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	End-of-year inventories (million dollars)
			Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)					
INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES												
Total	**–**	**456**	**228.4**	**10 438.8**	**193.3**	**397.3**	**8 606.8**	**45 262.2**	**107 636.6**	**152 948.5**	**2 989.5**	**4 101.3**
Establishments with an average of–												
1 to 4 employees	E9	171	.2	7.4	.2	.5	6.0	25.8	64.0	89.7	1.6	2.9
5 to 9 employees	E8	69	.4	10.7	.4	.7	8.7	38.5	94.9	133.5	2.5	4.4
10 to 19 employees	E7	55	.7	17.7	.6	1.1	13.4	54.3	129.5	183.6	3.2	8.6
20 to 49 employees	E5	41	1.2	32.0	1.0	2.0	23.7	65.5	199.7	261.3	4.5	19.1
50 to 99 employees	E5	28	2.1	54.6	1.7	3.5	39.0	197.9	389.0	583.8	7.6	40.4
100 to 249 employees	E1	16	2.5	68.5	1.8	3.9	48.1	165.6	370.2	526.8	3.5	76.6
250 to 499 employees	E1	8	2.9	101.0	2.0	4.2	64.8	292.6	856.8	1 136.5	74.6	149.9
500 to 999 employees	–	6	4.8	188.2	3.3	6.7	124.7	481.2	1 122.5	1 578.2	(D)	114.8
1,000 to 2,499 employees	–	25	41.0	1 891.7	34.5	70.6	1 543.1	11 495.4	24 098.6	35 623.9	245.1	1 079.6
2,500 employees or more	–	37	172.4	8 067.1	147.9	304.1	6 735.3	32 445.5	80 311.4	112 831.1	2 646.9	2 605.0
Covered by administrative records[2]	E9	138	.2	5.0	.2	.4	4.0	14.7	37.3	52.0	1.0	1.6
INDUSTRY 3713, TRUCK AND BUS BODIES												
Total	**E1**	**676**	**35.9**	**868.6**	**26.2**	**52.4**	**564.6**	**1 791.9**	**2 817.5**	**4 594.7**	**71.2**	**757.4**
Establishments with an average of–												
1 to 4 employees	E9	135	.3	4.8	.2	.4	3.2	11.9	15.0	26.9	.3	4.6
5 to 9 employees	E6	118	.8	15.9	.6	1.2	10.6	34.4	49.5	83.9	.8	14.2
10 to 19 employees	E2	122	1.7	38.6	1.2	2.4	23.3	80.1	97.4	177.6	1.7	26.2
20 to 49 employees	E2	141	4.5	106.6	3.3	6.5	66.7	197.2	294.9	492.9	4.7	80.7
50 to 99 employees	E1	69	4.9	114.7	3.8	7.6	75.0	276.0	317.0	595.4	4.2	103.2
100 to 249 employees	E1	65	10.2	238.0	7.5	14.6	151.6	417.8	731.5	1 142.6	11.9	218.6
250 to 499 employees	–	17	5.9	163.4	4.6	9.5	110.9	453.1	703.4	1 148.9	34.1	193.4
500 to 999 employees	–	6	7.6	186.6	5.1	10.3	123.2	321.6	608.8	926.4	13.6	116.5
1,000 to 2,499 employees	–	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Covered by administrative records[2]	E9	226	1.0	16.1	.8	1.4	10.8	35.4	49.4	84.8	1.0	14.3

See footnotes at end of table.

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Table 4. **Industry Statistics by Employment Size of Establishment: 1992**—Con.

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and employment size class	E[1]	All establishments (no.)	All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	End-of-year inventories (million dollars)
			Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)					
INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES												
Total	**–**	**3 246**	**400.2**	**13 955.6**	**313.4**	**647.0**	**10 255.1**	**30 927.9**	**43 951.9**	**75 070.7**	**3 647.6**	**7 122.6**
Establishments with an average of—												
1 to 4 employees	E6	832	1.4	33.3	1.1	2.2	24.6	85.4	123.1	208.5	10.1	23.2
5 to 9 employees	E7	493	3.3	72.4	2.6	5.2	53.3	137.4	209.7	346.6	15.5	40.0
10 to 19 employees	E3	467	6.5	143.3	4.8	9.6	94.2	269.9	427.8	699.5	37.7	101.4
20 to 49 employees	E1	477	14.9	346.0	10.8	21.6	205.1	776.3	995.7	1 767.6	60.6	262.1
50 to 99 employees	E1	273	19.6	455.0	14.8	30.1	282.8	1 069.2	1 296.9	2 350.5	92.9	334.4
100 to 249 employees	–	348	55.7	1 426.0	42.4	86.1	916.0	3 900.4	5 450.2	9 369.0	558.7	1 041.9
250 to 499 employees	–	200	68.6	1 890.3	53.5	109.1	1 312.3	4 942.9	6 188.6	11 108.5	403.2	1 180.1
500 to 999 employees	–	91	63.5	1 764.0	49.8	102.5	1 250.0	4 714.0	6 580.4	11 313.6	465.3	964.4
1,000 to 2,499 employees	–	43	166.6	7 825.3	133.5	280.5	6 116.8	15 032.4	22 679.4	37 906.9	818.6	3 175.0
2,500 employees or more	–	22	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1 185.1	(D)
Covered by administrative records[2]	E9	1 247	5.6	100.4	4.5	8.7	76.3	170.9	250.0	420.9	20.8	44.6
INDUSTRY 3715, TRUCK TRAILERS												
Total	**–**	**339**	**23.4**	**565.9**	**18.7**	**38.4**	**397.2**	**1 093.5**	**2 459.0**	**3 545.5**	**30.9**	**438.1**
Establishments with an average of—												
1 to 4 employees	E9	70	.1	2.5	.1	.2	1.6	4.0	10.2	14.0	.1	2.3
5 to 9 employees	E8	58	.4	7.4	.3	.6	4.7	10.0	27.9	37.8	.3	5.5
10 to 19 employees	E3	54	.7	15.0	.6	1.1	9.7	21.3	49.2	70.4	.7	12.3
20 to 49 employees	E2	71	2.3	54.8	1.7	3.5	34.0	89.6	151.5	242.3	2.4	36.4
50 to 99 employees	–	32	2.3	54.9	1.7	3.6	37.3	110.2	196.0	305.2	2.9	49.7
100 to 249 employees	–	28	4.2	103.7	3.2	6.5	66.2	206.5	473.5	683.0	4.7	80.5
250 to 499 employees	–	18	6.0	140.7	4.8	9.0	96.4	259.1	629.5	879.5	6.0	110.9
500 to 999 employees	–	6	7.4	187.0	6.2	13.9	147.3	392.7	921.1	1 313.2	13.8	140.4
1,000 to 2,499 employees	–	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Covered by administrative records[2]	E9	122	.6	10.4	.5	.9	7.0	12.8	35.1	47.9	.5	7.1
INDUSTRY 3716, MOTOR HOMES												
Total	**–**	**145**	**16.1**	**367.3**	**13.1**	**24.9**	**246.2**	**842.9**	**2 063.3**	**2 960.9**	**19.0**	**367.1**
Establishments with an average of—												
1 to 4 employees	E8	25	(Z)	.7	(Z)	.1	.4	1.5	4.0	5.5	.1	.8
5 to 9 employees	E7	19	.1	2.3	.1	.2	1.5	4.8	12.1	16.9	.2	2.6
10 to 19 employees	E2	18	.2	4.2	.2	.4	2.8	8.8	35.6	44.5	.2	3.3
20 to 49 employees	E3	28	.9	15.7	.7	1.3	9.6	44.9	60.6	109.0	.7	10.3
50 to 99 employees	E2	18	1.2	22.1	.8	1.6	12.4	54.5	73.6	129.1	1.0	14.8
100 to 249 employees	–	19	3.0	67.7	2.3	4.9	40.3	120.5	319.4	438.8	3.5	82.3
250 to 499 employees	–	13	4.5	107.0	4.0	7.5	82.9	227.3	941.5	1 213.9	4.8	130.4
500 to 999 employees	–	3	6.1	147.6	4.9	9.1	96.3	380.5	616.6	1 003.2	8.7	122.7
1,000 to 2,499 employees	–	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2,500 employees or more	–	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Covered by administrative records[2]	E9	39	.1	2.1	.1	.2	1.4	4.0	11.0	15.0	.2	2.2

Note: For qualifications of data, see footnotes on table 1a. Data shown as (D) are included in underscored figures above.

[1]Payroll and sales data for some small single-establishment manufacturing 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 the items shown 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 for those employment-size classes where estimated data based on administrative-record data account for 10 percent or more of figures shown: E1—10 to 19 percent; E2—20 to 29 percent; E3—30 to 39 percent; E4—40 to 49 percent; E5—50 to 59 percent; E6—60 to 69 percent; E7—70 to 79 percent; E8—80 to 89 percent; E9—90 percent or more.

[2]Report forms were not mailed to small single-establishment companies with up to 20 employees (cutoff varied by industry). Payroll and sales data for 1992 were obtained from administrative records supplied by other agencies of the Federal Government. Those data were then used in conjunction with industry averages to estimate the items shown. Data are also included in respective employment-size classes shown.

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Table 5a. Industry Statistics by Industry and Primary Product Class Specialization: 1992

[Table presents selected statistics for establishments according to their degree of specialization in products primary to their industry. Measures of plant specialization shown are (1) industry specialization: ratio of primary product shipments to total product shipments (primary plus secondary, excluding miscellaneous receipts) for the establishment; and (2) product class specialization: ratio of largest primary product class shipments to total product shipments (primary plus secondary, excluding miscellaneous receipts) for the establishment. See appendix for method of computing ratios. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry or product class code	Industry or primary product class	All establishments (number)	All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)
			Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
3711	**Motor vehicles and car bodies:**										
	All establishments in industry	456	228.4	10 438.8	193.3	397.3	8 606.8	45 262.2	107 636.6	152 948.5	2 989.5
	Establishments with this product class primary:										
37111	Passenger cars, knockdown or assembled, chassis for sale separately and passenger car bodies	58	134.4	6 247.9	115.1	239.6	5 201.7	23 312.9	61 977.6	85 420.8	2 333.7
37113	Buses, including military and firefighting vehicles (chassis of own manufacture)	18	4.9	155.6	3.3	6.2	88.3	396.9	663.3	1 038.2	6.0
37114	Combat vehicles and wheeled tactical vehicles or carriers	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
37116	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 10,000 pounds or less	20	55.5	2 786.0	47.9	101.6	2 363.1	18 661.4	36 141.2	54 709.0	453.4
37117	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 10,001 to 19,500 pounds	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
37118	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 19,501 to 33,000 pounds	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
37119	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 33,001 pounds or more	17	10.8	401.5	8.4	16.9	292.8	999.4	4 124.2	5 101.3	20.9
3713	**Truck and bus bodies:**										
	All establishments in industry	676	35.9	868.6	26.2	52.4	564.6	1 791.9	2 817.5	4 594.7	71.2
	Establishments with this product class primary:										
37131	Truck, bus, and other vehicle bodies (except passenger car bodies) for sale separately	228	19.1	487.9	14.3	28.9	315.0	1 019.4	1 319.2	2 328.9	49.6
37132	Complete vehicles produced on purchased chassis	97	10.8	251.5	7.4	14.9	165.2	499.6	1 058.1	1 562.4	15.1
3714	**Motor vehicle parts and accessories:**										
	All establishments in industry	3 246	400.2	13 955.6	313.4	647.0	10 255.1	30 927.9	43 951.9	75 070.7	3 647.6
	Establishments with this product class primary:										
37142	Gasoline engines and gasoline engine parts for motor vehicles, new	214	67.6	2 745.3	54.1	115.3	2 117.6	5 885.0	10 494.5	16 453.1	737.5
37144	Filters for internal combustion engines and motor vehicles, new	46	13.9	337.5	10.8	22.1	228.5	1 370.5	980.6	2 352.6	40.2
37145	Exhaust system parts, new	60	16.6	524.1	13.4	25.8	373.6	1 224.6	2 565.6	3 781.2	124.8
37146	Drive train components, new, except wheels and brakes	181	91.5	4 107.9	71.1	152.3	3 077.7	8 200.5	10 965.2	19 124.2	1 358.8
37147	Motor vehicle wheels, new	49	13.1	346.2	10.8	23.8	251.3	900.0	964.0	1 860.3	96.3
37148	Brake parts and assemblies, new	123	27.5	847.3	21.6	43.0	610.9	2 045.0	3 693.4	5 777.1	205.5
37149	All other motor vehicle parts and accessories, new, n.e.c.	509	127.2	4 087.2	99.5	200.8	2 953.5	9 302.0	11 824.5	21 281.9	937.9
3714A	Rebuilt parts for motor vehicles, excluding carburetors and engine electrical equipment	153	15.0	349.0	10.8	21.8	210.2	841.3	820.3	1 639.5	22.2
3715	**Truck trailers:**										
	All establishments in industry	339	23.4	565.9	18.7	38.4	397.2	1 093.5	2 459.0	3 545.5	30.9
	Establishments with this product class primary:										
37151	Truck trailers and chassis, with axle rating of 10,000 pounds or more	134	20.0	494.2	15.9	32.6	344.9	980.9	2 131.1	3 099.9	26.9
37152	Truck trailers and chassis, with axle rating of less than 10,000 pounds	18	1.5	33.2	1.3	2.8	25.7	51.0	188.1	244.6	2.0
3716	**Motor homes:**										
	All establishments in industry	145	16.1	367.3	13.1	24.9	246.2	842.9	2 063.3	2 960.9	19.0

Note: For qualifications of data, see footnotes on table 1a.

