

FEDERAL RESERVE statistical release



G.12.3

For release at 9:15 am (EDT)
September 15, 1987

INDUSTRIAL PRODUCTION

Industrial production increased an estimated 0.3 percent in August, after gains of 0.8 percent in July and 0.7 percent in both June and May. The business equipment sector posted the largest increases in August, while output of materials and consumer goods edged up further. At 130.7 percent of the 1977 average, the total index in August was 4.5 percent higher than a year earlier.

Market Groupings. Output of consumer goods was up about one-quarter of a percent despite a sharp reduction in auto assemblies from an annual rate of 6.7 million units in July to a 5.9 million rate in August. A further surge in light truck production, of which a large proportion is for consumer use, more than offset the decline in auto assemblies. The cutback in autos reflected an attempt to reduce inventory levels as well as reported parts shortages. Output of goods for the home increased slightly, but, on balance, has been sluggish throughout this year. Production of nondurable consumer goods changed little in August. Output of business equipment, which has grown rapidly this year, rose sharply further in August with increases in all major components; the most significant gains so far this year have occurred in manufacturing and commercial equipment, apparently reflecting improvement in both domestic and foreign demand. Output of intermediate products--supplies for both construction and business--was about unchanged in August following several months of solid gains. Recent strength in construction supplies, particularly lumber, may reflect, in part, the improved trade situation.

Materials output rose 0.2 percent after rising on average about 1 percent in the preceding two months. Production of durable materials--in particular, equipment parts and metals--increased in August. Nondurable materials output was up fractionally to a level more than 7 percent higher than a year earlier. Energy materials were unchanged during the month.

Industrial Production: Summary

Seasonally adjusted

Item	Index, 1977 = 100		Monthly percent change					Current month from a year ago
	1987		APR	MAY	JUN	JUL	AUG	
	JUL	AUG						
Total	130.3	130.7	.1	.7	.7	.8	.3	4.5
Market Groupings								
Products, total	138.9	139.4	-0.4	1.1	.6	.6	.4	4.2
Final products	137.3	138.0	-0.4	1.0	.6	.5	.5	4.1
Consumer goods	129.3	129.5	-0.7	1.2	.4	.5	.2	3.5
Durable goods	120.1	120.5	-2.6	1.8	-0.5	.4	.3	4.1
Nondurable goods	132.8	132.9	.0	1.0	.6	.6	.1	3.4
Business equipment	143.8	145.2	.0	.7	1.3	.1	1.0	4.2
Defense and space	186.3	186.8	-0.3	.2	-0.4	.3	.3	3.2
Intermediate products	144.2	144.1	-0.4	1.6	.5	1.0	-0.1	4.5
Construction supplies	130.8	130.9	-0.9	.8	.9	1.1	.1	4.4
Materials	118.6	118.9	.8	.1	.8	1.1	.2	5.0
Industry Groupings								
Manufacturing	135.0	135.4	.1	.6	.4	.9	.3	4.6
Durable	132.1	132.7	-0.4	.6	.3	.8	.5	4.1
Nondurable	139.0	139.2	.7	.7	.7	1.0	.1	5.3
Mining	98.6	98.6	.5	1.0	.8	-0.2	.0	2.3
Utilities	113.9	114.3	-0.5	2.2	1.7	.5	.4	5.5

Industry Groupings. Manufacturing production increased 0.3 percent in August, with durable goods up 0.5 percent and total nondurables about unchanged. Mining output was unchanged overall, but oil and gas extraction increase moderately. Production by utilities rose an estimated 0.4 percent.

Revisions.

Total Industrial Production
(Estimate as shown last month and current estimates)

Month	Index (1977=100)		Percentage change from previous months	
	Previous	Current	Previous	Current
May	128.3	128.4	.7	.7
June	128.8	129.2	.4	.7
July	129.8	130.3	.8	.8
August	NA	130.7	NA	.3

NA--not applicable.

In October revised indexes of industrial production will be issued for the period from January 1985 through mid-1987. The revision is based on data unavailable at the time the original estimates were made and also incorporates updated seasonal adjustment factors developed from data through 1986. The October G.12.3 statistical release will contain the revised indexes both in seasonally adjusted and not seasonally adjusted form. A computer tape including all revisions will be available.

FEDERAL RESERVE



Industrial Production

INDUSTRIAL PRODUCTION

AUGUST DATA

SEASONALLY ADJUSTED, RATIO SCALE, 1977=100

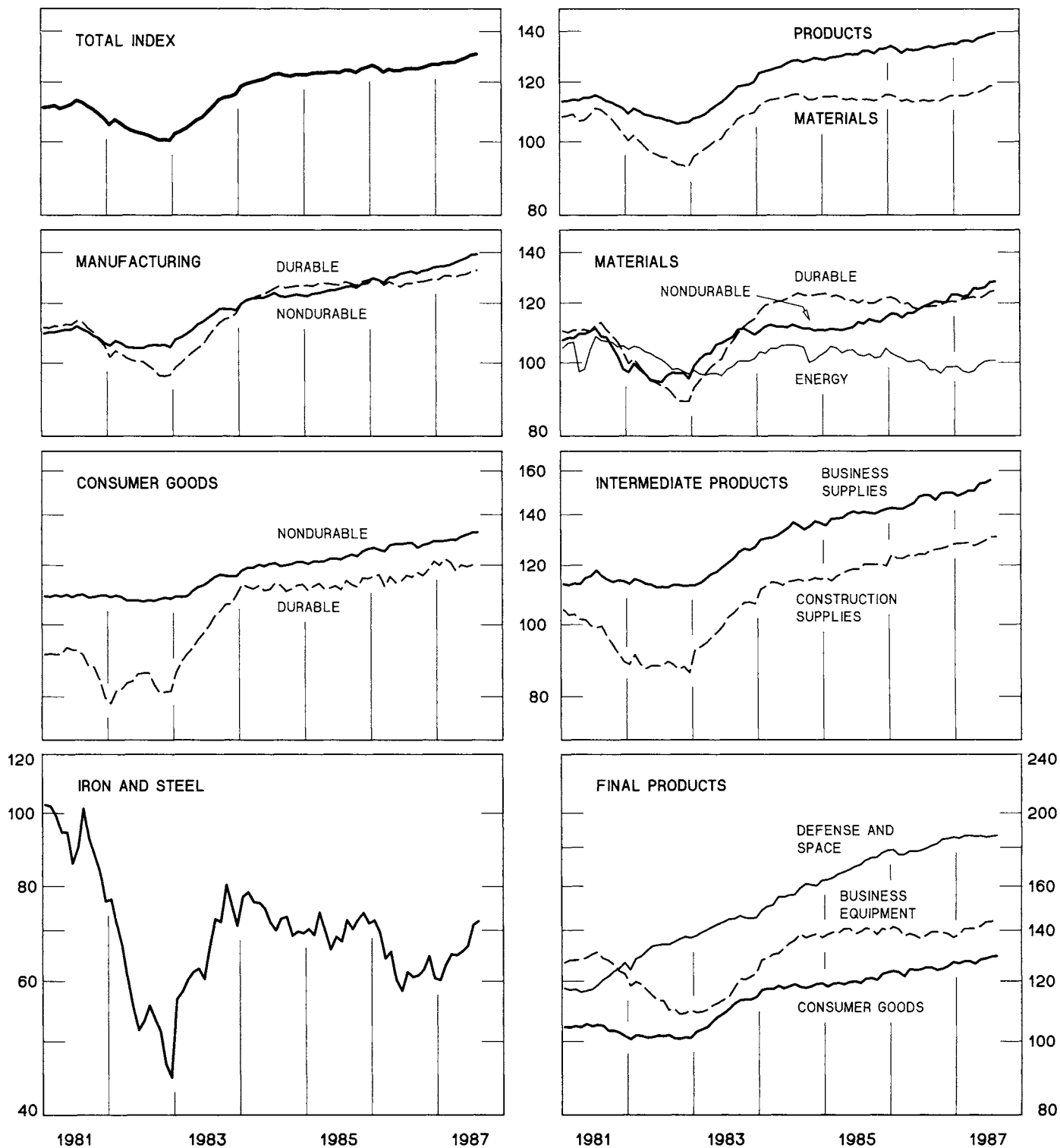


Table 1A
INDUSTRIAL PRODUCTION: MARKET GROUPINGS
 Seasonally adjusted, 1977 = 100