Table 5b. Industry–Product Analysis—Value of Industry and Primary Product Shipments; Specialization and Coverage Ratios: 1992 and Earlier Census Years

[Million dollars. An establishment is assigned to an industry based on shipment values of products representing largest amount considered primary to an industry. Frequently, establishment shipments comprise mixtures of products assigned to an industry (primary), those considered primary to other industries (secondary), and receipts for activities such as merchandising or contract work (total miscellaneous receipts). Subtotals for total value of shipments show this product pattern for an industry. Primary products specialization ratio is the primary products value of shipments divided by the sum of primary products value of shipments plus secondary products value of shipments. The extent of which an industry's primary products are shipped by establishments classified both in and out of an industry is the coverage ratio and is calculated by dividing the primary products value of shipments by the value of primary products shipments made in all industries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry	1992	1987	1982
INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES			
Total value of shipments	152 948.5	133 345.6	70 739.7
Primary products value of shipments	147 282.7	128 701.2	66 413.7
Secondary products value of shipments	4 015.3	3 893.2	3 836.8
Total miscellaneous receipts	1 650.5	751.2	489.2
Value of resales	1 561.2	654.5	435.5
Contract receipts	3.2	4.9	(D)
Other miscellaneous receipts	86.2	91.8	(D)
Sales of scrap and refuse	(D)	25.7	(D)
Receipts for repair work	(D)	11.6	(D)
Other miscellaneous receipts	(D)	54.5	(D)
Other miscellaneous receipts, n.s.k.	(D)	(NA)	(NA)
Primary products specialization ratio	97	97	95
Value of primary products shipments made in all industries	147 515.1	130 856.8	66 705.6
Value of primary products shipments made in this industry	147 282.7	128 701.3	66 413.7
Value of primary products shipments made in other industries	232.4	2 155.5	291.9
Coverage ratio	99	98	99

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Table 5b. Industry–Product Analysis—Value of Industry and Primary Product Shipments; Specialization and Coverage Ratios: 1992 and Earlier Census Years—Con.

[Million dollars. An establishment is assigned to an industry based on shipment values of products representing largest amount considered primary to an industry. Frequently, establishment shipments comprise mixtures of products assigned to an industry (primary), those considered primary to other industries (secondary), and receipts for activities such as merchandising or contract work (total miscellaneous receipts). Subtotals for total value of shipments show this product pattern for an industry. Primary products specialization ratio is the primary products value of shipments divided by the sum of primary products value of shipments plus secondary products value of shipments. The extent of which an industry's primary products are shipped by establishments classified both in and out of an industry is the coverage ratio and is calculated by dividing the primary products value of shipments by the value of primary products shipments made in all industries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry	1992	1987	1982
INDUSTRY 3713, TRUCK AND BUS BODIES			
Total value of shipments	4 594.7	4 588.7	2 463.6
Primary products value of shipments	4 012.9	4 181.1	2 176.3
Secondary products value of shipments	275.5	184.7	104.5
Total miscellaneous receipts	306.3	222.9	182.8
Value of resales	195.3	120.4	82.1
Contract receipts	39.1	7.8	8.5
Other miscellaneous receipts	71.9	94.7	92.2
Receipts for repair work	37.2	40.2	40.3
Other miscellaneous receipts	27.5	54.5	51.9
Other miscellaneous receipts, n.s.k.	7.1	(NA)	(NA)
Primary products specialization ratio	94	96	95
Value of primary products shipments made in all industries	4 153.4	4 482.4	2 304.4
Value of primary products shipments made in this industry	4 012.9	4 181.1	2 176.3
Value of primary products shipments made in other industries	140.5	301.3	128.2
Coverage ratio	97	93	94
INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES			
Total value of shipments	75 070.7	62 068.4	36 293.1
Primary products value of shipments	69 344.9	54 972.5	33 111.2
Secondary products value of shipments	2 248.9	5 218.0	2 587.0
Total miscellaneous receipts	3 476.9	1 877.9	594.9
Value of resales	3 060.1	1 557.6	441.7
Contract receipts	86.9	89.9	18.9
Other miscellaneous receipts	329.8	230.4	134.3
Sales of scrap and refuse	230.8	130.8	92.2
Receipts for research and development	25.8	24.5	3.5
Other miscellaneous receipts	(D)	75.1	34.2
Other miscellaneous receipts, n.s.k.	(D)	(NA)	(NA)
Primary products specialization ratio	97	91	93
Value of primary products shipments made in all industries	74 594.0	60 816.0	38 414.2
Value of primary products shipments made in this industry	69 344.9	54 972.5	33 111.2
Value of primary products shipments made in other industries	5 249.1	5 843.5	5 303.0
Coverage ratio	93	90	86
INDUSTRY 3715, TRUCK TRAILERS			
Total value of shipments	3 545.5	3 433.5	1 820.6
Primary products value of shipments	3 089.5	3 102.0	1 585.7
Secondary products value of shipments	226.1	135.8	137.9
Total miscellaneous receipts	230.0	195.7	97.0
Value of resales	165.1	129.0	55.2
Contract receipts	9.4	(D)	(D)
Other miscellaneous receipts	55.5	(D)	(D)
Receipts for repair work	31.7	(D)	(D)
Other miscellaneous receipts	12.0	(D)	(D)
Other miscellaneous receipts, n.s.k.	11.8	(NA)	(D)
Primary products specialization ratio	93	96	92
Value of primary products shipments made in all industries	3 168.1	3 138.1	1 667.5
Value of primary products shipments made in this industry	3 089.5	3 102.0	1 585.7
Value of primary products shipments made in other industries	78.7	36.1	81.7
Coverage ratio	98	99	95
INDUSTRY 3716, MOTOR HOMES			
Total value of shipments	2 960.9	2 486.8	952.7
Primary products value of shipments	2 696.3	2 282.9	908.6
Secondary products value of shipments	126.6	124.7	25.9
Total miscellaneous receipts	138.1	79.2	18.1
Value of resales	66.4	41.6	1.3
Contract receipts	(D)	(D)	(D)
Other miscellaneous receipts	(D)	(D)	(D)
Primary products specialization ratio	96	95	97
Value of primary products shipments made in all industries	2 772.5	2 373.5	1 035.7
Value of primary products shipments made in this industry	2 696.3	2 282.9	908.6
Value of primary products shipments made in other industries	76.2	90.6	127.1
Coverage ratio	97	96	88

Note: For qualifications of data, see footnotes on table 1a.

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Table 6a. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1992 and 1987

[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. For further explanation, see Value of Shipments in appendixes. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	1992			1987		
		Number of companies with shipments of $100,000 or more	Product shipments[1]		Number of companies with shipments of $100,000 or more	Product shipments[1]	
			Quantity[2]	Value (million dollars)		Quantity[2]	Value (million dollars)
3711– —	**MOTOR VEHICLES AND CAR BODIES**						
	Total	**(NA)**	**(X)**	**147 515.1**	**(NA)**	**(X)**	**130 856.8**
37111	Passenger cars, knockdown or assembled, chassis for sale separately and passenger car bodies	(NA)	(X)	84 064.3	(NA)	(X)	79 853.3
37111 11	Complete vehicles, knockdown or assembled thousands	25			20	[3]7 258.3	[3]79 835.3
37111 51	Chassis for sale separately thousands	11	(S)	84 019.9	5	([3])	([3])
37111 71	Passenger car bodies[4] thousands	4			4	(D)	([5])
37111 00	Passenger cars, knockdown or assembled, chassis for sale separately and passenger car bodies, n.s.k.	(NA)	(X)	44.4	(NA)	(X)	17.9
37113	Buses, including military and firefighting vehicles (chassis of own manufacture)	(NA)	(X)	1 073.4	(NA)	(X)	1 198.2
37113 04	Buses, including military (except trolley buses)[4] thousands	11	(S)	920.2	(NA)	21.8	1 066.4
37113 03	Firefighting vehicles thousands	11	(S)	115.4	8	(S)	79.2
37113 00	Buses, including military and firefighting vehicles (chassis of own manufacture), n.s.k.	(NA)	(X)	37.8	(NA)	(X)	52.6
37114	Combat vehicles and wheeled tactical vehicles or carriers	(NA)	(X)	(D)	(NA)	(X)	([5])
37114 00	Military vehicles, wheeled tactical vehicles or carriers, excluding tanks and self-propelled weapons thousands	4	(D)	(D)	6	(D)	([5])
37116	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 10,000 pounds or less	(NA)	(X)	49 234.4	(NA)	(X)	[6]47 701.1
37116 00	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 10,000 pounds or less[4] thousands	9	(S)	49 234.4	(NA)	(NA)	[6]47 701.1
37117	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 10,001 to 19,500 pounds	(NA)	(X)	([7])	(NA)	(X)	([6])
37117 00	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 10,001 to 19,500 pounds[4] thousands	6	(D)	([8])	(NA)	(NA)	([6])
37118	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 19,501 to 33,000 pounds	(NA)	(NA)	[7]4 685.6	(NA)	(X)	([6])
37118 00	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 19,501 to 33,000 pounds[4] thousands	6	(NA)	[8]4 685.6	(NA)	(NA)	([6])
37119	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 33,001 pounds or more	(NA)	(X)	6 321.8	(NA)	(X)	([6])
37119 00	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 33,001 pounds or more[4] thousands	16	(S)	6 321.8	(NA)	(NA)	([6])
37110	Motor vehicles and car bodies, n.s.k.	(NA)	(X)	(D)	(NA)	(X)	[5]2 104.2
37110 00	Motor vehicles and car bodies, n.s.k.[9]	(NA)	(X)	(D)	(NA)	(X)	[5]1 972.4
37110 02	Motor vehicles and car bodies, n.s.k.[10]	(NA)	(X)	52.0	(NA)	(X)	131.8
3713– —	**TRUCK AND BUS BODIES**						
	Total	**(NA)**	**(X)**	**4 153.4**	**(NA)**	**(X)**	**4 482.4**
37131	Truck, bus, and other vehicle bodies (except passenger car bodies) for sale separately	(NA)	(X)	2 150.6	(NA)	(X)	2 735.4
37131 01	Bus bodies thousands	13	*22.1	346.1	11	*29.0	316.6
37131 02	Truck cabs thousands	21	(S)	523.7	12	(S)	158.9
	Truck and other vehicle bodies:						
37131 12	Vans with unit body-cab[4] thousands	16	(S)	116.2	(NA)	(D)	(D)
	Vans with separate cab:						
37131 15	Refrigerated (except food service) thousands	7	(S)	24.1	15	*3.9	48.0
37131 16	Food service thousands	10	(S)	48.5	10	*4.3	39.0
37131 17	Other thousands	28	28.7	133.0	35	*22.6	108.0
37131 21	Tank thousands	15	(S)	18.1	12	**9.6	69.0
	Garbage and refuse (packer-types):						
37131 31	Front loading thousands	5	(D)	([11])	5	.9	31.2
37131 32	Rear loading thousands	4	*2.0	46.7	9	4.2	80.5
37131 35	Side loading thousands	4	(S)	27.2	7	(S)	20.4
37131 39	Other thousands	9	(NA)	[11]84.5	7	(S)	6.0
37131 43	Beverage thousands	6	(S)	39.8	7	*1.8	22.9
37131 53	Dump thousands	52	(S)	112.2	50	(S)	140.8
37131 55	Stake and platform thousands	42	(S)	43.0	43	**28.7	45.6
37131 61	Utility line service thousands	36	(S)	102.9	38	(S)	76.1
37131 62	Other mobile service types thousands	15	(S)	18.2	10	(S)	86.4
37131 63	Wrecker thousands	12	(S)	70.3	5	1.4	13.9
37131 71	Other truck and vehicle bodies, except passenger cars[4] thousands	68	(S)	271.9	(NA)	(D)	(D)
37131 00	Truck, bus, and other vehicle bodies (except passenger car bodies) for sale separately, n.s.k.	(NA)	(X)	124.3	(NA)	(X)	133.4
37132	Complete vehicles produced on purchased chassis	(NA)	(X)	1 521.0	(NA)	(X)	1 158.5
37132 01	Buses thousands	13	(S)	315.0	9	(S)	151.8
	Trucks and other vehicles:						
37132 11	Ambulance and rescue vehicles[4] thousands	17	(S)	145.4	(NA)	(NA)	([12])
37132 13	Vans[4] thousands	10	(S)	14.9	(NA)	(NA)	([12])
37132 15	Tank thousands	11	(S)	50.9	8	(S)	42.9
37132 17	Beverage thousands	3	(D)	(D)	4	(S)	26.2
37132 18	Dump thousands	6	**.9	11.5	6	*1.7	20.8
37132 25	Firefighting thousands	28	(S)	331.0	25	(S)	306.9
37132 26	Utility line service thousands	9	(D)	(D)	11	*1.4	62.0
37132 27	Other mobile service types thousands	14	(S)	73.8	6	(S)	73.9
37132 39	Other trucks and complete vehicles produced on purchased chassis[4] thousands	30	(S)	395.1	(NA)	(NA)	[12]382.6
37132 00	Complete vehicles produced on purchased chassis, n.s.k.	(NA)	(X)	171.3	(NA)	(X)	91.4

See footnotes at end of table.

TIPS [UPF] BATCH_1658 [EISS,BA_TAYLOR] EISS 3/13/95 1:05 PM MACHINE: EPCV20 DATA:NONE TAPE: NOreel FRAME: 11
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Table 6a. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1992 and 1987—Con.

[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. For further explanation, see Value of Shipments in appendixes. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	1992			1987		
		Number of companies with shipments of $100,000 or more	Product shipments[1]		Number of companies with shipments of $100,000 or more	Product shipments[1]	
			Quantity[2]	Value (million dollars)		Quantity[2]	Value (million dollars)
3713– —	**TRUCK AND BUS BODIES**—Con.						
37130	Truck and bus bodies, n.s.k.	(NA)	(X)	481.8	(NA)	(X)	588.5
37130 00	Truck and bus bodies, n.s.k.[9]	(NA)	(X)	397.1	(NA)	(X)	387.5
37130 02	Truck and bus bodies, n.s.k.[10]	(NA)	(X)	84.8	(NA)	(X)	201.1
3714– —	**MOTOR VEHICLE PARTS AND ACCESSORIES**						
	Total	**(NA)**	**(X)**	**74 594.0**	**(NA)**	**(X)**	**60 816.0**
37142	Gasoline engines and gasoline engine parts for motor vehicles, new	(NA)	(X)	17 157.0	(NA)	(X)	14 550.5
37142 01	Gasoline engines, new (with or without cylinder heads, fuel pumps, water pumps, and other standard accessories) millions	18	10.0	10 501.4	10	8.0	8 979.0
37142 06	Intake manifolds millions	12	(S)	148.5	8	*1.4	58.7
37142 07	Exhaust manifolds millions	15	6.4	148.3	12	8.8	172.5
37142 08	Crankshafts, engine millions	10	(S)	60.2	17	(S)	61.2
37142 09	Camshafts, engine millions	11	**4.8	131.3	12	6.1	169.7
37142 15	Rocker arms and parts	13	(X)	55.7	8	(X)	43.8
37142 16	Valve guides, seats, and tappets	15	(X)	219.0	8	(X)	157.6
37142 18	Fuel injection systems millions	24	38.2	1 055.2	10	19.0	775.7
37142 17	Flywheels and flexplates[4] millions	10	(S)	36.1	(NA)	(NA)	(13)
37142 22	Timing gears, sprockets, and chains[4] millions	12	(S)	87.7	(NA)	(NA)	(13)
	Engine bearings (halves):						
37142 24	Main	8	(X)	96.7	4	(X)	(13)
37142 25	Connecting rod	7	(X)	90.2	10	(X)	67.6
37142 26	Other (balance shaft, camshaft, etc.)	11	(X)	(D)	6	(X)	15.6
	Oil pumps, new:						
37142 27	Engine millions	12	(S)	83.4	14	**9.0	87.1
37142 28	Power steering millions	5	(D)	(D)	4	(D)	(13)
37142 31	Fuel pump assemblies (excluding kits) millions	12	(S)	640.1	18	175.5	614.3
37142 32	Water pump assemblies (excluding kits) millions	14	(S)	137.8	9	(D)	(13)
37142 34	Engine cooling fans (including hubs and clutches) millions	10	(S)	140.4	9	6.2	48.6
37142 35	Radiators, complete millions	25	(S)	780.1	17	**16.1	851.2
37142 36	Radiator shells and cores	15	(X)	70.4	12	(X)	112.8
37142 37	Thermostats (engine cooling system)[4] millions	4	(D)	(D)	(NA)	(D)	(13)
37142 41	PCV (positive crankcase ventilation) valves millions	7	23.8	18.0	9	*41.3	21.0
37142 49	All other parts and accessories for gasoline automotive engines[4]	107	(X)	1 797.5	(NA)	(X)	13 2 183.8
37142 00	Gasoline engines and gasoline engine parts for motor vehicles, new, n.s.k.	(NA)	(X)	120.8	(NA)	(X)	130.3
37144	Filters for internal combustion engines and motor vehicles, new	(NA)	(X)	2 154.2	(NA)	(X)	1 684.7
	Oil:						
37144 01	Light-duty (car and light truck) millions	13	*404.8	664.8	15	**317.8	586.9
37144 02	Heavy-duty millions	9	(S)	289.0	10	**70.4	183.8
	Fuel:						
37144 04	Light-duty (car and light truck) millions	17	135.6	205.9	17	**63.1	80.8
37144 05	Heavy-duty millions	9	(S)	157.3	9	**70.6	81.0
	Air:						
37144 07	Light-duty (car and light truck) millions	18	240.3	267.5	12	293.8	442.0
37144 08	Heavy-duty millions	12	(S)	330.1	11	(S)	195.6
37144 09	Other filters, including coolant and hydraulic	13	(X)	234.9	11	(X)	66.9
37144 00	Filters for internal combustion engines and motor vehicles, new, n.s.k.	(NA)	(X)	4.6	(NA)	(X)	47.8
37145	Exhaust system parts, new	(NA)	(X)	3 187.6	(NA)	(X)	2 579.1
37145 01	Mufflers, including standard, sports or glass pack, and resonators millions	27	(S)	924.1	23	(S)	661.4
37145 02	Pipes, including exhaust, intermediate, connecting, crossover, tail, and side pipes	32	(X)	627.6	19	(X)	481.6
37145 03	Catalytic converters millions	15	(S)	1 622.6	13	97.6	1 384.5
37145 00	Exhaust system parts, new, n.s.k.	(NA)	(X)	13.3	(NA)	(X)	51.7
37146	Drive train components, new, except wheels and brakes	(NA)	(X)	19 632.6	(NA)	(X)	15 820.6
	Transmissions (except auxiliary and parts):						
	Car and light truck type:						
37146 03	Manual	11	(X)	329.1	6	(X)	350.0
37146 05	Automatic	16	(X)	4 435.3	13	(X)	(D)
	Heavy truck and bus type:						
37146 13	Manual	10	(X)	560.0	10	(X)	558.8
37146 15	Automatic	6	(X)	(D)	4	(X)	(D)
37146 23	Parts for manual transmissions	22	(X)	194.6	5	(X)	127.5
37146 25	Parts for automatic transmissions	33	(X)	1 807.6	23	(X)	1 492.0
37146 28	Transaxles	14	(X)	(D)	3	(X)	(D)
37146 31	Clutch disc and facing assemblies	22	(X)	389.6	14	(X)	176.6
37146 33	Gear shifters	13	(X)	268.6	6	(X)	21.0
37146 35	Drive shafts	19	(X)	851.5	8	(X)	423.4
37146 37	Universal joints	10	(X)	(D)	11	(X)	389.2
37146 41	Axles and axle parts	43	(X)	5 828.3	35	(X)	4 485.1
37146 43	Wheel hubs, sold separately	11	(X)	128.5	8	(X)	117.4
37146 49	Other	58	(X)	1 937.5	27	(X)	921.9
37146 00	Drive train components, new, except wheels and brakes, n.s.k.	(NA)	(X)	108.3	(NA)	(X)	r90.8

See footnotes at end of table.

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TSF:37A_92.DAT;2 3/13/95 13:04:29 UTF:37A_93.DAT;2 3/13/95 13:04:29 META:TIPS96-13041978.DAT;1 3/13/95 13:05:26

Table 6a. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1992 and 1987—Con.

[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. For further explanation, see Value of Shipments in appendixes. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	1992			1987		
		Number of companies with shipments of $100,000 or more	Product shipments[1]		Number of companies with shipments of $100,000 or more	Product shipments[1]	
			Quantity[2]	Value (million dollars)		Quantity[2]	Value (million dollars)
3714– –	**MOTOR VEHICLE PARTS AND ACCESSORIES**—Con.						
37147	Motor vehicle wheels, new	(NA)	(X)	1 943.2	(NA)	(X)	1 372.8
	Car and light truck type:						
37147 01	Steel millions	14	(D)	(14)	16	49.9	642.5
37147 05	Aluminum millions	20	**16.7	847.9	9	*9.6	340.7
37147 07	Other, including combination millions	3	(NA)	14731.4	8	(X)	87.0
37147 14	Heavy truck and bus type, including those for truck trailers and trailer coaches millions	10	(S)	331.1	13	*21.3	288.1
37147 00	Motor vehicle wheels, new, n.s.k.	(NA)	(X)	32.8	(NA)	(X)	14.5
37148	Brake parts and assemblies, new	(NA)	(X)	6 010.6	(NA)	(X)	3 876.6
	Brake cylinders, new:						
37148 01	Wheel, sold separately millions	8	(S)	94.7	7	(S)	124.3
37148 02	Master, sold separately millions	8	(S)	315.6	7	(S)	251.2
37148 03	Brake valves millions	7	(D)	(D)	4	**9.9	115.9
37148 07	Brake assemblies (drum), including backing plates, shoes, linings (except asbestos), cylinders, etc., if sold together millions	24	(S)	429.9	14	(S)	338.6
37148 09	Brake assemblies (disc/ caliper), including rotors, calipers, pads (except asbestos), cylinders, etc., if sold together millions	30	(S)	1 356.1	15	32.1	1 223.4
37148 11	Brake drums (with or without hub), sold separately millions	15	(S)	358.5	18	21.5	353.6
37148 13	Brake rotors/ discs (with or without hub), sold separately millions	19	(S)	347.4	10	15.0	207.8
37148 15	Brake shoes (with or without lining), sold separately millions	19	(S)	161.1	12	24.5	151.8
37148 17	Metallic or semimetallic brake linings, except asbestos millions	25	(S)	417.3	14	(S)	61.0
	Brake power actuation units:						
37148 21	Air millions	7	(S)	102.7	8	(S)	(15)
37148 23	Hydraulic millions	6	(D)	(D)	3	(S)	15111.0
37148 25	Vacuum millions	6	(D)	(D)	5	11.3	235.5
37148 27	Other brake parts	53	(X)	1 389.9	32	(X)	574.3
37148 00	Brake parts and assemblies, new, n.s.k.	(NA)	(X)	273.8	(NA)	(X)	r128.2
37149	All other motor vehicle parts and accessories, new, n.e.c.	(NA)	(X)	20 509.5	(NA)	(X)	16 928.6
37149 01	Bumper assemblies, bumpers, and parts	43	(X)	912.2	31	(X)	764.1
37149 02	Automotive frames millions	18	(S)	887.6	8	(D)	(16)
37149 03	Fuel tanks millions	15	24.9	407.8	10	9.7	251.9
37149 04	Heaters, heater cores, and other heater parts millions	21	(X)	320.8	21	(X)	599.2
37149 05	Shock absorbers millions	17	(S)	753.5	9	(S)	681.8
37149 06	Tie rod ends	13	(X)	185.1	8	(X)	222.7
37149 07	Steering idler arms, drag links, and control arms	21	(X)	407.2	18	(X)	511.4
37149 08	Ball joints millions	14	(S)	179.8	10	(S)	189.7
37149 09	Automotive air-conditioning hose assemblies millions	18	(S)	437.3	11	(S)	214.1
37149 11	Automotive power steering hose assemblies millions	10	(S)	91.5	6	(S)	97.0
37149 12	Automotive brake hose assemblies millions	4	(S)	73.7	5	(S)	103.7
37149 13	Cruise control units millions	13	*14.2	229.3	8	9.1	151.6
37149 16	Windshield wiper blades millions	6	(S)	196.6	7	60.2	113.6
37149 17	Windshield washer pumps millions	7	(S)	40.2	5	5.9	25.3
37149 20	Steering wheels, columns, and gearboxes	24	(X)	1 330.4	16	(X)	982.3
37149 22	Convertible tops millions	12	(S)	191.5	12	(S)	76.2
37149 23	Sunroofs and parts	10	(X)	38.4	8	(X)	46.1
37149 25	Fifth wheels millions	6	(S)	109.2	8	**130.7	71.3
37149 31	Automotive air bag assemblies and parts thereof[4] millions	22	(S)	1 582.1	(NA)	(NA)	(16)
37149 41	All other motor vehicle parts and accessories for cars, trucks, and buses[4]	365	(X)	11 281.0	(NA)	(X)	16111 101.4
37149 00	All other motor vehicle parts and accessories, new, n.e.c., n.s.k.	(NA)	(X)	854.1	(NA)	(X)	r725.2
3714A	Rebuilt parts for motor vehicles, excluding carburetors and engine electrical equipment	(NA)	(X)	1 379.8	(NA)	(X)	1 156.5
3714A 02	Fuel pumps millions	6	(S)	1.9	7	.7	8.6
3714A 03	Water pumps millions	35	**7.2	105.8	35	6.1	95.1
3714A 04	Clutch discs and pressure plates millions	31	(S)	119.6	23	(S)	121.3
	Engines, gasoline (rebuilt):						
3714A 23	Car and light truck type[4] millions	43	(S)	216.2	51	*.4	268.5
3714A 25	Heavy truck and bus type[4] millions	4	(S)	27.8			
	Transmissions (rebuilt), including drive lines and axles:						
	Car and light truck type:						
3714A 27	Automatic[4] millions	21	(S)	65.2	(NA)	(NA)	(17)
3714A 29	Manual (standard)[4] millions	5	(S)	4.9	(NA)	(NA)	(17)
3714A 31	Heavy truck and bus[4] millions	6	(S)	3.8	(NA)	(NA)	(17)
3714A 09	Brake shoe assemblies (drum brake) millions	22	(S)	107.7	16	(S)	74.1
3714A 10	Brake caliper assemblies (disc brake) millions	27	(S)	101.8	10	1.3	15.9
3714A 11	Brake master cylinders millions	12	(S)	44.4	10	(S)	47.6
	Brake power actuation units:						
3714A 33	Air[4] millions	5	(D)	(D)	(NA)	(NA)	(17)
3714A 35	Vacuum[4] millions	5	(D)	(D)	(NA)	(NA)	(17)
3714A 37	Hydraulic[4] millions	3	(S)	2.8	(NA)	(NA)	(17)
3714A 06	Power steering pumps millions	20	(S)	52.3	13	(S)	23.0
3714A 39	Rack and pinion steering assemblies[4] millions	20	(S)	55.7	(NA)	(NA)	(17)
3714A 41	Other[4]	49	(X)	306.4	(NA)	(X)	17378.8
3714A 00	Rebuilt parts for motor vehicles, excluding carburetors and engine electrical equipment, n.s.k.	(NA)	(X)	109.7	(NA)	(X)	123.6
37140	Motor vehicle parts and accessories, n.s.k.	(NA)	(X)	2 619.5	(NA)	(X)	2 846.6
37140 00	Motor vehicle parts and accessories, n.s.k.[9]	(NA)	(X)	2 198.6	(NA)	(X)	r1 927.6
37140 02	Motor vehicle parts and accessories, n.s.k.[10]	(NA)	(X)	420.9	(NA)	(X)	919.0

See footnotes at end of table.