Major Market Groupings	1977 Pro-portion	1986 Ann. Avg.	1986 AUG	SEP	OCT	NOV	DEC	1987 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
TOTAL INDEX	100.00	125.1	125.1	124.9	125.3	126.0	126.7	126.5	127.2	127.3	127.4	128.4	129.2	130.3	130.7
PRODUCTS, TOTAL	57.72	133.2	133.8	133.3	134.0	134.5	135.0	134.9	136.1	136.2	135.7	137.2	138.0	138.9	139.4
FINAL PRODUCTS	44.77	132.3	132.6	132.2	132.7	133.1	133.7	133.6	135.0	135.0	134.5	135.8	136.6	137.3	138.0
CONSUMER GOODS	25.52	124.5	125.1	124.2	124.7	125.6	127.2	126.8	127.5	127.5	126.6	128.2	128.6	129.3	129.5
EQUIPMENT, TOTAL	19.25	142.7	142.5	142.8	143.3	143.1	142.2	142.8	144.9	145.0	144.9	145.8	147.1	147.9	149.3
INTERMEDIATE PRODUCTS	12.94	136.4	137.8	137.0	138.7	139.2	139.7	139.1	139.7	140.4	139.9	142.1	142.8	144.2	144.1
MATERIALS	42.28	113.9	113.2	113.5	113.3	114.3	115.2	115.2	115.1	115.2	116.2	116.3	117.2	118.6	118.9
CONSUMER GOODS	25.52	124.5	125.1	124.2	124.7	125.6	127.2	126.8	127.5	127.5	126.6	128.2	128.6	129.3	129.5
DURABLE CONSUMER GOODS	6.89	116.2	115.7	117.4	116.3	118.4	121.5	120.0	122.4	121.2	118.1	120.2	119.6	120.1	120.5
Automotive products	2.98	115.1	114.5	117.0	112.7	114.6	117.7	117.6	123.5	121.2	115.7	118.0	114.9	117.1	117.6
Autos and trucks, consumer	1.79	112.9	110.4	116.8	107.7	107.6	115.6	117.9	125.2	121.6	111.5	113.1	107.7	111.5	112.7
Autos, consumer	1.16	97.3	87.8	96.2	91.9	92.3	99.5	94.3	105.3	100.9	91.8	91.0	87.9	86.1	76.5
Trucks, consumer	.63	141.8	152.4	155.1	137.1	136.0	145.6	161.9	162.1	159.9	148.1	154.2	144.4		
Auto parts & allied gds	1.19	118.4	120.7	117.3	120.1	125.2	120.8	117.1	121.0	120.5	121.9	125.3	125.8	125.5	125.0
Home goods	3.91	117.1	116.7	117.7	119.0	121.2	124.4	121.9	121.6	121.2	119.9	121.8	123.2	122.4	122.7
Appliances, TV & air-cond	1.24	139.5	139.4	141.2	142.6	148.2	153.2	146.9	145.2	142.9	137.7	142.2	143.8	139.9	140.3
Appliances and TV	1.19	141.6	142.5	143.5	144.3	150.0	155.1	148.9	146.7	143.8	139.2	142.3	144.4	140.8	
Carpeting & furniture	.96	125.8	125.8	126.2	128.8	131.1	132.0	129.1	130.8	131.3	133.5	133.3	135.1	136.1	
Misc. home goods	1.71	96.0	95.1	96.0	96.5	96.3	99.4	99.8	99.3	99.8	99.4	100.7	101.7	102.1	
NONDURABLE CONSUMER GOODS	18.63	127.5	128.6	126.7	127.8	128.3	129.4	129.2	129.4	129.8	129.8	131.1	132.0	132.8	132.9
Clothing	3.34	97.0	96.8	95.4	97.4	97.6	99.0	98.8	99.9	99.4	99.5	101.0	102.1	102.8	
Consumer staples	15.29	134.2	135.5	133.6	134.4	135.0	136.0	135.9	135.9	136.5	136.4	137.7	138.5	139.3	139.5
Consumer foods & tobacco	7.80	131.9	133.2	131.0	131.6	132.6	133.9	132.9	134.0	134.8	134.4	135.6	136.1	137.0	
Nonfood staples	7.49	136.5	137.9	136.3	137.2	137.4	138.2	139.0	137.9	138.2	138.5	139.9	141.0	141.7	141.8
Consumer chem. products	2.75	161.3	163.4	161.1	161.7	161.0	163.1	165.9	164.7	165.7	164.7	165.9	166.4	166.3	
Consumer paper products	1.88	147.3	147.7	145.7	150.3	151.5	150.1	149.4	147.8	147.5	148.9	152.9	154.1	155.5	
Consumer energy	2.86	105.7	107.1	106.3	105.2	105.5	106.4	106.3	105.7	105.8	106.5	106.4	108.0	109.0	
Consumer fuel	1.44	92.8	94.9	92.0	90.8	91.7	92.2	95.0	92.5	94.1	94.5	92.1	91.7	92.9	
Residential utilities	1.42	118.8	119.6	120.9	119.8	119.6	120.8	117.8	119.2	117.7	118.7	121.0	124.7		
EQUIPMENT, TOTAL	19.25	142.7	142.5	142.8	143.3	143.1	142.2	142.8	144.9	145.0	144.9	145.8	147.1	147.9	149.3
BUSINESS & DEFENSE EQUIP.	18.01	147.1	147.8	148.0	148.4	148.1	147.0	147.7	150.1	150.1	150.0	150.8	152.2	152.4	153.6
BUSINESS EQUIPMENT	14.34	138.6	139.3	139.3	139.1	138.6	137.1	138.1	140.8	140.8	140.8	141.7	143.6	143.8	145.2
Constr., mining, & farm	2.08	59.9	58.3	58.1	58.0	56.6	58.2	57.2	56.8	58.1	58.6	61.2	64.0	65.3	
Manufacturing equipment	3.27	111.9	113.3	113.0	112.7	109.6	108.8	110.1	111.5	110.9	111.1	111.5	113.9	116.4	117.7
Power equipment	1.27	81.6	81.7	80.3	80.5	79.5	80.2	79.6	81.2	81.7	82.4	84.0	83.8	82.2	82.6
Commercial equipment	5.22	214.6	217.5	215.1	215.4	217.3	213.7	215.9	218.4	219.7	220.9	222.0	225.8	224.9	226.6
Transit equipment	2.49	109.2	106.9	113.3	111.8	110.7	108.9	109.5	117.4	114.0	110.4	110.1	107.3	106.8	108.2
DEFENSE & SPACE EQUIPMENT	3.67	180.3	181.0	182.0	184.6	184.9	185.8	185.2	186.5	186.6	186.1	186.5	185.8	186.3	186.8
INTERMEDIATE PRODUCTS	12.94	136.4	137.8	137.0	138.7	139.2	139.7	139.1	139.7	140.4	139.9	142.1	142.8	144.2	144.1
Construction supplies	5.95	124.7	125.4	125.9	126.3	126.8	127.9	128.3	128.4	128.5	127.3	128.3	129.4	130.8	130.9
Business supplies	6.99	146.4	148.4	146.4	149.3	149.7	149.8	148.3	149.4	150.5	150.5	153.8	154.2	155.6	
Gen. business supplies	5.67	150.6	152.5	151.2	154.1	153.7	154.3	153.3	154.1	155.2	155.5	158.2	159.0	160.7	
Commercial energy prod.	1.31	128.3	130.6	125.8	128.8	132.6	130.3	126.8	128.8	130.3	129.0	135.0	133.5	133.7	
MATERIALS	42.28	113.9	113.2	113.5	113.3	114.3	115.2	115.2	115.1	115.2	116.2	116.3	117.2	118.6	118.9
DURABLE GOODS MATERIALS	20.50	119.7	118.8	118.9	119.2	120.4	120.7	120.5	121.5	121.8	122.2	121.6	122.7	124.2	124.6
Consumer durable parts	4.92	98.5	95.2	95.3	97.0	98.0	98.8	99.0	100.0	98.9	96.2	95.2	95.1	94.6	94.8
Equipment parts	5.94	153.9	155.6	154.8	153.5	154.5	154.2	154.0	155.6	155.8	157.1	156.0	157.0	159.2	160.1
Durable materials nec	9.64	109.4	108.1	108.8	109.4	110.7	111.2	110.8	111.5	112.6	114.1	113.9	115.6	117.7	118.0
Basic metal materials	4.64	80.0	76.9	78.4	78.8	82.1	80.3	79.2	80.3	80.8	81.8	81.9	84.1	87.1	
NONDURABLE GOODS MATERIALS	10.09	118.3	119.7	120.6	120.3	120.2	123.1	123.2	122.5	122.8	125.4	125.3	125.8	127.8	128.1
Textile, paper, & chem. mater.	7.53	118.9	120.5	121.8	121.3	121.1	124.7	125.0	123.6	124.0	126.9	126.5	126.7	129.4	129.7
Textile materials	1.52	110.7	113.4	116.0	114.3	115.6	116.1	116.5	115.8	118.5	125.0				
Pulp & paper materials	1.55	132.3	136.0	133.7	133.5	134.2	140.2	137.9	136.7	134.7	135.8	137.4	138.6	141.6	
Chemical materials	4.46	117.1	117.5	119.7	119.5	118.5	122.3	123.4	121.8	122.1	124.4	125.0	124.0	126.1	
Misc. nondurable materials	2.57	116.5	117.2	117.1	117.5	117.6	118.4	118.0	119.0	119.2	121.1	122.0	122.9		
ENERGY MATERIALS	11.69	99.9	97.9	98.0	96.9	98.7	98.8	98.9	97.6	97.0	97.5	99.3	100.4	100.7	100.7
Primary energy	7.57	105.5	103.7	103.8	102.7	104.8	105.1	104.1	102.6	101.5	102.3	103.6	104.3	103.8	
Converted fuel materials	4.12	89.7	87.3	87.4	86.2	87.6	87.3	89.4	88.5	88.9	88.7	91.4	93.3	95.1	