TIPS [UPF] BATCH_1658 [EISS,BA_TAYLOR] EISS 3/ 13/ 95 1:05 PM MACHINE: EPCV20 DATA:NONE TAPE: NOreel FRAME: 13
TSF:37A_92.DAT;2 3/ 13/ 95 13:04:29 UTF:37A_93.DAT;2 3/ 13/ 95 13:04:29 META:TIPS96-13041978.DAT;1 3/ 13/ 95 13:05:26

Table 6a. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1992 and 1987—Con.

[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. For further explanation, see Value of Shipments in appendixes. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	1992			1987		
		Number of companies with shipments of $100,000 or more	Product shipments[1]		Number of companies with shipments of $100,000 or more	Product shipments[1]	
			Quantity[2]	Value (million dollars)		Quantity[2]	Value (million dollars)
3715– —	**TRUCK TRAILERS**						
	Total	**(NA)**	**(X)**	**3 168.1**	**(NA)**	**(X)**	**3 138.1**
37151	Truck trailers and chassis, with axle rating of 10,000 pounds or more	(NA)	(X)	2 724.2	(NA)	(X)	2 821.4
37151 00	Truck trailers and chassis, 10,000 pounds (4.54 metric tons) maximum load rating per axle or more[18]	133	(X)	2 724.2	141	(X)	2 821.4
37152	Truck trailers and chassis, with axle rating of less than 10,000 pounds	(NA)	(X)	248.0	(NA)	(X)	132.1
37152 00	Truck trailers and chassis, less than 10,000 pounds (4.54 metric tons) maximum load rating per axle[4] thousands	35	(S)	248.0	(NA)	(NA)	132.1
37150	Truck trailers, n.s.k.	(NA)	(X)	195.9	(NA)	(X)	184.6
37150 00	Truck trailers, n.s.k.[19]	(NA)	(X)	148.0	(NA)	(X)	107.6
37150 02	Truck trailers, n.s.k.[20]	(NA)	(X)	47.9	(NA)	(X)	77.1
3716– —	**MOTOR HOMES PRODUCED ON PURCHASED CHASSIS**						
	Total	**(NA)**	**(X)**	**2 772.5**	**(NA)**	**(X)**	**2 373.5**
37160	Motor homes built on purchased chassis	(NA)	(X)	2 772.5	(NA)	(X)	2 373.5
37160 01	Conventional (Type A) thousands	26	22.7	1 390.0	28	*43.8	1 638.4
37160 05	Chopped van (Type C) thousands	18	*12.1	390.8	22	12.1	289.3
37160 07	Van camper (Type B) thousands	3	(S)	7.7	8	*2.0	21.5
37160 21	Converted vans not qualifying as van campers (Type B) motor homes thousands	12	(S)	827.4	21	**20.6	166.2
37160 00	Motor homes produced on purchased chassis, n.s.k.[9]	(NA)	(X)	141.6	(NA)	(X)	217.4
37160 02	Motor homes produced on purchased chassis, n.s.k.[10]	(NA)	(X)	15.0	(NA)	(X)	40.7

[1]Data reported by all producers, not just those with shipments of $100,000 or more.
[2]For some establishments, data have been estimated from central unit values which 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: *10 to 19 percent estimated; **20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).
[3]For 1987, data for product code 37111 51 were included with product code 37111 11 to avoid disclosing data for individual companies.
[4]For 1992, product code is revised. See appendix C, parts 1 and 2 for comparability.
[5]For 1987, products were combined to avoid disclosing data for individual companies.
[6]For 1987, trucks, truck tractors, and bus chassis were collected as one product class.
[7]For 1992, product classes are combined to avoid disclosing data for individual companies.
[8]For 1992, product codes are combined to avoid disclosing data for individual companies.
[9]Typically for establishments with 10 employees or more.
[10]Typically for establishments with less than 10 employees.
[11]For 1992, products are combined to avoid disclosing data for individual companies.
[12]For 1987, data were not collected separately and were included with product code 37132 39.
[13]For 1987, data for these products were included with product code 37142 49.
[14]For 1992, products are combined to avoid disclosing data for individual companies.
[15]For 1987, data for product code 37148 21 were included with product code 37148 23 to avoid disclosing data for individual companies.
[16]For 1987, data for these products were included with product code 37149 41.
[17]For 1987, data for these products were not collected separately but were included with product code 3714A 41.
[18]Additional detail is collected for this product in the Current Industrial Reports. For the survey number and title, see appendix C, part 3.
[19]Typically for establishments with 15 employees or more.
[20]Typically for establishments with less than 15 employees.

TIPS [UPF] BATCH_1658 [EISS,BA_TAYLOR] EISS 3/13/95 1:05 PM MACHINE: EPCV20 DATA:NONE TAPE: NOreel FRAME: 14
TSF:37A_92.DAT;2 3/13/95 13:04:29 UTF:37A_93.DAT;2 3/13/95 13:04:29 META:TIPS96-13041978.DAT;1 3/13/95 13:05:26

Table 6b. Product Classes—Value of Shipments by All Producers for Specified States: 1992 and 1987

[Million dollars. Product classes shown are those where the data are 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 1992. For meaning of abbreviations and symbols, see introductory text]

Product class and geographic area	1992 value of product shipments	1987 value of product shipments
37111, PASSENGER CARS, KNOCKDOWN OR ASSEMBLED, CHASSIS FOR SALE SEPARATELY AND PASSENGER CAR BODIES		
United States	**84 064.3**	**79 853.3**
Illinois	7 712.5	(NA)
Michigan	26 783.6	31 462.7
Missouri	8 188.2	8 051.1
Ohio	11 268.9	9 393.4
37113, BUSES, INCLUDING MILITARY AND FIREFIGHTING VEHICLES (CHASSIS OF OWN MANUFACTURE)		
United States	**1 073.4**	**1 198.2**
Ohio	223.1	(NA)
37114, COMBAT VEHICLES AND WHEELED TACTICAL VEHICLES OR CARRIERS		
United States	**(D)**	**(NA)**
37116, TRUCKS, TRUCK TRACTORS, AND BUS CHASSIS (CHASSIS OF OWN MANUFACTURE) 10,000 POUNDS OR LESS		
United States	**49 234.4**	**(NA)**
Michigan	10 184.8	(NA)
37117, TRUCKS, TRUCK TRACTORS, AND BUS CHASSIS (CHASSIS OF OWN MANUFACTURE) 10,001 TO 19,500 POUNDS		
United States	**(D)**	**(NA)**
37118, TRUCKS, TRUCK TRACTORS, AND BUS CHASSIS (CHASSIS OF OWN MANUFACTURE) 19,501 TO 33,000 POUNDS		
United States	**(D)**	**(NA)**
37119, TRUCKS, TRUCK TRACTORS, AND BUS CHASSIS (CHASSIS OF OWN MANUFACTURE) 33,001 POUNDS OR MORE		
United States	**6 321.8**	**(NA)**
Ohio	1 407.3	(NA)
37131, TRUCK, BUS, AND OTHER VEHICLE BODIES (EXCEPT PASSENGER CAR BODIES) FOR SALE SEPARATELY		
United States	**2 150.6**	**2 735.4**
California	476.1	191.6
Georgia	77.4	43.9
Illinois	37.7	36.1
Indiana	224.8	333.6
Iowa	66.8	61.1
Kansas	32.4	9.8
Kentucky	12.6	18.2
Michigan	66.9	76.4
Minnesota	15.3	10.0
Mississippi	42.0	23.4
Missouri	26.9	10.4
New Jersey	3.4	3.8
New York	21.5	58.9
North Carolina	203.7	111.9
Ohio	170.1	1 021.5
Oklahoma	12.4	34.6
Pennsylvania	158.5	194.1
Tennessee	39.7	58.1
Texas	45.5	51.9
Virginia	40.1	24.5
Washington	4.9	3.6
Wisconsin	68.2	158.6
37132, COMPLETE VEHICLES PRODUCED ON PURCHASED CHASSIS		
United States	**1 521.0**	**1 158.5**
Arizona	9.8	(NA)
California	23.9	61.5
Florida	124.0	200.0
Georgia	69.0	106.0
Indiana	86.9	55.5
Iowa	55.4	(NA)
Kansas	97.0	41.6
Missouri	4.2	31.1
North Carolina	14.3	58.9
Ohio	73.1	49.7
Tennessee	4.4	(NA)
Texas	57.0	4.3
37142, GASOLINE ENGINES AND GASOLINE ENGINE PARTS FOR MOTOR VEHICLES, NEW		
United States	**17 157.0**	**14 550.5**
Arkansas	68.4	(NA)
California	114.9	154.9
Colorado	3.3	(NA)
Connecticut	86.7	47.0
Florida	74.3	44.6
Georgia	16.6	(NA)
Illinois	202.3	210.4
Indiana	878.5	662.4
Iowa	131.8	168.2
Massachusetts	22.3	37.2
Michigan	7 484.9	6 968.3
Missouri	99.0	93.8
New Jersey	16.8	21.9
North Carolina	120.8	(NA)
Ohio	4 115.9	(NA)
Pennsylvania	28.3	31.9
South Carolina	262.8	(NA)
Tennessee	227.8	80.4
37144, FILTERS FOR INTERNAL COMBUSTION ENGINES AND MOTOR VEHICLES, NEW		
United States	**2 154.2**	**1 684.7**
California	58.9	37.6
Iowa	185.5	(NA)
Michigan	204.6	(NA)
Missouri	118.2	76.0
Tennessee	258.2	(NA)
37145, EXHAUST SYSTEM PARTS, NEW		
United States	**3 187.6**	**2 579.1**
California	18.9	30.4
Indiana	370.4	(NA)
Michigan	633.8	(NA)
Ohio	252.7	178.3
37146, DRIVE TRAIN COMPONENTS, NEW, EXCEPT WHEELS AND BRAKES		
United States	**19 632.6**	**15 820.6**
Arkansas	121.9	(NA)
California	48.2	34.9
Connecticut	15.7	(NA)
Georgia	84.1	35.5
Illinois	258.0	238.4
Indiana	4 206.6	2 646.8
Michigan	7 242.0	(NA)
Nebraska	16.2	(NA)
New York	990.3	1 454.7
North Carolina	828.6	549.7
Ohio	3 508.3	2 460.7
Oklahoma	42.7	(NA)
Pennsylvania	258.6	(NA)
South Carolina	34.4	60.7
Tennessee	425.9	356.7
Virginia	359.1	(NA)
37147, MOTOR VEHICLE WHEELS, NEW		
United States	**1 943.2**	**1 372.8**
California	471.7	488.2
Indiana	204.5	69.5
Kentucky	286.3	(NA)
Michigan	333.5	328.3
Ohio	172.8	141.2

See footnotes at end of table.

TIPS [UPF] BATCH_1658 [EISS,BA_TAYLOR] EISS 3/13/95 1:05 PM MACHINE: EPCV20 DATA:NONE TAPE: NOreel FRAME: 15
TSF:37A_92.DAT;2 3/13/95 13:04:29 UTF:37A_93.DAT;2 3/13/95 13:04:29 META:TIPS96-13041978.DAT;1 3/13/95 13:05:26

Table 6b. Product Classes—Value of Shipments by All Producers for Specified States: 1992 and 1987—Con.

[Million dollars. Product classes shown are those where the data are 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 1992. For meaning of abbreviations and symbols, see introductory text]

Product class and geographic area	1992 value of product shipments	1987 value of product shipments
37148, BRAKE PARTS AND ASSEMBLIES, NEW		
United States	**6 010.6**	**3 876.6**
Alabama	82.3	67.0
California	28.9	107.6
Georgia	27.3	(NA)
Indiana	238.7	88.0
Kentucky	356.1	(NA)
Michigan	1 789.0	1 225.8
Mississippi	15.9	(NA)
Missouri	101.0	(NA)
New Jersey	32.8	26.1
New York	50.9	(NA)
North Carolina	579.0	(NA)
Ohio	1 009.6	852.0
Pennsylvania	35.8	(NA)
South Carolina	383.0	(NA)
Tennessee	510.1	273.8
Texas	32.4	(NA)
Virginia	187.7	(NA)
Wisconsin	56.4	(NA)
37149, ALL OTHER MOTOR VEHICLE PARTS AND ACCESSORIES, NEW, N.E.C.		
United States	**20 509.5**	**16 928.6**
Alabama	275.9	(NA)
Arkansas	297.8	(NA)
California	404.7	230.0
Colorado	92.3	54.7
Connecticut	101.1	91.3
Florida	68.0	27.0
Georgia	390.7	210.1
Illinois	746.3	557.0
Indiana	1 733.9	1 584.4
Iowa	153.4	111.1
Kansas	13.3	6.0
Kentucky	430.2	72.9
Maryland	32.5	(NA)
Massachusetts	22.1	(NA)
Michigan	5 966.7	5 904.9
Minnesota	79.2	32.4
Mississippi	505.2	532.2
Missouri	555.8	273.1
New Jersey	56.6	53.8
New York	537.5	590.1
North Carolina	329.3	167.5
Ohio	3 968.0	3 181.7
Oregon	137.3	(NA)
Pennsylvania	442.3	482.1
South Carolina	109.0	(NA)
Tennessee	1 144.3	606.7
Texas	184.3	98.6
Virginia	64.4	(NA)
Washington	41.6	27.2
Wisconsin	594.7	(NA)
3714A, REBUILT PARTS FOR MOTOR VEHICLES, EXCLUDING CARBURETORS AND ENGINE ELECTRICAL EQUIPMENT		
United States	**1 379.8**	**1 156.5**
Arkansas	18.4	29.7
California	181.5	178.8
Florida	14.2	(NA)
Georgia	31.3	44.4
Illinois	42.8	56.0
Indiana	35.2	70.8
Iowa	8.8	(NA)
Kentucky	47.6	38.1
Massachusetts	10.4	(NA)
Michigan	85.2	66.8
Minnesota	11.9	8.2
Mississippi	32.2	(NA)
Missouri	55.4	48.6
New Jersey	35.1	35.9
North Carolina	53.9	59.8
Ohio	63.2	47.9
Pennsylvania	158.3	97.9
Tennessee	30.7	23.4
Texas	102.3	58.2
Washington	19.5	(NA)
37151, TRUCK TRAILERS AND CHASSIS, WITH AXLE RATING OF 10,000 POUNDS OR MORE		
United States	**2 724.2**	**2 821.4**
Alabama	192.3	139.8
California	63.6	156.1
Colorado	21.4	(NA)
Florida	41.1	(NA)
Illinois	339.5	262.0
Indiana	735.7	386.8
Missouri	46.2	58.6
Oklahoma	15.3	16.8
Oregon	21.1	21.0
Pennsylvania	122.2	248.1
South Carolina	4.9	(NA)
South Dakota	64.4	(NA)
Tennessee	72.5	114.2
Texas	39.0	309.4
Wisconsin	105.6	180.4
37152, TRUCK TRAILERS AND CHASSIS, WITH AXLE RATING OF LESS THAN 10,000 POUNDS		
United States	**248.0**	**132.1**
South Dakota	6.1	(NA)

Note: For qualifications of data, see footnotes on table 6a.

TIPS [UPF] BATCH_1658 [EISS,BA_TAYLOR] EISS 3/13/95 1:05 PM MACHINE: EPCV20 DATA:NONE TAPE: NOreel FRAME: 16
TSF:37A_92.DAT;2 3/13/95 13:04:29 UTF:37A_93.DAT;2 3/13/95 13:04:29 META:TIPS96-13041978.DAT;1 3/13/95 13:05:26

Table 6c. Historical Statistics for Product Classes—Value Shipped by All Producers: 1992 and Earlier Years

[Million dollars. For meaning of abbreviations and symbols, see introductory text]

Product code	Product class	1992	1991[1]	1990[1]	1989[1]	1988[1]	1987	1982	1977
3711-	**Motor vehicles and car bodies**	**147 515.1**	**128 753.7**	**135 740.5**	**144 447.9**	**139 864.0**	**130 856.8**	**66 705.6**	**72 979.1**
37111	Passenger cars, knockdown or assembled, chassis for sale separately and passenger car bodies	84 064.3	78 834.3	81 497.3	86 833.1	84 688.5	79 853.3	42 902.3	47 798.9
37113	Buses, including military and firefighting vehicles (chassis of own manufacture)	1 073.4	1 770.8	1 488.4	1 527.7	1 288.8	1 198.2	893.5	(NA)
37114	Combat vehicles and wheeled tactical vehicles or carriers	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)
37116	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 10,000 pounds or less	49 234.4	38 751.1	42 776.6	44 647.0	42 219.3			
37117	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 10,001 to 19,500 pounds	(D)	1 086.9	1 218.6	1 604.2	1 113.3	47 701.1	19 295.5	21 543.5
37118	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 19,501 to 33,000 pounds	(D)	1 922.6	2 676.3	2 740.3	3 008.5			
37119	Trucks, truck tractors, and bus chassis (chassis of own manufacture) 33,001 pounds or more	6 321.8	4 689.5	4 970.3	5 977.2	6 236.5			
37110	Motor vehicles and car bodies, n.s.k.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)
3713-	**Truck and bus bodies**	**4 153.4**	**3 583.6**	**4 136.8**	**3 990.6**	**3 974.5**	**4 482.4**	**2 304.4**	**1 880.9**
37131	Truck, bus, and other vehicle bodies (except passenger car bodies) for sale separately	2 150.6	1 978.2	2 111.4	2 094.5	2 001.2	2 735.4	1 672.6	1 326.5
37132	Complete vehicles produced on purchased chassis	1 521.0	1 271.1	1 458.2	1 394.4	1 394.2	1 158.5	523.8	316.7
37130	Truck and bus bodies, n.s.k.	481.8	334.4	567.2	501.7	579.0	588.5	108.0	237.7
3714-	**Motor vehicle parts and accessories**	**74 594.0**	**62 325.4**	**62 299.5**	**66 459.4**	**68 061.6**	**60 816.0**	**38 414.2**	**37 841.8**
37142	Gasoline engines and gasoline engine parts for motor vehicles, new	17 157.0	15 324.3	14 258.9	15 305.7	15 598.1	14 550.5	8 274.1	
37144	Filters for internal combustion engines and motor vehicles, new	2 154.2	1 767.9	1 573.0	1 595.4	1 707.6	1 684.7	1 028.9	
37145	Exhaust system parts, new	3 187.6	2 852.0	2 781.7	2 861.2	2 752.9	2 579.1	1 672.2	
37146	Drive train components, new, except wheels and brakes	19 632.6	15 548.8	16 405.4	17 508.6	17 852.6	15 820.6	9 798.9	36 735.4
37147	Motor vehicle wheels, new	1 943.2	1 483.2	1 540.5	1 583.6	1 497.5	1 372.8	815.4	
37148	Brake parts and assemblies, new	6 010.6	4 465.5	4 538.3	4 526.5	4 798.2	3 876.6	2 211.0	
37149	All other motor vehicle parts and accessories, new, n.e.c.	20 509.5	17 197.5	17 204.4	19 109.8	19 547.9	16 928.6	12 709.5	
3714A	Rebuilt parts for motor vehicles, excluding carburetors and engine electrical equipment	1 379.8	1 265.5	1 411.8	1 373.1	1 389.9	1 156.5	890.4	592.9
37140	Motor vehicle parts and accessories, n.s.k.	2 619.5	2 420.7	2 585.6	2 595.5	2 916.9	2 846.6	1 013.9	513.5
3715-	**Truck trailers**	**3 168.1**	**2 587.8**	**2 865.9**	**3 435.3**	**3 428.5**	**3 138.1**	**1 667.5**	**1 807.0**
37151	Truck trailers and chassis, with axle rating of 10,000 pounds or more	2 724.2	2 305.7	2 529.3	3 096.6	3 089.6	2 821.4	1 525.5	1 680.9
37152	Truck trailers and chassis, with axle rating of less than 10,000 pounds	248.0	124.2	151.0	152.5	142.1	132.1	78.3	41.3
37150	Truck trailers, n.s.k.	195.9	157.8	185.6	186.2	196.9	184.6	63.7	84.8
3716-	**Motor homes produced on purchased chassis**	**2 772.5**	**1 980.2**	**2 163.8**	**2 478.1**	**2 573.7**	**2 373.5**	**1 035.7**	**1 494.6**
37160	Motor homes built on purchased chassis	2 772.5	1 980.2	2 163.8	2 478.1	2 573.7	2 373.5	1 035.7	1 494.6

[1]Figures are estimates derived from a representative sample of manufacturing establishments. Standard errors associated with estimates are published in annual survey of manufactures publications for this period.

Table 7. Materials Consumed by Kind: 1992 and 1987

[Includes cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendixes. For meaning of abbreviations and symbols, see introductory text]

Material code	Material	1992 delivered cost (million dollars)	1987 delivered cost (million dollars)
	INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES		
	Materials, ingredients, containers, and supplies	**105 521.7**	**96 135.7**
371401	Gasoline engines and parts specially designed for gasoline engines	14 661.0	12 334.9
351902	Diesel engines and parts specially designed for diesel engines	1 707.0	2 152.9
	Drive train components and parts:		
371463	Transmissions and parts	(1)	(2)
371462	Axles and axle parts	3 402.2	(2)
371471	Wheels, motor vehicle	(1)	(2)
371481	Brake parts and assemblies	(1)	(2)
371464	Other drive train components	[1]13 421.6	(2)
371110	Car bodies	682.9	(2)
358501	Refrigeration compressors, compressor units, condensing units, and other heat transfer equipment	2 606.3	2 400.4
371402	Shocks, struts, and other suspension equipment and parts	1 809.4	(2)
371451	Exhaust systems and parts	1 376.8	(2)
354500	Machine tool accessories, including cutting tools	(D)	(2)
	Fluid power products (hydraulic and pneumatic):		
359412	Pumps, motors and hydrostatic transmissions	353.2	(2)
349271	Valves	203.6	(2)
359301	Cylinders and rotary actuators	(3)	(2)
349261	Hose or tube fittings and assemblies	123.9	(2)
356921	Filters	16.9	(2)
190089	Other fluid power products	[3]255.3	(2)
	Fabricated metal products, except forgings:		
346501	Automotive stampings (including body parts, hubcaps, fenders, etc.)	11 981.4	9 027.7
349301	Steel springs, except wire	676.8	506.7
342961	Motor vehicle metal hardware (lock units, door and window handles, hinges, etc.)	573.7	605.5
345001	Bolts, nuts, screws, washers, rivets, and screw machine products	1 071.4	832.4
340071	Other fabricated metal products	972.8	(2)
346000	Forgings	2.6	(2)
330091	Castings (rough and semifinished)	(D)	(4)
	Shapes and forms, except castings, forgings, and fabricated metal products: Steel:		
331022	Sheet and strip	(D)	(2)
331085	All other steel shapes and forms	(D)	(2)
336002	Nonferrous shapes and forms	28.2	(4)
356200	Ball and roller bearings (mounted and unmounted)	13.5	35.9

See footnotes at end of table.

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TSF:37A_92.DAT;2 3/13/95 13:04:29 UTF:37A_93.DAT;2 3/13/95 13:04:29 META:TIPS96-13041978.DAT;1 3/13/95 13:05:26

Table 7. **Materials Consumed by Kind: 1992 and 1987**—Con.

[Includes cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendixes. For meaning of abbreviations and symbols, see introductory text]

Material code	Material	1992 delivered cost (million dollars)	1987 delivered cost (million dollars)
	INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES—Con.		
301101	Pneumatic tires and inner tubes	2 461.2	2 560.9
305201	Rubber and plastics hose and belting	209.0	248.9
306902	Fabricated rubber products, except tires, tubes, hose, belting, and gaskets	243.8	133.5
305302	Gaskets (all types) and packing and sealing devices	(D)	103.9
308025	Fabricated plastics products, including components, housings, accessories, etc. (except gaskets, hose, and belting)	1 129.9	551.6
320102	Glass and glass products, including windows and mirrors	1 652.7	1 467.7
253121	Seats (purchased separately) for automobiles, trucks, and buses	2 616.6	1 293.7
239901	Seat covers, seat belts, and shoulder harnesses	954.6	738.0
371491	Automotive air bag assemblies and parts thereof	(D)	(2)
239621	Automotive trimmings, textile (panels, headliners, etc.)	3 364.6	824.4
227002	Carpeting	505.4	309.8
320601	Ceramic and ceramic composite parts, components, and accessories	(D)	(2)
289101	Glues and adhesives	841.7	640.7
285101	Paints, varnishes, lacquers, stains, shellacs, japans, enamels, and allied products	1 280.0	1 040.6
369401	Engine electrical equipment including spark plugs, magnetos, generators, starters, etc.	1 745.5	1 288.4
364701	Motor vehicle lighting fixtures (including headlights, taillights, running lights, and dome fixtures; except auto lamps)	569.2	401.9
364102	Automotive lamps (bulbs and sealed beams)	401.2	161.6
369104	Storage batteries, automotive	270.4	262.9
365101	Automotive radios and loudspeakers	2 046.0	1 692.3
382441	Motor vehicle clusters, meters, and gauges, except electrical (including speedometers, fuel level)	750.0	(4)
970099	All other materials and components, parts, containers, and supplies	25 216.5	[2]51 381.2
971000	Materials, ingredients, containers, and supplies, n.s.k.[5]	1 987.1	3 137.3
	INDUSTRY 3713, TRUCK AND BUS BODIES		
	Materials, ingredients, containers, and supplies	**2 587.4**	**2 507.3**
	Fabricated metal products, except forgings:		
346501	Automotive stampings (including body parts, hubcaps, fenders, etc.)	(6)	(2)
342961	Motor vehicle metal hardware	71.6	85.9
345001	Bolts, nuts, screws, washers, rivets, and screw machine products	24.5	22.7
340096	Other fabricated metal products	[6]72.6	(2)
346000	Forgings	3.9	(2)
330091	Castings (rough and semifinished)	5.5	4.8
	Shapes and forms, except castings, forgings, and fabricated metal products:		
	Steel:		
331007	Bars, bar shapes, and plates	40.6	
331022	Sheet and strip	129.0	
331023	Structural shapes and sheet piling	29.9	250.8
331091	All other steel shapes and forms	30.9	
	Aluminum and aluminum-base alloy:		
335301	Sheet, plate, foil, and welded tubing	82.6	99.5
335405	Extruded shapes, including extruded rod, bar, pipe, tube, etc.	54.3	51.8
335008	Other aluminum and aluminum-base alloy shapes and forms	14.5	1.4
335091	Other nonferrous	2.8	(2)
371000	Purchased chassis for vehicles (excluding passenger cars)	333.4	155.5
371301	Truck bodies	38.8	(2)
371463	Transmissions and parts	35.1	(2)
371402	Shocks, struts, and other suspension equipment and parts	11.7	(2)
371412	Axles, brakes, drums, rims, wheels, and other metal motor wheel parts	42.3	32.7
301101	Pneumatic tires and inner tubes	13.4	12.6
285101	Paints, varnishes, lacquers, stains, shellacs, japans, enamels, and allied products	43.7	56.9
320102	Glass and glass products, including windows and mirrors	19.5	39.3
242101	Rough and dressed lumber	29.9	20.0
190090	Fluid power products	72.8	(2)
364701	Motor vehicle lighting fixtures (including headlights, taillights, running lights, dome fixtures; except auto lamps)	19.3	(2)
364102	Automotive lamps (bulbs and sealed beams)	1.4	(2)
253121	Seats (purchased separately for automobiles, trucks, and buses)	20.5	(2)
308025	Fabricated plastics products, including components, housings, accessories, etc. (except gaskets, hose, and belting)	20.6	(2)
970099	All other materials and components, parts, containers, and supplies	677.0	[2]1 164.4
971000	Materials, ingredients, containers, and supplies, n.s.k.[5]	645.7	509.0
	INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES		
	Materials, ingredients, containers, and supplies	**40 220.9**	**[r]33 028.2**
	Fluid power products, (hydraulic and pneumatic):		
359412	Hydraulic and pneumatic fluid power pumps, motors, and hydrostatic transmissions	226.8	(2)
349271	Valves	93.9	(2)
359301	Cylinders and rotary actuators	65.8	(2)
349261	Hose or tube fittings and assemblies	165.0	(2)
356921	Filters	15.3	(2)
190089	Other fluid power products	97.5	(2)
	Fabricated metal products, except forgings:		
346501	Automotive stampings (including body parts, hubcaps, fenders, etc.)	2 159.2	1 144.9
345001	Bolts, nuts, screws, washers, rivets, and screw machine products	983.2	660.4
340056	Other fabricated metal products, except fluid power	4 510.8	(2)
346000	Forgings	1 550.2	1 418.0

See footnotes at end of table.