NOTE: Two components--oil and gas well drilling and manufactured homes--are included in total equipment but not shown here. They are shown in Tables 4A and 4B on page 8 and 9.

Table 1B
INDUSTRIAL PRODUCTION: MARKET GROUPINGS
 Not seasonally adjusted, 1977 = 100

Major Market Groupings	1977 Pro- por- tion	1986 Ann. Avg.	1986 AUG	SEP	OCT	NOV	DEC	1987 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
TOTAL INDEX	100.00	125.1	127.6	129.1	128.0	125.4	122.4	123.0	126.9	127.0	126.3	127.4	132.0	128.2	133.5
PRODUCTS, TOTAL	57.72	133.2	138.0	139.6	138.0	133.9	130.1	129.9	134.0	134.2	133.3	135.5	141.5	137.9	144.1
FINAL PRODUCTS	44.77	132.3	136.3	138.1	136.4	132.4	128.9	129.6	133.6	133.5	131.9	133.9	140.0	135.8	142.1
CONSUMER GOODS	25.52	124.5	130.5	131.8	129.7	124.6	120.3	121.6	125.5	125.1	123.8	126.0	132.8	128.1	135.3
EQUIPMENT, TOTAL	19.25	142.7	143.9	146.5	145.2	142.7	140.4	140.1	144.2	144.7	142.7	144.4	149.5	146.0	151.2
INTERMEDIATE PRODUCTS	12.94	136.4	143.9	144.8	143.6	139.2	134.1	131.1	135.6	136.6	138.2	140.8	146.7	145.3	151.0
MATERIALS	42.28	113.9	113.4	114.8	114.4	113.9	111.8	113.5	117.2	117.2	116.8	116.5	119.1	114.9	119.0
CONSUMER GOODS	25.52	124.5	130.5	131.8	129.7	124.6	120.3	121.6	125.5	125.1	123.8	126.0	132.8	128.1	135.3
DURABLE CONSUMER GOODS	6.89	116.2	113.6	121.4	125.9	119.5	110.2	115.6	124.8	124.5	120.9	122.5	124.0	106.2	118.0
Automotive products	2.98	115.1	106.2	119.2	121.4	115.1	104.1	115.1	129.1	128.9	121.4	122.9	123.2	95.1	109.6
Autos and trucks, consumer	1.79	112.9	95.4	116.8	118.7	109.1	95.3	115.5	135.3	134.5	120.7	122.8	121.4	78.1	98.1
Autos, consumer	1.16	97.3	74.3	94.9	104.2	96.4	83.6	95.0	114.7	111.5	98.7	98.5	98.2	51.4	65.7
Trucks, consumer	.63	141.8	134.7	157.5	145.8	132.6	117.0	153.4	173.4	177.2	161.4	168.0	164.6		
Auto parts & allied gds	1.19	118.4	122.5	122.8	125.5	124.1	117.4	114.5	119.8	120.4	122.5	123.1	125.8	120.6	126.9
Home goods	3.91	117.1	119.2	123.0	129.4	122.8	114.8	116.0	121.5	121.1	120.4	122.2	124.6	114.7	124.4
Appliances, TV & air-cond	1.24	139.5	140.0	144.5	164.5	151.1	130.0	145.1	146.9	142.0	139.2	145.3	141.9	128.1	138.9
Appliances and TV	1.19	141.6	145.2	148.5	168.5	154.5	132.0	146.5	147.0	140.3	138.0	143.1	141.2	129.6	
Carpeting & furniture	.96	125.8	129.0	133.4	135.2	132.0	126.8	118.3	132.3	133.1	136.2	132.1	139.1	125.6	
Misc. home goods	1.71	96.0	98.6	101.7	100.6	97.2	97.1	93.6	97.1	99.3	98.1	100.1	103.9	99.0	
NONDURABLE CONSUMER GOODS	18.63	127.5	136.8	135.6	131.1	126.5	124.1	123.8	125.8	125.3	124.9	127.3	136.1	136.2	141.7
Clothing	3.34	97.0	102.0	99.5	99.6	96.6	94.2	93.5	99.2	99.2	98.6	100.7	105.9	100.1	
Consumer staples	15.29	134.2	144.4	143.5	138.0	133.0	130.6	130.5	131.6	131.0	130.7	133.1	142.7	144.1	149.1
Consumer foods & tobacco	7.80	131.9	141.4	140.9	137.9	132.1	127.4	126.0	127.8	129.5	129.8	132.8	141.3	138.9	
Nonfood staples	7.49	136.5	147.6	146.1	138.2	134.0	133.9	135.2	135.6	132.5	131.5	133.4	144.2	149.5	152.7
Consumer chem. products	2.75	161.3	172.6	176.5	167.9	158.2	154.8	154.5	156.9	158.4	156.4	160.2	174.3	176.9	
Consumer paper products	1.88	147.3	163.2	156.2	153.2	148.3	141.5	141.4	144.2	142.5	143.4	147.5	156.8	163.1	
Consumer energy	2.86	105.7	113.3	110.4	99.8	101.3	108.9	112.6	109.5	101.0	100.0	98.4	107.1	114.4	
Consumer fuel	1.44	92.8	96.2	94.7	90.9	95.2	96.2	92.2	87.2	87.2	91.6	93.0	95.0	95.3	
Residential utilities	1.42	118.8	130.8	126.4	108.9	107.5	121.9	133.3	132.3	115.1	108.4	103.9	119.5		
EQUIPMENT, TOTAL	19.25	142.7	143.9	146.5	145.2	142.7	140.4	140.1	144.2	144.7	142.7	144.4	149.5	146.0	151.2
BUSINESS & DEFENSE EQUIP.	18.01	147.1	149.3	152.0	150.2	147.4	144.8	144.8	149.4	150.0	147.8	149.6	154.9	150.7	155.6
BUSINESS EQUIPMENT	14.34	138.6	141.7	144.3	141.8	137.6	133.4	134.1	139.8	140.5	138.1	140.2	146.9	142.3	148.1
Const., mining, & farm	2.08	59.9	58.3	59.9	57.9	55.7	56.9	55.5	58.7	58.9	58.5	60.8	64.5	64.6	
Manufacturing equipment	3.27	111.9	114.6	115.8	114.2	109.4	107.0	106.9	112.1	111.5	110.1	110.1	116.1	115.1	119.5
Power equipment	1.27	81.6	82.1	83.7	81.8	80.3	80.2	77.7	80.5	81.5	80.4	82.1	84.9	79.9	83.3
Commercial equipment	5.22	214.6	226.8	226.5	220.3	215.1	208.4	208.3	212.9	215.3	213.2	217.1	230.1	230.6	237.7
Transit equipment	2.49	109.2	99.3	111.3	114.6	110.1	102.4	109.1	121.1	120.4	113.8	114.7	113.9	90.1	99.0
DEFENSE & SPACE EQUIPMENT	3.67	180.3	178.8	181.8	183.1	185.6	189.3	186.3	186.7	187.0	185.5	186.4	186.0	183.5	184.9
INTERMEDIATE PRODUCTS	12.94	136.4	143.9	144.8	143.6	139.2	134.1	131.1	135.6	136.6	138.2	140.8	146.7	145.3	151.0
Construction supplies	5.95	124.7	128.9	131.2	130.5	127.4	122.2	119.5	123.2	126.3	128.3	129.9	134.6	130.4	134.8
Business supplies	6.99	146.4	156.7	156.4	154.7	149.3	144.4	141.0	146.2	145.4	146.5	150.2	157.0	157.9	
Gen. business supplies	5.67	150.6	160.5	160.9	161.3	154.3	149.1	144.6	149.7	150.9	152.2	155.3	161.3	161.3	
Commercial energy prod.	1.31	128.3	140.4	137.1	126.5	127.7	123.8	125.2	130.9	121.8	122.0	128.3	138.8	143.2	
MATERIALS	42.28	113.9	113.4	114.8	114.4	113.9	111.8	113.5	117.2	117.2	116.8	116.5	119.1	114.9	119.0
DURABLE GOODS MATERIALS	20.50	119.7	118.6	121.1	120.6	119.4	117.0	116.5	122.0	124.1	123.3	123.3	125.6	121.0	124.2
Consumer durable parts	4.92	98.5	94.0	97.1	99.7	98.3	97.4	96.0	100.8	101.1	97.6	95.9	96.4	90.6	93.1
Equipment parts	5.94	153.9	153.6	155.7	153.7	155.5	156.1	154.0	155.5	157.0	155.2	156.2	158.9	155.8	158.1
Durable materials nec	9.64	109.4	109.5	112.0	111.0	107.9	102.9	103.9	112.2	115.6	116.7	116.9	119.9	115.1	119.3
Basic metal materials	4.64	80.0	74.0	77.3	77.2	77.0	71.9	77.0	83.6	87.4	87.8	88.1	88.4	81.6	
NONDURABLE GOODS MATERIALS	10.09	118.3	119.3	121.9	123.0	120.7	115.9	120.7	125.9	125.6	127.5	125.8	128.2	121.3	128.0
Textile, paper, & chem. mater.	7.53	118.9	119.3	122.8	122.6	121.9	118.3	122.5	127.4	127.2	129.5	127.8	129.2	122.1	128.8
Textile materials	1.52	110.7	116.2	117.2	119.7	116.7	104.9	114.3	119.7	121.8	121.8	127.3			
Pulp & paper materials	1.55	132.3	136.4	134.0	135.3	136.0	128.8	137.3	141.8	139.6	138.2	137.6	141.2	133.0	
Chemical materials	4.46	117.1	114.4	120.8	119.2	118.8	119.2	120.1	125.0	124.7	127.1	125.9	126.2	122.8	
Misc. nondurable materials	2.57	116.5	119.3	119.4	124.2	117.0	108.7	115.4	121.5	121.0	121.9	119.8	125.2		
ENERGY MATERIALS	11.69	99.9	99.3	97.6	96.1	98.3	99.1	102.0	101.2	97.9	96.1	96.6	99.7	98.8	101.9
Primary energy	7.57	105.5	104.6	104.1	103.7	104.6	104.4	105.2	105.4	103.2	102.0	102.4	103.8	100.3	
Converted fuel materials	4.12	89.7	89.6	85.7	82.3	86.7	89.3	96.3	93.5	88.2	85.3	85.9	92.2	96.1	