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TSF:37A_92.DAT;2 3/13/95 13:04:29 UTF:37A_93.DAT;2 3/13/95 13:04:29 META:TIPS96-13041978.DAT;1 3/13/95 13:05:26

Table 7. **Materials Consumed by Kind: 1992 and 1987**—Con.

[Includes cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendixes. For meaning of abbreviations and symbols, see introductory text]

Material code	Material	1992 delivered cost (million dollars)	1987 delivered cost (million dollars)
	INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES—Con.		
	Castings (rough and semifinished):		
332001	Iron and steel	4 266.4	3 443.9
336005	Aluminum and aluminum-base alloy	2 451.0	1 512.8
336003	Other nonferrous	246.7	150.1
	Shapes and forms (except castings, forgings, and fabricated metal products):		
	Steel:		
331007	Bars, bar shapes, and plates	1 133.9	
331022	Sheet and strip	1 948.2	3 408.3
331034	Other steel shapes and forms	788.3	
335004	Copper and copper-base alloy	251.2	263.9
335010	Aluminum and aluminum-base alloy	541.8	212.0
335099	Other nonferrous shapes and forms	376.1	(2)
	Bearings (mounted and unmounted):		
356218	Ball bearings	285.9	396.1
356201	Roller bearings	615.3	295.1
308006	Fabricated plastics products, except gaskets	706.6	426.1
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes	147.7	100.0
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc.	481.1	340.9
306902	Fabricated rubber products, except tires, tubes, hose, belting, and gaskets	430.1	296.3
305201	Rubber and plastics hose and belting	197.1	133.3
280020	Ceramic raw materials, including powders, chemicals, and fibers (excluding refractory uses)	332.3	41.3
320601	Ceramic and ceramic composite parts, components, and accessories	124.0	(4)
305302	Gaskets (all types) and packing and sealing devices	232.0	290.9
285101	Paints, varnishes, lacquers, stains, shellacs, japans, enamels, and allied products	403.5	135.2
289101	Glues and adhesives	41.7	31.9
190003	Flexible packaging materials	59.1	(2)
260051	Paper and paperboard containers	347.8	(2)
369401	Engine electrical equipment, including spark plugs, magnetos, generators, starters, etc.	1 516.8	723.1
367004	Resistors, capacitors, transformers, electron tubes, semiconductors, and other electronic components	1 285.9	378.9
970099	All other materials and components, parts, containers, and supplies	9 967.7	213 255.9
971000	Materials, ingredients, containers, and supplies, n.s.k.[5]	1 174.9	r3 968.9
	INDUSTRY 3715, TRUCK TRAILERS		
	Materials, ingredients, containers, and supplies	**2 287.3**	**2 180.1**
	Fabricated metal products, except forgings:		
346501	Automotive stampings (including body parts, hubcaps, fenders, etc.)	(7)	(2)
342961	Motor vehicle metal hardware	10.8	47.8
345001	Bolts, nuts, screws, washers, rivets, and screw machine products	43.0	43.4
340096	Other fabricated metal products	7115.9	(2)
346000	Forgings	2.2	(2)
330091	Castings (rough and semifinished)	5.0	5.7
	Shapes and forms, except castings, forgings, and fabricated metal products:		
	Steel:		
331007	Bars, bar shapes, and plates	58.4	(2)
331022	Sheet and strip	86.6	(2)
331023	Structural shapes and sheet piling	34.2	(2)
331091	All other steel shapes and forms	21.3	(2)
	Aluminum and aluminum-base alloy:		
335301	Sheet, plate, foil, and welded tubing	183.5	166.7
335405	Extruded shapes, including extruded rod, bar, pipe, tube, etc.	163.1	163.6
335008	Other aluminum and aluminum-base alloy shapes and forms	7.1	4.6
335091	Other nonferrous	.3	(2)
371000	Purchased chassis for vehicles (excluding passenger cars)	16.6	9.5
371301	Truck bodies	(D)	(2)
371463	Transmissions and parts	(D)	(2)
371402	Shocks, struts, and other suspension equipment and parts	86.8	(2)
371412	Axles, brakes, drums, rims, wheels, and other metal motor wheel parts	264.9	280.8
301101	Pneumatic tires and inner tubes	223.5	198.5
285101	Paints, varnishes, lacquers, stains, shellacs, japans, enamels, and allied products	34.0	22.6
320102	Glass and glass products, including windows and mirrors	(D)	(Z)
242101	Rough and dressed lumber	95.7	66.3
190090	Fluid power products	19.2	(2)
364701	Motor vehicle lighting fixtures (including headlights, taillights, running lights, dome fixtures; except auto lamps)	20.1	(2)
364102	Automotive lamps (bulbs and sealed beams)	(D)	(2)
253121	Seats (purchased separately for automobiles, trucks, and buses)	(D)	(2)
308025	Fabricated plastics products, including components, housings, accessories, etc. (except gaskets, hose, and belting)	12.5	(2)
970099	All other materials and components, parts, containers, and supplies	492.8	2710.4
971000	Materials, ingredients, containers, and supplies, n.s.k.[5]	276.7	460.2

See footnotes at end of table.

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TSF:37A_92.DAT;2 3/13/95 13:04:29 UTF:37A_93.DAT;2 3/13/95 13:04:29 META:TIPS96-13041978.DAT;1 3/13/95 13:05:26

Table 7. **Materials Consumed by Kind: 1992 and 1987**—Con.

[Includes cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendixes. For meaning of abbreviations and symbols, see introductory text]

Material code	Material	1992 delivered cost (million dollars)	1987 delivered cost (million dollars)
	INDUSTRY 3716, MOTOR HOMES		
	Materials, ingredients, containers, and supplies	**2 033.6**	**1 750.7**
371411	Trailer axles, wheels, brakes, undercarriages, and other metal vehicular parts	95.9	31.3
301101	Pneumatic tires and inner tubes	(D)	9.0
371121	Purchased chassis for motor homes	518.3	509.8
363001	Household appliances including refrigerators, cooking equipment, and other household appliances; except air-conditioners	71.9	52.4
358503	Air-conditioning equipment	23.6	42.4
	Fabricated metal products, except forgings:		
343301	Heating equipment (except electric)	9.4	16.4
344201	Metal doors and door units; windows and window units	24.3	15.1
343201	Metal plumbing fixtures, fittings, and trim (including enameled)	8.8	12.7
344401	Sheet metal products, except stampings	15.5	24.7
345001	Bolts, nuts, screws, washers, rivets, and screw machine products	9.7	15.6
340092	Other fabricated metal products		(2)
346000	Forgings	–	(2)
330091	Castings (rough and semifinished)	(D)	(2)
	Shapes and forms, except castings, forgings, and fabricated metal products:		
331002	Steel	14.8	(2)
	Aluminum and aluminum-base alloy:		
335301	Sheet, plate, foil, and welded tubing	32.5	(4)
335011	All other (except sheet, plate, foil, and welded tubing)		(4)
335091	Other nonferrous		(2)
364300	Current-carrying wiring devices	47.6	51.7
243056	Plywood	40.4	44.9
242103	Dressed lumber	37.9	23.4
243011	Millwork, wood (including wood doors, window sash, moldings, and cabinets)	30.6	32.4
320102	Glass and glass products, including windows and mirrors	15.0	45.3
308006	Fabricated plastics products, except gaskets	22.8	24.0
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes	23.4	12.4
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc.	8.7	(4)
285101	Paints, varnishes, lacquers, stains, shellacs, japans, enamels, and allied products	8.9	12.0
227002	Carpeting	21.0	16.9
239101	Curtains and draperies	17.2	16.7
970099	All other materials and components, parts, containers, and supplies	460.2	2454.5
971000	Materials, ingredients, containers, and supplies, n.s.k.[5]	469.5	287.1

[1]For 1992, data are included with material code 371464 to avoid disclosing data for individual companies.
[2]For 1987, data were not collected separately but were included with material code 970099 of the industry in which the material was consumed.
[3]For 1992, data are included with material code 190089 to avoid disclosing data for individual companies.
[4]For 1987, data were included with material code 970099 to avoid disclosing data for individual companies.
[5]Total cost of materials of establishments that did not report detailed materials data, including establishments that were not mailed a form.
[6]For 1992, data are included with material code 340096 to avoid disclosing data for individual companies.
[7]For 1992, data are included with material code 340096 to avoid disclosing data for individual companies.

Table 8. **Employees Engaged in Construction and Value of Work Done: 1992**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

SIC code	Industry	Total		Establishments reporting construction employees[1]					Response coverage ratio (col C ÷ col A)
				Total		Engaged in construction[2]			
		Employees (1,000)	Payroll (million dollars)	Employees (1,000)	Payroll (million dollars)	Employees (1,000)	Payroll (million dollars)	Value of work done (millions)	
		A	B	C	D	E	F	G	H
3711	Motor vehicles and car bodies	228.4	10 438.8	(D)	(D)	(D)	(D)	(D)	(D)

[1]Data exclude government-owned, contractor-operated plants.
[2]Establishments in selected industries were instructed to report number of employees, included in total employment, that were engaged in construction, maintenance, or repair of the plant and utilized as a separate work force. Coverage ratio (col. H) indicates proportion of industry employment represented by establishments that reported construction employees. Coverage ratio excludes (a) construction workers not employed by establishment (working under contract or provided by another establishment of the company), (b) establishments that reported having no construction employees, (c) establishments that did not respond to inquiry, and (d) establishments that were not mailed a form or from which a form had not been received at the time data were tabulated.

TIPS [UPF] BATCH_1658 [EISS,BA_TAYLOR] EISS 3/13/95 1:05 PM MACHINE: EPCV20 DATA:NONE TAPE: NOreel FRAME: 20
TSF:37A_92.DAT;2 3/13/95 13:04:29 UTF:37A_93.DAT;2 3/13/95 13:04:29 META:TIPS96-13041978.DAT;1 3/13/95 13:05:26

Appendix A.
Explanation of Terms

This appendix is in two sections. Section 1 includes items requested of all establishments mailed census of manufactures forms including annual survey of manufactures (ASM) forms. Note that this section also includes several items (number of establishments and companies, value added, classes of products, and specialization and coverage ratios) not included on the report forms but derived from information collected on the forms. Section 2 covers supplementary items requested only from establishments included in the ASM sample. Results of the supplementary ASM inquiries are included in table 3c of this report.

SECTION 1. ITEMS COLLECTED OR DERIVED BASED ON ALL CENSUS OF MANUFACTURES (INCLUDING ASM) REPORT FORMS

Number of establishments and companies. A separate report was required for each manufacturing establishment (plant) with one employee or more. An establishment is defined as a single physical location where manufacturing is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same line of goods, a separate report was requested for each location. If the company operated in two or more distinct lines of manufacturing at the same location, a separate report was requested for each activity.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the ''Operational Status'' section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

In this report, data are shown for establishments in operation at any time during the year. A comparison with the number of establishments in operation at the end of the year will be provided in the Introduction of the *General Summary* subject report.

Employment and related items. The report forms requested separate information on production workers for a specific payroll period within each quarter of the year and on other employees as of the payroll period which included the 12th of March.

All employees. This item includes all full-time and part-time employees on the payrolls of operating manufacturing establishments during any part of the pay period which included the 12th of the months specified on the report form. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The ''all employees'' number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average for the payroll periods including the 12th of March, May, August, and November.

Production workers. This item includes workers (up through the line-supervisor level) engaged in fabricating, processing, assembling, inspecting, receiving, storing, handling, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial and guard services, product development, auxiliary production for plant's own use (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Employees above the working-supervisor level are excluded from this item.

All other employees. This item covers nonproduction employees of the manufacturing establishment including those engaged in factory supervision above the line-supervisor level. It includes sales (including driver salespersons), sales delivery (highway truckdrivers and their helpers), advertising, credit, collection, installation and servicing of own products, clerical and routine office function, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional, and technical employees. Also included are employees on the payroll of the manufacturing establishment engaged in the construction of major additions or alterations to the plant and utilized as a separate work force.