NOTE: Two components--oil and gas well drilling and manufactured homes--are included in total equipment but not shown here. They are shown in Tables 4A and 4B on page 8 and 9.

Table 2A
INDUSTRIAL PRODUCTION: INDUSTRY GROUPINGS
 Seasonally adjusted, 1977 = 100

Major Industry Groupings	SIC Code	1977 Pro- por- tion	1986 Ann- Avg- tion	1986 AUG	SEP	OCT	NOV	DEC	1987 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
MINING AND UTILITIES		15.78	103.4	100.9	100.8	100.7	102.6	101.9	101.9	101.3	101.4	101.5	103.0	104.2	104.3	104.5
MINING		9.83	99.6	96.4	96.2	95.6	97.4	96.7	97.2	96.2	96.5	97.0	98.0	98.7	98.6	98.6
UTILITIES		5.96	109.7	108.3	108.3	109.3	111.2	110.6	109.5	109.6	109.5	109.0	111.3	113.3	113.9	114.3
MANUFACTURING		84.22	129.1	129.5	129.5	129.9	130.3	131.1	131.1	132.0	132.3	132.4	133.3	133.8	135.0	135.4
NONDURABLE		35.11	130.9	132.2	131.4	132.3	132.7	133.7	134.1	134.3	134.8	135.8	136.8	137.7	139.0	139.2
DURABLE		49.10	127.9	127.5	128.1	128.1	128.6	129.2	129.0	130.4	130.5	130.0	130.8	131.1	132.1	132.7
MINING																
Metal mining	101	5.50	71.8	70.9	70.7	68.5	68.3	73.5	72.1	72.0	71.6	66.7	71.7	70.1		
Coal	11,12	1.60	124.2	122.2	120.8	117.6	130.1	124.3	133.5	127.7	121.8	121.6	126.6	130.1	126.9	124.0
Oil & gas extraction	13	7.07	94.7	90.7	91.0	90.5	90.4	90.9	89.9	89.5	91.0	92.0	91.7	91.9	92.0	92.5
Stone & earth minerals	14	6.66	113.7	114.8	111.7	116.4	115.2	109.6	107.1	110.0	113.1	114.4	115.5	117.2	119.6	
NONDURABLE MANUFACTURES																
Foods	20	7.96	133.6	135.1	134.3	133.7	134.4	135.3	135.3	135.7	136.1	136.1	137.1	137.8	138.8	
Tobacco products	21	6.21	96.4	97.1	89.8	100.1	96.8	92.9	89.1	98.7	100.7	99.4	107.8	107.0		
Textile mill products	22	2.29	113.2	114.7	116.0	116.1	117.8	118.4	118.0	118.4	119.3	122.9	122.1	123.6	125.2	
Apparel products	23	2.79	103.6	102.5	102.7	104.2	105.1	106.4	107.2	107.4	107.1	106.6	108.1	109.0		
Paper & products	26	3.15	136.4	138.6	136.9	137.8	139.5	141.6	139.8	140.5	139.2	139.9	141.1	141.9	145.2	
Printing & publishing	27	4.54	163.4	164.6	163.0	167.8	168.5	167.7	168.1	166.7	168.2	171.4	174.4	175.5	175.7	175.6
Chemicals & products	28	8.05	133.0	134.4	133.9	133.9	132.3	134.6	137.4	137.7	138.3	138.2	138.0	138.9	140.3	
Petroleum products	29	2.40	92.1	94.0	93.3	91.1	92.0	92.5	94.7	91.9	91.4	94.0	92.6	91.7	92.0	92.0
Rubber & plastics prod.	30	2.80	153.4	155.5	154.9	157.6	159.0	160.7	158.1	159.2	161.3	163.8	165.4	168.2	171.8	
Leather & products	31	5.31	61.3	62.0	59.4	60.2	61.3	59.4	58.3	59.6	59.1	59.3	60.6	60.1	59.9	
DURABLE MANUFACTURES																
Lumber & products	24	2.30	123.4	122.5	125.0	125.9	129.5	133.1	130.2	130.0	129.5	128.9	130.6	132.0	134.1	
Furniture & fixtures	25	1.27	146.8	148.3	147.7	149.2	148.6	150.5	148.7	151.8	153.4	155.9	156.2	161.9	162.6	
Clay, glass, stone prod.	32	2.72	120.2	119.7	121.6	118.1	120.6	121.7	122.8	121.5	122.7	122.9	120.9	119.4	119.5	
Primary metals	33	5.33	75.8	73.4	74.1	74.2	76.8	73.5	73.6	76.3	77.5	76.8	77.6	78.1	81.7	82.7
Iron & steel	331,2	3.49	63.4	60.8	61.1	62.2	64.8	60.3	60.2	63.1	65.1	65.0	65.7	66.8		
Fabricated metal prod.	34	6.46	107.4	105.9	107.3	108.3	107.1	108.5	108.0	108.2	108.8	108.6	107.9	108.9	109.7	110.5
Nonelectrical machinery	35	9.54	141.9	142.6	140.9	142.2	141.2	139.9	140.3	142.3	143.7	145.2	147.1	148.8	150.0	151.4
Electrical machinery	36	7.15	166.5	167.2	166.9	167.7	168.3	170.2	169.2	169.3	167.6	166.5	168.8	169.4	169.4	170.5
Transportation equip.	37	9.13	125.8	125.1	127.7	125.2	125.6	127.0	128.1	131.8	130.6	127.1	127.4	125.1	125.8	125.3
Motor vehicles & pts.	371	5.26	110.9	108.2	112.2	107.1	107.9	111.2	112.2	117.8	115.5	109.3	110.1	106.6	108.0	106.8
Aerospace & misc.	372-6,9	3.87	146.1	148.0	148.7	149.7	149.6	148.4	149.6	150.7	151.2	151.3	151.0	150.2	150.0	150.4
Instruments	38	2.66	141.4	142.0	141.7	140.3	141.1	142.4	142.5	143.3	142.0	144.1	143.5	145.1	146.1	146.8
Miscellaneous mfrs.	39	1.46	99.4	98.3	97.7	99.0	98.9	103.1	101.8	101.1	101.4	100.0	101.5	99.9	99.9	
UTILITIES																
Electric		4.17	122.2	122.4	122.8	123.8	125.1	123.5	121.7	122.3	123.3	123.4	127.5	129.1	129.2	

Table 3A
INDUSTRIAL PRODUCTION: PERCENT CHANGES
 Based on seasonally adjusted indexes

Series	1986 AUG	SEP	OCT	NOV	DEC	1987 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
CHANGE FROM PREVIOUS MONTH													
TOTAL INDEX	.1	-0.1	.3	.6	.5	-0.1	.5	.1	.1	.7	.7	.8	.3
Final products	.4	-0.3	.4	.4	.4	.0	1.0	.0	-0.4	1.0	.6	.5	.5
Consumer goods	.0	-0.7	.4	.8	1.3	-0.4	.6	.0	-0.7	1.2	.4	.5	.2
Durable consumer goods	-0.5	1.4	-1.0	1.8	2.7	-1.2	2.0	-1.0	-2.6	1.8	-0.5	.4	.3
Non-durable consumer goods	.1	-1.4	.8	.4	.8	-0.1	.2	.3	.0	1.0	.6	.6	.1
Business equipment	1.0	.0	-0.2	-0.4	-1.1	.7	1.9	.0	.0	.7	1.3	.1	1.0
Construction Supplies	1.1	.4	.3	.5	.8	.3	.1	.1	.0	.8	.9	1.1	.1
Materials	-0.3	.3	-0.2	.9	.8	.0	.0	.1	-0.9	.1	.9	1.1	.2
Durable goods materials	.0	.1	.2	1.0	.3	-0.2	.9	.3	.3	-0.5	.9	1.3	.3
Non-durable goods materials	.7	.8	-0.2	-0.1	2.4	.1	-0.6	.2	2.1	.0	.3	1.6	.2
Manufacturing	.2	.0	.3	.3	.6	.1	.7	.2	.1	.6	.4	.9	.3
Durable manufacturing	.1	.5	.0	.4	.5	-0.1	1.1	.1	-0.4	.6	.3	.8	.5
Non-durable manufacturing	.4	-0.6	.7	.3	.8	.3	.1	.4	.7	.7	.7	1.0	.1
Mining and utilities	-0.9	-0.2	.0	1.9	-0.7	-0.1	-0.6	.2	.1	1.4	1.2	.1	.2
CHANGE FROM SAME MONTH A YEAR EARLIER													
TOTAL INDEX	.5	.5	1.4	.9	.9	.3	1.6	3.0	2.2	3.4	4.0	4.3	4.5
Final products	.3	.0	1.3	.0	.3	-0.2	1.7	3.4	1.6	3.2	4.2	4.0	4.1
Consumer goods	3.5	2.6	3.5	2.4	3.2	2.4	3.4	4.7	1.7	3.2	3.4	3.3	3.5
Durable consumer goods	1.1	3.8	3.6	2.6	5.4	3.5	5.0	7.8	1.9	5.6	4.6	3.2	4.1
Non-durable consumer goods	4.3	2.2	3.5	2.3	2.4	2.1	2.9	3.6	1.6	2.3	3.0	3.3	3.4
Business equipment	-1.2	-0.8	.6	-1.5	-2.1	-2.4	.2	2.2	1.6	2.8	5.1	4.3	4.2
Construction Supplies	4.1	4.7	5.0	5.3	6.8	3.4	4.7	4.8	3.0	3.9	4.2	5.5	4.4
Materials	-0.6	-0.2	-0.1	.4	-0.2	-0.2	.3	1.7	2.1	2.9	3.7	4.4	5.0
Durable goods materials	-2.0	-0.9	-0.7	-0.7	-1.0	-1.4	.2	2.1	1.7	2.7	4.1	4.6	4.9
Non-durable goods materials	6.1	5.6	5.9	6.1	7.2	6.0	5.4	6.9	7.7	7.6	6.8	7.6	7.1
Manufacturing	1.7	2.0	2.8	2.0	2.2	1.3	2.6	4.0	2.9	3.9	4.4	4.5	4.6
Durable manufacturing	-0.5	.5	1.1	.3	.3	-0.4	1.4	2.9	1.5	3.0	3.9	3.7	4.1
Non-durable manufacturing	4.9	4.0	5.2	4.3	4.9	3.7	4.3	5.6	4.8	5.3	4.9	5.6	5.3
Mining and utilities	-7.3	-8.5	-7.4	-5.7	-7.5	-7.2	-5.2	-3.7	-2.5	-0.1	1.6	2.5	3.6

Table 4A—continued
INDUSTRIAL PRODUCTION: INDUSTRY SUBTOTALS AND INDIVIDUAL SERIES
 Seasonally adjusted, 1977 = 100