In addition to reports sent to operating manufacturing establishments, information on employment during the payroll period which included March 12 and annual payrolls also was requested of auxiliary units (e.g., administrative offices, warehouses, and research and development

laboratories) of multiestablishment companies. However, these figures are not included in the totals for individual industries shown in this report. They are included in the *General Summary* and geographic area reports as a separate category.

Payroll. This item includes the gross earnings of all employees on the payrolls of operating manufacturing establishments paid in the calendar year 1992. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of manufacturing establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' Social Security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

The ASM provides estimates of employers' supplemental labor costs, both those required by Federal and State laws and those incurred voluntarily or as part of collective bargaining agreements. (Supplemental labor costs are explained later in this appendix.)

As in the case of employment figures, the payrolls of separate auxiliary units of multiestablishment companies are not included in the totals for individual industries or industry groups.

Production-worker hours. This item covers hours worked or paid for at the plant, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave.

Cost of materials. This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. It includes the cost of materials or fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

The important components of this cost item are (1) all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year, (2) electric energy purchased, (3) fuels consumed for heat, power, or the generation of electricity, (4) work done by others on materials or parts furnished by manufacturing establishments (contract work), and (5) products bought and resold in the same condition. (See discussion of duplication of data below.)

Specific materials consumed. In addition to the total cost of materials, which every establishment was required to report, information also was collected for most manufacturing industries on the consumption of major materials used in manufacturing. The inquiries were restricted to those materials which were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers' records. Information on the establishments consuming less than a specified amount (usually $25,000) of a specific material were not requested to report consumption of that material separately. Also, the cost of materials for the small establishments for which either administrative records or short forms were used was imputed as ''not specified by kind.'' (See Census of Manufactures for the importance of administrative records in the industry.)

Value of shipments. This item covers the received or receivable net selling values, f.o.b. plant (exclusive of freight and taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as receipts for contract work performed for others, installation and repair, sales of scrap, and sales of products bought and resold without further processing. Included are all items made by or for the establishments from materials owned by it, whether sold, transferred to other plants of the same company, or shipped on consignment. The net selling value of products made in one plant on a contract basis from materials owned by another was reported by the plant providing the materials.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of ''all other costs'' (including company overhead) and profit. (See discussion of duplication of data below.)

Individual products. As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the 1992 census program, information was collected on the output of almost 11,000 individual product items. The term ''product,'' as used in the census of manufactures, represents the finest level of detail for which output information was requested. Consequently, it is not necessarily synonymous with the term ''product'' as used in the marketing sense. In some cases, it may be much more detailed and, in other cases, it is more aggregative. For example, ''pharmaceutical preparations'' was distributed into over 100 terms; whereas, ''motor gasoline'' was reported as a single item.

Approximately 6,300 of the product items were listed separately on the 1992 census report forms. Data for

about 4,500 products were obtained in the monthly, quarterly, or annual surveys comprising the Current Industrial Reports series of the Census Bureau. Totals for the year 1992 for these items, as derived from the commodity surveys, are shown in the ''products shipped'' table.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1987 information is presented for most products.

Typically, both quantity and value of shipments information were collected. However, if quantity was not significant or could not be reported by manufacturers, only value of shipments was collected.

Shipments include both commercial shipments and transfers of products to other plants of the same company. For industries in which a considerable portion of the total shipments is transferred to other plants of the same company, separate information on interplant transfers also was collected. Moreover, for products that are used to a large degree within the same establishment as materials or components in the fabrication of other products, total production and often consumption of the item within the plant was collected. Typically, the information on production also was collected for products for which there are significant differences between total production and shipments in a given year because of wide fluctuations in finished goods inventories. Other measures of output of products with long production cycles were used as appropriate and feasible.

Classes of products. To summarize the product information, the separate products were aggregated into classes of products that, in turn, were grouped into all primary products of each industry. The code structure used is a seven-digit number for the individual product, a five-digit number for the class of product, and a four-digit number for the total primary products in an industry. (See Census of Manufactures, Industry Classification of Establishments, for application of the coding structure to the assignment of SIC codes for establishments.)

In the 1992 census, the 11,000 products were grouped into approximately 1,500 separate classes on the basis of general similarity of manufacturing processes, types of materials used, etc. However, the grouping of products was affected by the economic significance of the class and, in some cases, dissimilar products were grouped because the products were not sufficiently significant to warrant separate classes.

Duplication in cost of materials and value of shipments. The aggregate of the cost of materials and value of shipments figures for industry groups and for all manufacturing industries includes large amounts of duplication since the products of some industries are used as materials by others. This duplication results, in part, from the addition of related industries representing successive stages in the production of a finished manufactured product. Examples are the addition of flour mills to bakeries in the food group and the addition of pulp mills to paper mills in the paper and allied products group of industries. Estimates of the overall extent of this duplication indicate that the value of manufactured products exclusive of such duplication (the value of finished manufactures) tends to approximate two-thirds of the total value of products reported in the annual survey.

Duplication of products within individual industries is significant within a number of industry groups, e.g., machinery and transportation industries. These industries frequently include complete machinery and their parts. In this case, the parts made for original equipment are materials consumed for assembly plants in the same industry.

Even when no significant amount of duplication is involved, value of shipments figures are deficient as measures of the relative economic importance of individual manufacturing industries or geographic areas because of the wide variation in ratio of materials, labor, and other processing costs of value of shipments, both among industries and within the same industry.

Before 1962, cost of materials and value of shipments were not published for some industries which included considerable duplication. Since then, these data have been published for all industries at the U.S. level and beginning in 1964, for all geographic levels.

Value added by manufacture. This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments (products manufactured plus receipts for services rendered). The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of merchandise sold without further manufacture, processing, or assembly) plus the net change in finished goods and work-in-process between the beginning- and end-of-year inventories.

For those industries where value of production is collected instead of value of shipments (see footnote in table 1a), value added is adjusted only for the change in work-in-process inventories between the beginning and end of year. For those industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

''Value added'' avoids the duplication in the figure for value of shipments that results from the use of products of some establishments as materials by others. Value added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

New and used capital expenditures. For establishments in operation and any known plants under construction, manufacturers were asked to report their new expenditures for (1) permanent additions and major alterations to

manufacturing establishments, and (2) machinery and equipment used for replacement and additions to plant capacity if they were of the type for which depreciation accounts were ordinarily maintained.

The totals for new expenditures include expenditures leased from nonmanufacturing concerns through capital leases. New facilities owned by the Federal Government but operated under contract by private companies, and plant and equipment furnished to the manufacturer by communities and nonprofit organizations are excluded. Also excluded are expenditures for used plant and equipment (although reported in the census), expenditures for land, and cost of maintenance and repairs charged as current operating expenses.

Manufacturers also were requested to report the value of all used buildings and equipment purchased during the year at the purchase price. For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. Furthermore, if the establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported under used capital expenditures.

Total expenditures for used plant and equipment is a universe figure; it is collected on all census forms. However, the breakdown of this figure between expenditures for used buildings and other structures and expenditures for used machinery and equipment is collected only on the ASM form. The data for total new capital expenditures, new building expenditures, and new machinery expenditures, as well as the data for total used expenditures, are shown in table 3b.

End-of-year inventories. Respondents were asked to report their 1991 and 1992 end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method (FIFO, LIFO, market, to name a few). In 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Because of this change in reporting instructions, the 1982 through 1992 data for inventories and value added by manufacture included in the tables of this report are not comparable to the prior-year data shown in table 1a of this report and in historical census of manufactures and annual survey of manufactures publications.

In using inventory data by stage of fabrication for ''all industries'' and at the two-digit industry level, it should be noted that an item treated as a finished product by an establishment in one industry may be reported as a raw material by another establishment in a different industry. For example, the finished-product inventories of a steel mill would be reported as raw materials by a stamping plant. Such differences are present in the inventory figures by stage of fabrication shown for individual industries, industry groups, and ''all manufacturing'', which are aggregates of figures reported by establishments in specified industries.

Specialization and coverage ratios. These items are not collected on the report forms but are derived from the data shown in table 5b. An establishment is classified in a particular industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment's shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.). Specialization and coverage ratios have been developed to measure the relationship of primary product shipments to the data on shipments for the industry shown in tables 1a through 5a and data on product shipments shown in tables 6a through 6c.

Specialization ratio represents the ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for the establishments classified in the industry.

Coverage ratio represents the ratio of primary products shipped by the establishments classified in the industry to the total shipments of such products that are shipped by all manufacturing establishments wherever classified.

SECTION 2. ITEMS COLLECTED ONLY ON ASM REPORT FORMS

The following items were collected only from establishments included in the ASM sample:

Supplemental labor costs. Supplemental labor costs are divided into legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

While the excluded items do benefit employees and all or part of their cost generally is similar to the items covered in the ASM labor costs statistics, accounting records generally do not provide reliable figures on net employee benefits of these types.

Retirements of depreciable assets. Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during 1992. When a complete operation or establishment changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

Depreciation charges for fixed assets. This item includes depreciation and amortization charged during the year against assets. Depreciation charged against fixed assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation.

Rental payments. Total rental payments is collected on all census forms. However, the breakdown between rental payments for buildings and other structures and rental payments for machinery and equipment is collected only on the ASM forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets, and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

Depreciable assets. Total value of gross depreciable assets is collected on all census forms. However, the detail for depreciable assets is collected only on the ASM forms. The data encompass all fixed depreciable assets on the books of establishments at the beginning and end of the year. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, and equipment (production, office, and transportation equipment) for which depreciation reserves are maintained. Excluded are nondepreciable capital assets, including inventories and intangible assets, such as timber and mineral rights.

The definition of fixed depreciable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year, rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress. In addition, respondents were requested to make certain that assets at the beginning of the year plus new and used capital expenditures, less retirements, equalled assets at the end of the year.

New and used capital expenditures. The data for total new capital expenditures, new building expenditures, new machinery expenditures, and total used capital expenditures are collected on all census forms. However, the breakdown between expenditures for used buildings and other structures and expenditures for used machinery and equipment is collected only on the ASM form. (See further explanation on capital expenditures in section 1.)

Quantity of electric energy consumed for heat and power. Data on the cost of purchased electric energy are collected on all census forms. However, data on the quantity of purchased electric energy are collected only on the ASM forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

Breakdown of new capital expenditures for machinery and equipment. ASM establishments were requested to separate their capital expenditures for new machinery and equipment into (1) automobiles, trucks, etc., for highway use, (2) computers and peripheral data processing equipment, and (3) all other.

The category ''automobiles, trucks, etc., for highway use'' is intended to measure expenditures for vehicles designed for highway use that were acquired through a purchase or lease-purchase agreement. Vehicles normally operating off public highways (vehicles specifically designed to transport materials, property, or equipment on mining, construction, logging, and petroleum development projects) are excluded from this item.

Foreign content of cost of materials. Establishments included in the ASM sample panel were requested to provide information on foreign-made materials purchased or transferred from foreign sources. This includes materials acquired from a central warehouse or other domestic establishment of the same company but made in an operation outside of the 50 States, District of Columbia, Puerto Rico, or U.S. territories.

Cost of purchased services. ASM establishments were requested to provide information on the cost of purchased services for the repair of buildings and other structures, the repair of machinery, communication services, legal services, accounting and bookkeeping services, advertising, software and other data processing services, and refuse removal. Each of these items reflect the costs paid directly by the establishment, and exclude salaries paid to employees of the establishment for these services.

Included in the cost of purchased services for the repair of buildings and machinery are payments made for all maintenance and repair work on buildings and equipment, such as painting, roof repairs, replacing parts, and overhauling equipment. Such payments made to other establishments of the same company and for repair and maintenance of any leased property also are included. Extensive repairs or reconstruction that were capitalized are considered capital expenditures for used buildings and machinery and are, therefore, excluded from this item. Repair and maintenance costs provided by an owner as part of a rental contract or incurred directly by an establishment in using its own work force also are excluded.

Included in the cost of purchased advertising services are payments for printing, media coverage, and other advertising services and materials.

Included in the cost of purchased software and other data processing services are all purchases by the establishment from other companies. Excluded are services provided by other establishments of the same company (such as by a separate data processing unit).

Included in the cost of purchased refuse removal services are all costs of refuse removal services paid by the establishment, including costs for hazardous waste removal or treatment. Excluded are all costs included in rental payments or as capital expenditures.

Three basic approaches were utilized to produce these statistics.

1. For items 1 through 6, data were estimated (imputed) for all non-ASM establishments using the available data in the establishment record and industry-based parameters. The statistics were then generated by simply tabulating all census records including the imputed value for non-ASM establishments and the unweighted value for ASM establishments. Separate imputation rates were developed and are shown in the table. For quantity of purchased electricity for heat and power (item 7), a similar procedure was used; however, the imputation parameters were geographically-based instead of industry-based. For quantities of generated less sold electricity, no imputation was performed for non-ASM establishments. The estimates for these items are simply tabulations of unweighted ASM values.

   Since the published statistics for these items were developed from the complete census universe and not just the ASM establishments, there are no sampling variances associated with these statistics. However, there is an unknown level of bias for each of the items due to the imputation of the non-ASM establishments. This bias is felt to be small due to the strong correlation between the items being imputed and the collected items that were used to generate the impute values.

2. For items 8 and 9, the estimates were developed using a ratio estimation methodology. For item 8, an estimate of the breakout of new capital expenditures for machinery and equipment into the three categories was made from ASM establishments reporting these categories. The estimated proportions were then applied to the corresponding census value for new capital expenditures for machinery and equipment to produce the estimates.

   The estimates for item 9, foreign content of cost of materials, were developed in a similar manner based on costs of parts, supplies, and components (item 5a) as the control total for the three categories.