Series	SIC Code	1977 Pro- por- tion	1986 Ann. Avg.	1986 JUL	AUG	SEP	OCT	NOV	DEC	1987 JAN	FEB	MAR	APR	MAY	JUN	JUL
FABRICATED METAL PRODUCTS	34	6.46	107.4	105.7	105.9	107.3	108.3	107.1	108.3	108.0	108.2	108.8	108.6	107.9	108.9	109.7
Metal containers	341	.52	90.4	88.3	89.2	92.3	92.0	90.7	93.0	89.5	91.4	90.6	93.5	92.9	96.8	95.3
Hardware, tools, cutlery	342	.73	102.1	103.5	104.8	104.1	104.7	100.7	101.0	100.6	102.3	106.7	104.1	103.4	104.0	105.1
Structural metal prod.	344	1.67	107.8	107.5	107.6	107.8	106.5	106.1	106.8	107.9	107.3	108.8	108.2	108.7	108.6	108.2
Fasteners, stamp, etc.	345-7	1.95	111.3	108.2	108.1	110.3	113.4	109.7	115.0	113.1	115.3	114.7	114.6	109.3	111.3	112.8
NONELECTRICAL MACHINERY	35	9.54	141.9	142.6	142.6	140.9	142.2	141.2	139.9	140.3	142.3	143.7	145.2	147.1	148.8	150.0
Engine & farm equip.	351,2	1.48	60.5	60.5	59.9	58.1	58.3	57.7	57.8	57.7	60.9	61.5	63.1	62.3	63.1	64.8
Construct. & allied eq.	353	1.68	74.3	73.4	74.9	73.6	72.6	70.6	72.1	71.0	68.5	69.5	68.9	72.8	75.0	75.3
Metalworking machinery	354	1.24	132.0	134.0	136.8	133.6	134.1	130.7	128.1	130.6	131.2	130.9	130.4	130.9	138.3	142.4
Spec. & genl. ind. eq.	355,6	2.12	95.0	96.2	94.9	93.7	96.0	93.0	93.0	93.9	94.7	94.2	95.6	95.4	98.2	100.7
Office, serv. & misc.	357-9	3.02	256.6	257.4	255.5	254.8	256.2	259.4	254.3	260.6	264.9	269.8	272.0	270.8	275.2	270.4
ELECTRICAL MACHINERY	36	7.15	166.5	166.8	167.2	166.9	167.7	168.3	170.2	169.2	169.3	167.6	166.5	168.8	169.4	169.4
Major elect. eq. & pts	361,2	1.27	88.7	91.1	89.3	86.4	85.8	86.1	86.9	88.1	93.3	94.5	95.7	96.2	97.4	96.0
Household appliances	363	.75	136.3	137.1	138.1	137.5	136.0	142.3	147.6	145.0	144.0	138.2	135.4	137.1	139.1	134.8
Cooking equipment	3631	.11	263.6	254.4	253.1	267.7	242.7	262.0	278.4	310.5	281.7	242.8	253.3	243.8	245.9	246.1
Refrigeration appl.	3632	.17	110.1	107.7	121.1	104.7	113.3	116.0	121.3	111.9	123.2	114.7	109.3	114.6	119.8	104.1
Laundry appliances	3633	.12	145.5	164.7	147.1	147.0	153.5	154.6	166.4	144.6	151.7	166.4	145.3	150.1	160.5	155.2
Misc. appliances	3634-6,9	.35	105.3	104.5	106.6	108.6	107.0	112.7	112.2	108.5	107.6	106.5	107.0	109.6	107.1	107.2
TV and radio sets	365	.44	150.7	147.9	152.6	148.7	146.0	166.0	167.1	159.3	151.4	153.2	148.2	157.0	149.1	150.3
Communication equipment	366	2.01	216.7	216.5	218.6	219.4	218.7	216.4	218.2	219.3	219.6	215.8	215.4	215.4	213.1	214.1
Electronic components	367	1.31	244.1	243.9	240.7	242.6	244.5	248.4	249.2	247.1	245.8	245.6	245.7	248.5	247.2	255.1
TV tubes	3671-3	.13	122.4	125.4	95.6	87.7	130.9	149.0	146.8	125.7	108.8	107.8	113.4	130.6	122.0	135.4
Misc. electrical supp.	369	.70	116.0	117.6	118.1	114.5	114.9	119.0	114.9	111.4	117.7	115.6	113.5	116.5	118.8	119.1
Storage battery, repl.	3691	.13	127.9	137.6	142.6	124.2	127.9	141.7	117.9	90.7	121.4	123.9	132.4	149.7	156.5	149.5
TRANSPORTATION EQUIPMENT	37	9.13	125.8	125.6	125.1	127.7	125.2	125.6	127.0	128.1	131.8	130.6	127.1	127.4	125.1	125.8
Motor vehicles & parts	371	5.26	110.9	111.2	108.2	112.2	107.1	107.9	111.2	112.2	117.8	115.5	109.3	110.1	106.6	108.0
Autos, total		1.82	111.0	108.8	100.2	109.7	104.9	105.3	113.6	107.6	120.1	115.2	104.8	103.8	100.3	98.3
Consumer		1.16	97.3	95.3	87.8	96.2	91.9	92.3	99.5	94.3	105.3	100.9	91.8	91.0	87.9	86.1
Business		.66	135.4	132.6	122.2	133.8	127.9	128.4	138.5	131.2	146.5	140.5	127.7	126.5	122.3	119.9
Trucks and buses		1.03	131.0	136.4	139.8	143.2	126.3	127.7	132.1	144.3	147.9	146.6	135.9	141.2	131.9	145.5
Business vehicles		.41	114.5	115.0	120.4	124.9	109.6	114.8	111.4	117.2	126.1	126.1	117.2	121.4	112.8	
Consumer trucks		.63	141.8	150.3	152.4	155.1	137.1	136.0	145.6	161.9	162.1	159.9	148.1	154.2	144.4	
Truck trailers	3715	.09	125.4	133.3	134.0	130.3	122.8	111.6	113.4	123.8	140.2	134.3	144.2	148.7	146.9	154.2
Motor vehicle parts	3714	2.31	101.2	101.0	99.3	99.5	99.7	100.9	100.0	101.1	101.6	101.0	99.6	99.5	98.7	97.0
Aircraft and parts	372	2.09	157.7	155.6	161.6	161.1	162.2	164.2	163.7	164.1	163.8	164.0	164.1	165.2	165.1	165.3
Ships and boats	373	.66	86.4	86.7	87.4	88.7	87.8	87.1	87.0	85.2	83.7	84.5	82.4	83.5	82.2	83.1
Rail & misc trans eq.	374-6,9	1.11	159.8	159.4	161.2	162.1	161.9	160.1	162.8	161.5	164.4	163.8	167.0	162.9	161.3	158.8
Railroad equipment	374	.27	22.9	20.6	27.8	30.8	30.0	18.2	16.6							
INSTRUMENTS	38	2.66	141.4	141.7	142.0	141.7	140.3	141.1	142.4	142.5	143.3	142.0	144.1	143.5	145.1	146.1
Equipment instr. & pts	381-4	1.52	163.2	162.0	163.7	161.6	163.7	166.7	170.6	166.5	169.4	169.0	172.1	170.7	173.4	170.5
MISC. MANUFACTURES	39	1.46	99.4	97.5	98.3	97.7	99.0	98.9	103.1	101.8	101.1	101.4	100.0	101.5	99.9	99.9
Misc. cons. goods	391,3,4,6	.84	95.3	93.4	93.5	95.3	95.9	94.8	100.7	96.3	96.4	98.4	97.6	100.5	103.1	101.9
Misc. bus. supplies	395,9	.62	104.9	104.2	104.6	103.0	108.1	108.1	106.7	105.5	106.4	104.9	102.3	102.2	94.0	98.5
ELECTRIC UTILITIES	49	4.17	122.2	125.4	122.4	122.8	123.8	125.1	123.5	121.7	122.3	123.3	123.4	127.5	129.1	129.2
Elec. util. generation		1.76	116.2	121.5	114.8	117.9	118.4	118.0	116.0	115.5	115.1	116.3	117.5	120.4	122.9	
Fossil fuel generation		1.41	107.8	115.1	105.6	107.6	105.8	107.6	105.4	105.7	106.9	108.8	111.5	114.5	117.9	
Hydro & nuclear gener.		.35	149.6	147.4	151.5	159.3	168.7	159.3	158.4	154.6	148.1	146.7	141.3	144.2	142.8	
Elec. util. sales		2.41	126.5	128.3	128.0	126.3	127.7	130.3	129.0	126.2	127.5	128.4	127.7	132.7		
Residential elec.		.95	129.0	134.8	130.7	132.6	132.0	130.7	132.6	128.1	130.1	127.9	129.4	132.8	138.3	
Nonresidential elec.		1.46	124.9	124.0	126.2	122.2	124.9	130.1	126.7	124.9	125.8	128.6	126.6	132.6		
Industrial elec.		.68	105.5	103.9	105.9	102.9	104.9	108.1	105.9	104.4	105.8	108.1	106.6	109.2	108.2	
Commercial & other elec.		.78	141.9	141.5	143.9	139.0	142.4	149.2	144.8	142.8	143.2	146.5	144.0	153.0	149.9	

Note: Seasonally adjusted industry totals are not aggregated from the seasonally adjusted components, but result from independent seasonal adjustment of the aggregated not seasonally adjusted components.

Table 4B—continued

INDUSTRIAL PRODUCTION: INDUSTRY SUBTOTALS AND INDIVIDUAL SERIES

Not seasonally adjusted, 1977 = 100

Series	SIC Code	1977 Pro- por- tion	1986 Ann. Avg.	1986 JUL	AUG	SEP	OCT	NOV	DEC	1987 JAN	FEB	MAR	APR	MAY	JUN	JUL
FABRICATED METAL PRODUCTS	34	6.46	107.4	104.3	107.4	110.4	109.6	106.9	107.2	103.5	108.2	109.9	107.8	107.3	110.6	107.9
Metal containers	341	.52	90.4	92.2	94.1	97.7	92.3	88.9	87.2	82.8	89.6	89.5	92.6	92.5	100.6	99.6
Hardware, tools, cutlery	342	.73	102.1	101.8	106.7	108.2	107.2	101.2	98.2	95.3	104.3	107.6	102.0	102.6	105.1	103.3
Structural metal prod.	344	1.67	107.8	107.8	110.2	111.8	110.0	108.9	109.4	104.7	102.8	105.2	104.1	106.6	109.9	108.5
Fasteners, stamp, etc.	345-7	1.95	111.3	105.0	108.0	112.6	115.0	109.8	110.2	105.8	117.1	119.0	115.9	109.5	114.1	109.4
NONELECTRICAL MACHINERY	35	9.54	141.9	145.6	149.0	148.2	144.3	139.7	134.0	135.4	140.7	142.9	141.0	144.0	152.1	152.9
Engine & farm equip.	351,2	1.48	60.5	58.6	57.6	58.0	57.4	57.7	59.0	57.8	62.3	63.4	63.3	62.6	63.3	62.8
Construct. & allied eq.	353	1.68	74.3	74.1	75.2	76.3	72.9	70.5	72.1	69.5	69.3	68.7	67.6	71.0	75.6	76.0
Metalworking machinery	354	1.24	132.0	131.7	137.5	138.8	137.7	128.8	123.7	126.3	134.1	132.4	131.4	129.3	138.0	140.0
Spec. & genl. ind. eq.	355,6	2.12	95.0	94.1	95.3	97.0	95.7	93.6	92.6	91.6	95.1	95.1	94.2	94.8	99.4	98.6
Office, serv. & misc.	357-9	3.02	256.6	270.2	277.4	272.5	263.8	255.6	239.3	244.9	254.0	262.4	260.1	265.5	284.1	283.7
ELECTRICAL MACHINERY	36	7.15	166.5	162.0	166.9	169.5	173.3	170.9	168.0	167.6	168.5	167.1	165.5	167.1	169.2	164.0
Major elect. eq. & pts	361,2	1.27	88.7	90.8	91.3	90.9	89.2	85.9	84.0	85.5	91.3	93.9	93.3	95.0	99.3	95.6
Household appliances	363	.75	136.3	122.0	131.2	143.4	155.3	137.4	127.4	146.1	150.9	142.6	140.8	137.3	139.6	119.6
Cooking equipment	3631	.11	263.6	224.7	246.5	280.8	292.1	268.3	248.6	309.3	281.3	234.0	253.2	255.3	238.1	217.3
Refrigeration appl.	3632	.17	110.1	109.7	88.2	111.3	127.5	100.6	86.6	114.5	132.9	129.4	123.4	121.5	126.4	105.7
Laundry appliances	3633	.12	145.5	137.3	148.3	147.8	177.1	138.5	140.6	153.8	168.3	177.0	148.6	145.4	162.6	129.1
Misc. appliances	3634-6,9	.35	105.3	90.2	109.2	113.6	117.7	112.9	103.8	106.8	112.3	108.1	110.8	104.6	106.9	92.1
TV and radio sets	365	.44	150.7	143.5	169.1	157.2	191.2	183.8	140.0	147.0	140.3	136.4	133.4	153.0	149.9	146.6
Communication equipment	366	2.01	216.7	213.8	215.0	217.5	217.7	218.9	225.8	220.5	219.3	217.7	213.5	213.1	213.2	211.5
Electronic components	367	1.31	244.1	236.1	242.0	245.0	247.7	252.0	251.2	246.2	243.1	243.7	244.3	247.2	249.5	246.9
TV tubes	3671-3	.13	122.4	107.2	106.7	95.2	155.7	154.0	108.2	119.8	109.6	102.5	120.2	137.0	116.5	115.7
Misc. electrical supp.	369	.70	116.0	109.3	117.9	123.1	124.0	125.9	122.8	112.4	112.5	110.0	106.9	109.6	115.4	110.5
Storage battery, repl.	3691	.13	127.9	112.3	149.6	163.0	167.5	171.5	144.4	96.1	103.4	99.2	98.4	113.6	135.4	122.0
TRANSPORTATION EQUIPMENT	37	9.13	125.8	114.7	117.8	127.3	128.8	126.9	123.3	127.9	135.4	135.2	130.1	130.6	129.6	111.9
Motor vehicles & parts	371	5.26	110.9	95.3	98.7	111.9	113.5	108.7	101.1	111.5	123.5	122.7	114.4	115.8	114.9	87.2
Autos, total		1.82	111.0	82.4	84.8	108.3	118.9	110.1	95.4	108.4	130.9	127.3	112.6	112.4	112.0	58.7
Consumer		1.16	97.3	72.2	74.3	94.9	104.2	96.4	83.6	95.0	114.7	111.5	98.7	98.5	98.2	51.4
Business		.66	135.4	100.5	103.4	132.1	144.9	134.2	116.3	132.2	159.6	155.2	137.3	137.0	136.6	71.6
Trucks and buses		1.03	131.0	109.5	124.3	142.4	134.2	124.0	106.5	139.4	158.4	160.9	147.6	154.4	150.5	117.2
Business vehicles		.41	114.5	92.9	108.5	119.2	116.5	110.7	90.3	117.7	135.4	135.7	126.2	133.5	128.8	
Consumer trucks		.63	141.8	120.3	134.7	157.5	145.8	132.6	117.0	153.4	173.4	177.2	161.4	168.0	164.6	
Truck trailers	3715	.09	125.4	117.1	133.7	136.8	125.0	113.3	116.1	110.0	139.5	142.6	148.3	149.6	152.6	135.4
Motor vehicle parts	3714	2.31	101.2	98.3	96.7	100.1	99.5	100.6	102.6	101.5	101.2	101.1	99.7	100.0	99.8	94.4
Aircraft and parts	372	2.09	157.7	151.6	155.4	160.4	162.6	166.9	168.5	164.6	166.2	165.9	163.5	164.6	164.2	161.1
Ships and boats	373	.66	86.4	84.5	84.2	86.9	87.5	88.4	88.4	84.7	84.3	85.7	83.7	84.9	82.9	81.0
Rail & misc. trans. eq.	374-6,9	1.11	159.8	154.6	157.7	161.7	161.6	160.6	164.2	161.6	164.6	165.9	168.6	163.7	162.0	154.1
Railroad equipment	374	.27	22.9	19.7	22.1	31.5	32.1	18.5	17.0							
INSTRUMENTS	38	2.66	141.4	143.1	145.1	145.4	141.7	140.8	141.6	138.1	140.6	140.6	141.3	141.9	148.0	147.9
Equipment instr. & pts	381-4	1.52	163.2	167.1	170.6	172.0	165.1	164.2	164.8	160.1	165.4	166.1	166.8	168.1	177.7	176.0
MISC. MANUFACTURES	39	1.46	99.4	97.6	104.0	105.7	103.4	97.9	97.1	94.2	100.8	101.4	97.3	99.5	101.9	100.0
Misc. cons. goods	391,3,4,6	.84	95.3	92.4	99.4	102.7	100.0	91.8	93.1	89.7	94.8	98.0	95.7	99.8	106.9	100.8
Misc. bus. supplies	395,9	.62	104.9	104.7	109.6	109.7	108.0	106.1	102.5	100.3	108.8	106.0	100.1	99.0	95.0	99.0
ELECTRIC UTILITIES	49	4.17	122.2	135.7	133.0	127.8	114.8	116.9	121.7	128.3	130.1	117.8	113.5	116.5	131.5	139.4
Elec. util. generation		1.76	116.2	134.0	124.1	117.4	108.5	111.4	117.0	122.3	117.9	110.7	107.5	113.2	128.5	
Fossil fuel generation		1.41	107.8	130.0	118.5	109.5	99.7	101.7	105.4	112.0	107.4	100.6	98.5	104.9	123.6	
Hydro & nuclear gener.		.35	149.6	149.8	146.6	149.1	143.6	150.1	163.5	163.4	160.0	151.2	143.5	146.3	148.1	
Elec. util. sales		2.41	126.5	137.0	139.5	135.4	119.5	120.9	125.2	132.7	139.0	123.0	117.9	118.9		
Residential elec.		.95	129.0	147.2	147.4	140.9	115.7	112.7	134.2	151.2	149.6	124.0	114.1	107.3	130.5	
Nonresidential elec.		1.46	124.9	130.4	134.4	131.8	122.0	126.2	119.4	120.7	132.1	122.4	120.3	126.5		
Industrial elec.		.68	105.5	103.9	107.8	108.0	104.3	108.7	99.0	98.7	110.5	106.0	106.2	109.0	112.8	
Commercial & other elec.		.78	141.9	153.4	157.6	152.5	137.4	141.5	137.0	140.0	151.0	136.7	132.6	141.7	155.9	

Note: Seasonally adjusted industry totals are not aggregated from the seasonally adjusted components, but result from independent seasonal adjustment of the aggregated not seasonally adjusted components.