   For items 8 and 9, an adjustment ratio of the following form was computed:

$$Rj = \frac{NMc}{TMEasm}$$

   where:

   NMc = the census value of new capital expenditures for machinery and equipment

   TMEasm = the weighted ASM value of new capital expenditures for machinery and equipment from reporters of the detailed breakout data

3. For item 10, cost of purchased services, the estimates were made by simply tabulating weighted data for all the ASM records that reported the item. A response coverage ratio (a measure of the extent to which respondents reported for each item) is shown in table 3c for the types of services. It is derived for each item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight, see appendix B) for those ASM establishments that reported the specific inquiry to the weighted total employment for all ASM establishments classified in the industry.

Appendix B.
Annual Survey of Manufactures Sampling and Estimating Methodologies

DESCRIPTION OF SURVEY SAMPLE

The annual survey of manufactures (ASM) contains two components. The mail portion of the survey is a probability sample of about 64,000 manufacturing establishments selected from a total of about 216,000 establishments. These 216,000 establishments represent all manufacturing establishments of multiunit companies and all single-establishment companies mailed schedules in the 1987 Census of Manufactures. This mail portion is supplemented annually by a Social Security Administration list of new manufacturing establishments opened after 1987 and a list of new multiunit manufacturing establishments identified from the Census Bureau's Company Organization Survey.

For the current panel, all establishments of companies with 1987 shipments in manufacturing in excess of $500 million were included in the survey panel with certainty. There are approximately 500 such companies collectively accounting for approximately 18,000 establishments. For the remaining portion of the mail survey, the establishment was defined as the sampling unit. For this portion, all establishments with 250 employees or more and establishments with a very large value of shipments also were included in the survey panel with certainty. A total of 12,100 establishments were selected from this portion of the universe with certainty. Therefore, of the 64,000 manufacturing establishments included in the ASM panel, approximately 31,000 are selected with certainty. These certainty establishments collectively account for approximately 80 percent of the total value of shipments in the 1987 census.

Smaller establishments in the remaining portion of the mail survey were sampled with probabilities ranging from 0.999 to 0.005 in accordance with mathematical theory for optimum allocation of a sample. The probabilities of selection assigned to the smaller establishments were proportional to measures of size determined for each establishment. The measures of size depend directly upon each establishment's 1987 product class values and the historic variability of the year-to-year shipments of each product class. Product classes displaying more volatile year-to-year change in shipments at the establishment level were sampled at a heavier rate.

This method of assigning measures of size was used in order to maximize the precision (that is, minimize the variance of estimates of the year-to-year change) in the value of product class shipments. Implicitly, it also gave weight differences in employment, value added, and other general statistics, since these are highly correlated with value of shipments. Individual sample selection probabilities were obtained by multiplying each establishment's final measure of size by an overall sampling fraction coefficient calculated to yield a total expected sample size.

The sample selection procedure gave each establishment in the sampling frame an independent chance of selection. This method of independent selection permits the rotation of small establishments out of a given sample panel without introducing a bias into the survey estimates.

The nonmail portion of the survey includes all single-establishment companies that were tabulated as administrative records in the 1987 Census of Manufactures. Although this portion contained approximately 134,000 establishments, it accounted for less than 2 percent of the estimate for total value of shipments at the total manufacturing level. This portion was not sampled; rather, the data for every establishment in this group were estimated based on selected information obtained annually from the administrative records of the Internal Revenue Service and the Social Security Administration. This administrative-records information, which includes payroll, total employment, industry classification, and physical location of the establishment, was obtained under conditions which safeguard the confidentiality of both tax and census records. Estimates of data other than payroll and employment for these small establishments were developed from industry averages.

The corresponding estimates for the mail and nonmail establishments were added together, along with the base-year differences, as defined in the Description of Estimating Procedure section, to produce the figures shown in this publication.

DESCRIPTION OF ESTIMATING PROCEDURES

Most of the ASM estimates for the years 1988-1991 were computed using a difference estimation procedure. For each item, a base-year difference was developed. This base-year difference is equal to the difference between the 1987 census published number for an item total and the linear ASM estimate of the total for 1987. The ASM linear estimate was obtained by multiplying each sample establishment's data by its sample weight (the reciprocal of its probability of selection) and summing the weighted values.

These base-year differences were then added to the corresponding current-year linear estimates, which include the sum of the estimates for the mail and nonmail

establishments, to produce the estimates for the years 1983-1991. Estimates developed by this procedure usually are far more reliable than comparable linear estimates developed from the current sample data alone.

However, the 1992 sample estimates for the purchased service items, shown in table 3c, are strictly ASM linear estimates developed only from ASM establishments that reported the specific item.

The remaining estimates in table 3c, showing the breakdown of expenditures for new machinery and equipment and costs of parts (separated into purchases from foreign sources and purchases from domestic sources), were computed as ratio estimates. To do this, linear estimates of the new machinery detail items were developed from the ASM establishments and were ratio adjusted to the corresponding census total for new machinery. In a similar fashion, the ASM linear estimates of the detailed purchased materials items were ratio adjusted to the corresponding census total for cost of parts.

QUALIFICATIONS OF THE DATA

The estimates developed from the sample are apt to differ somewhat from the results of a survey covering all companies in the sampled lists but otherwise conducted under essentially the same conditions as the actual sample survey. The estimates of the magnitude of the sampling errors (the differences between the estimates obtained and the results theoretically obtained from a comparable, complete-coverage survey) are provided by the standard errors of the estimates.

The particular sample selected for the ASM is one of a large number of similar probability samples that, by chance, might have been selected under the same specifications. Each of the possible samples would yield somewhat different sets of results, and the standard errors are measures of the variation of all the possible sample estimates around the theoretical, comparable, complete-coverage values.

Estimates of the standard errors have been computed from the sample data for selected statistics in this report. They are presented in the form of relative standard errors (the standard errors divided by the estimated values to which they refer).

In conjunction with its associated estimate, the relative standard error may be used to define confidence intervals (ranges that would include the comparable, complete-coverage value for specified percentages of all the possible samples).

The complete-coverage value would be included in the range:

1. From one standard error below to one standard error above the derived estimate for about two-thirds of all possible samples.
2. From two standard errors below to two standard errors above the derived estimate for about 19 of 20 of all possible samples.
3. From three standard errors below to three standard errors above the derived estimate for nearly all samples.

An inference that the comparable, complete-survey result would be within the indicated ranges would be correct in approximately the relative frequencies shown. Those proportions, therefore, may be interpreted as defining the confidence that the estimates from a particular sample would differ from complete-coverage results by as much as one, two, or three standard errors, respectively.

For example, suppose an estimated total is shown as 50,000 with an associated relative standard error of 2 percent, that is, a standard error of 1,000 (2 percent of 50,000). There is approximately 67 percent confidence that the interval 49,000 to 51,000 includes the complete-coverage total, about 95 percent confidence that the interval 48,000 to 52,000 includes the complete-coverage total and almost certain confidence that the interval 47,000 to 53,000 includes the complete-coverage total.

In addition to the sample errors, the estimates are subject to various response and operational errors: errors of collection, reporting, coding, transcription, imputation for nonresponse, etc. These operational errors also would occur if a complete canvass were to be conducted under the same conditions as the survey. Explicit measures of their effects generally are not available. However, it is believed that most of the important operational errors were detected and corrected in the course of the Census Bureau's review of the data for reasonableness and consistency. The small operational errors usually remain. To some extent, they are compensating in the aggregated totals shown. When important operational errors were detected too late to correct the estimates, the data were suppressed or were specifically qualified in the tables.

As derived, the estimated standard errors included part of the effect of the operational errors. The total errors, which depend upon the joint effect of the sampling and operational errors, are usually of the order of size indicated by the standard error, or only moderately higher. However, for particular estimates, the total error may considerably exceed the standard errors shown.

The concept of complete coverage under the conditions prevailing for the ASM is not identical to the complete coverage of the census of manufactures, as the censuses have been conducted. Nearly all types of operational errors that affect the ASM also occur in the censuses. The ASM and the censuses, are conducted under quite different conditions, and operational errors can be better controlled in the ASM than in the censuses. As a result, for many of the census figures, the errors are of the same order of size as the total errors of the corresponding annual survey estimates. The differences between the census and ASM operating conditions also disturb, to some degree, the comparability of the ASM and census data.

Any figures shown in the tables in this publication having an associated standard error exceeding 15 percent may be of limited reliability. However, the figure may be combined with higher-level totals, creating a broader aggregate, which then may be of acceptable reliability.

Appendix C.
Product Code Reference Tables

Part 1. Comparability of Product Classes and Product Codes That Changed: 1992 to 1987

1992	1987
37111	37115
37111 71	37115 00
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Part 2. Comparability of Product Classes and Product Codes That Changed: 1987 to 1992

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37512 07	37512 09
37615	37616
37615	37617
37615 01	37616 00
37615 02	37617 02
37615 03	37617 03
37996 03	37996 07
37996 08	37996 07
37999 01	37999 23
37999 02	37999 25
37999 06	37999 23
37999 19	37999 23
37999 21	37999 25

Part 3. Current Industrial Reports by Product Code

[Current Industrial Reports (CIR) data are contained in the publication *Manufacturing Profiles: 1992* [MP-1(92)] issued August 1994 and available through the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. To access the most current CIR data electronically, dial the Census-BEA Electronic Forum at 301-457-2310. Your communications modem should be set as follows: Baud rate: 1200, 2400, 9600; Parity: None; Data bits: 8; Stop bits: 1; Duplex: full. Before making your first call, decide on a password and be prepared to provide the following regarding your computer: PC brand name, monitor screen dimensions (e.g., 80 columns by 24 lines), monitor color support, modem baud rate, and PC communications software package. Call the voice number, 301-457-1242, for further bulletin board assistance]

Product code	Current Industrial Report
3715100	M37L, Truck Trailers
3721500	M37G, Civil Aircraft and Engines
3724200	M37G, Civil Aircraft and Engines

Publication Program

1992 CENSUS OF MANUFACTURES

Publications of the 1992 Census of Manufactures, containing preliminary and final data on manufacturing establishments in the United States, are described below. Publications order forms for the specific reports may be obtained from any Department of Commerce district office or from Data User Services Division, Customer Services, Bureau of the Census, Washington, DC 20233-8300.

Preliminary Reports

Industry series—83 reports (MC92-I-20A(P) to -39D(P))

Preliminary industry data are issued in 83 separate reports covering 459 industries. Preliminary summary data for the United States and States are released in one report.

Final Reports

Industry series—83 reports (MC92-1-20A to -39D)

Each of the 83 reports provides information for a group of related industries (''dairy products'' includes industries for butter, cheese, milk, etc.). Final figures for the United States are shown for each of the 459 manufacturing industries on quantity and value of products shipped and materials consumed, cost of fuels and electric energy, capital expenditures, assets, rents, inventories, employment, payroll, payroll supplements, hours worked, value added by manufacture, number of establishments, and number of companies. Comparative statistics for earlier years are provided where available.

For each industry, data on value of shipments, value added by manufacture, capital expenditures, employment, and payroll are shown by employment-size class of establishment, State, and degree of primary product specialization.

Geographic area series—51 reports (MC92-A-1 to -51)

A separate report is being published for each State and the District of Columbia. Each report presents data for industry groups and industries on value of shipments, cost of materials, value added by manufacture, employment, payroll, hours worked, new capital expenditures, and number of manufacturing establishments for the State, MA's, counties, and selected places. Comparative statistics for earlier census years are shown for the State and large MA's. Manufacturing totals are presented for each county and for places with significant manufacturing activity. Detailed statistics (including inventories, assets, rents, and energy costs) are presented only in statewide totals.

Subject series—3 reports (MC92-S-1 to -3)

Each of the three reports contains detailed statistics for an individual subject, such as concentration ratios in manufacturing, manufacturers' shipments to the Federal Government, and a general national-level summary.

Reference series—1 report (MC92-R-1)

The *Numerical List of Manufactured and Mineral Products* includes a description of the principal products and services published in the 1992 Censuses of Manufactures and Mineral Industries.

Location of Manufacturing Plants—1 report (MC92-LM)

This report includes data for number of establishments by four-digit SIC industry and by employment-size class for counties, incorporated places of 2,500 inhabitants or more, and Zip Codes for each State. This report is available only on compact disc-read only memory (CD-ROM).

Analytical Reports—2 reports (AR92-1 and -2)

Exports From Manufacturing Establishments (AR92-1)

This report presents data on exports by two- and three-digit SIC industry groups for the United States and States. Information is presented on value of direct report shipments and estimates of the employment required to manufacture these products. Included are estimates of employment in manufacturing and nonmanufacturing establishments that supply parts, materials, and services for production of manufactured exports.

Selected Characteristics of Manufacturing Establishments That Export (AR92-2)

This report presents data on the number of manufacturing companies and establishments that export by major group, State, employment size, and ratios of exports to shipments.

Electronic Media

All data included in the printed reports are available on CD-ROM. The CD-ROM's provide the same information found in the reports as well as additional information not published in the final reports, such as location of manufacturing plants. Electronic media products are available for users who wish to summarize, rearrange, or process large amounts of data. These products, with corresponding technical documentation, are sold by Data User Services Division, Customer Services, Bureau of the Census, Washington, DC 20233-8300.

OTHER ECONOMIC CENSUSES REPORTS

Data on retail trade, wholesale trade, financial, insurance, real estate, service industries, construction industries, mineral industries, transportation, communications, utilities, enterprise statistics, minority-owned businesses, and women-owned businesses also are available from the 1992 Economic Census. A separate series of reports covers the census of outlying areas—Puerto Rico, Virgin Islands of the United States, Guam, and the Commonwealth of the Northern Mariana Islands. Separate announcements describing these reports are available free of charge from Data User Services Division, Customer Services, Bureau of the Census, Washington, DC 20233-8300.