Table 5

INDUSTRIAL PRODUCTION: INDEXES; 1977 = 100

Quarterly averages, seasonally adjusted

SERIES	Quarterly Averages of Monthly Indexes									
	1985 Q1	Q2	Q3	Q4	1986 Q1	Q2	Q3	Q4	1987 Q1	Q2
Industrial production	123.1	123.5	124.0	124.7	125.0	124.4	125.0	126.0	127.0	128.3
Products, total	129.1	130.4	131.6	132.3	132.7	132.5	133.4	134.5	135.7	136.9
Final products	129.7	130.6	131.7	132.4	132.5	131.6	132.3	133.2	134.6	135.6
Consumer goods	118.8	119.5	120.5	122.1	123.0	124.4	124.8	125.8	127.3	127.8
Durable consumer goods	112.4	112.1	113.0	114.3	115.0	114.7	116.5	118.7	121.2	119.3
Automotive products	113.7	112.4	115.9	114.2	114.7	114.4	116.0	115.0	120.8	116.2
Home goods	111.4	111.8	110.8	114.4	115.2	114.8	116.9	121.6	121.5	121.7
Nondurable consumer goods	121.2	122.2	123.2	125.0	125.9	128.0	127.9	128.5	129.5	131.0
Equipment, total	144.0	145.3	146.5	146.1	145.0	141.2	142.1	142.9	144.3	145.9
Business & defense equipment	144.0	145.8	146.9	147.3	147.5	145.9	147.4	147.8	149.3	151.0
Business equipment	138.8	140.0	140.3	139.7	139.9	137.7	138.8	138.3	139.9	142.0
Defense and space equipment	164.5	168.4	172.9	176.8	177.1	178.1	180.8	185.1	186.1	186.1
Intermediate products	127.2	129.9	131.2	131.7	133.7	135.5	137.4	139.2	139.7	141.6
Construction supplies	115.3	117.9	119.8	120.2	123.1	123.7	125.1	127.0	128.4	128.3
Business supplies	137.4	140.2	140.9	141.5	142.7	145.6	147.8	149.6	149.4	152.9
Commercial energy products	121.5	122.3	123.1	125.1	125.0	129.5	128.2	130.6	128.6	132.5
Materials	114.9	114.0	113.8	114.3	114.5	113.3	113.4	114.3	115.2	116.6
Durable goods materials	123.0	121.4	120.4	121.1	120.9	118.8	118.8	120.1	121.3	122.2
Basic metal materials	84.1	84.3	84.0	87.1	82.6	79.5	77.6	80.4	80.1	82.6
Nondurable goods materials	110.7	111.0	113.4	113.9	115.7	116.9	119.7	121.2	122.8	125.5
Textile, paper, & chem materials	111.2	110.6	113.3	114.0	116.2	117.0	120.4	122.4	124.2	126.7
Textile materials	93.2	95.2	101.7	105.0	105.8	108.2	113.5	115.3	116.9	122.6
Pulp and paper materials	126.6	121.6	123.8	124.8	128.8	130.1	135.1	136.0	136.4	137.2
Chemical materials	112.0	112.1	113.6	113.4	115.3	115.4	117.7	120.1	122.4	124.4
Energy materials	104.4	103.7	102.5	102.6	102.2	100.6	98.6	98.2	97.9	99.1
Manufacturing	125.3	126.1	126.8	127.4	128.4	128.4	129.4	130.4	131.8	133.2
Durable	126.8	127.3	127.5	127.9	128.3	127.1	127.7	128.6	130.0	130.6
Nondurable	123.3	124.6	125.9	126.8	128.6	130.2	131.8	132.9	134.4	136.7
Mining and Utilities	111.6	109.8	109.1	109.3	107.3	103.3	101.2	101.8	101.5	102.9
Mining	110.1	109.9	107.9	107.1	105.4	99.9	96.6	96.6	96.7	97.9
Utilities	114.1	109.6	111.1	112.8	110.5	108.9	108.8	110.4	109.5	111.2

Table 6

INDUSTRIAL PRODUCTION: GROSS VALUE OF PRODUCTS

Billions of 1982 dollars at annual rates, seasonally adjusted

SERIES	Billions of 1982 Dollars at Annual Rates													
	1982 Dollars	1986 Ann. Avg.	Quarters				Months							
			1986 Q1	Q2	Q3	Q4	1987 Q1	Q2	1987 MAR	APR	MAY	JUN	JUL	AUG
Products, total	1376.8	1683.1	1683.1	1683.5	1676.3	1692.2	1717.6	1722.7	1724.3	1713.3	1728.0	1726.8	1729.9	1737.7
Final products	1084.5	1297.5	1304.7	1299.2	1289.2	1298.9	1325.8	1324.8	1330.5	1320.1	1327.9	1326.4	1325.8	1333.6
Consumer goods	703.7	845.7	842.7	849.5	843.0	849.0	868.4	864.5	870.0	863.0	867.2	863.2	866.6	867.3
Durable consumer goods	133.3	200.7	199.6	198.6	201.8	203.0	211.6	205.0	211.6	203.8	207.2	203.9	206.4	208.1
Automotive products	65.9	109.2	109.6	108.8	110.4	108.0	116.6	109.7	116.9	109.8	111.8	107.5	110.6	112.4
Home goods	67.4	91.6	90.0	89.9	91.4	95.0	95.0	95.3	94.7	94.0	95.4	96.4	95.8	95.7
Nondurable consumer goods	570.4	644.9	643.1	650.9	641.2	646.0	656.8	659.5	658.4	659.2	660.0	659.3	660.2	659.1
Equipment, total	380.8	451.8	462.0	449.7	446.2	449.9	457.4	460.4	460.4	457.1	460.7	463.2	459.3	466.4
Business & defense equipment	345.4	433.2	437.0	432.8	430.8	433.2	440.8	443.5	443.7	440.5	443.8	446.1	440.2	446.6
Business equipment	278.0	341.1	345.9	341.9	338.9	338.7	346.0	349.0	348.7	346.1	349.2	351.9	346.1	352.3
Defense and space equipment	67.4	92.1	91.0	91.0	91.9	94.6	94.8	94.4	95.0	94.5	94.6	94.2	94.1	94.3
Intermediate products	292.2	385.7	378.4	384.3	387.1	393.3	391.8	397.9	393.9	393.3	400.1	400.4	404.0	404.1
Construction supplies	108.3	152.3	150.3	151.1	153.0	154.8	156.0	156.0	156.0	154.3	156.3	157.6	159.4	159.6
Business supplies	183.9	233.4	228.1	233.2	234.1	238.5	235.7	241.9	237.9	239.0	243.9	242.8	244.6	
Commercial energy products	63.4	76.3	73.8	77.6	75.7	78.4	74.6	78.5	76.4	77.6	79.9	78.0		

Table 7

INDUSTRIAL PRODUCTION: DIFFUSION INDEXES

Percent of component series higher than in earlier months

	ONE MONTH EARLIER	THREE MONTHS EARLIER	SIX MONTHS EARLIER
1977-86			
AVERAGE	53.5	55.7	57.5
HIGH	76.6	79.4	88.3
LOW	26.4	23.2	23.0
1985			
JULY	53.4	51.8	56.0
AUGUST	57.5	57.9	57.7
SEPTEMBER	51.2	57.1	57.1
OCTOBER	49.6	56.0	58.3
NOVEMBER	61.7	56.2	58.3
DECEMBER	57.5	60.9	63.5
1986			
JANUARY	60.7	68.7	67.1
FEBRUARY	42.5	55.4	56.2
MARCH	37.1	38.9	51.0
APRIL	65.9	46.2	60.9
MAY	42.7	47.8	55.2
JUNE	46.6	56.0	47.8
JULY	55.2	46.4	47.4
AUGUST	53.0	54.4	56.0
SEPTEMBER	43.7	53.8	59.9
OCTOBER	54.0	51.6	48.6
NOVEMBER	57.3	54.6	56.5
DECEMBER	58.5	60.1	61.5
1987			
JANUARY	49.8	62.1	58.5
FEBRUARY	58.7	62.7	63.9
MARCH	48.2	55.6	64.7
APRIL	55.8	61.1	66.1
MAY	57.1	59.3	63.3
JUNE	52.6	63.9	61.7
JULY	63.5	67.3	66.5

NOTE: THE DIFFUSION INDEXES SHOW THE PERCENT OF THE INDUSTRIAL PRODUCTION INDEX'S 252 SEASONALLY ADJUSTED COMPONENT SERIES THAT IN THE MONTH INDICATED WERE HIGHER THAN THEY WERE ONE MONTH EARLIER, THREE MONTHS EARLIER, AND SIX MONTHS EARLIER. IN CALCULATING THE DIFFUSION INDEXES HALF OF THE UNCHANGED COMPONENTS ARE COUNTED AS BEING HIGHER AND NO ALLOWANCE IS MADE FOR THE RELATIVE IMPORTANCE OF THE INDIVIDUAL COMPONENTS IN TOTAL INDUSTRIAL PRODUCTION. DIFFUSION INDEXES BASED ON CHANGES OVER A SIX-MONTH PERIOD GENERALLY SHOW MORE PRONOUNCED CYCLICAL PATTERNS THAN DIFFUSION INDEXES BASED ON CHANGES OVER SHORTER PERIODS.

Table 8

AUTO ASSEMBLIES AT ANNUAL RATES

Seasonally adjusted

	1986 Ann- Avg.	Millions of Units													
		1986 AUG	SEP	OCT	NOV	DEC	1987 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	
Autos, total	7.8	7.0	7.7	7.3	7.3	7.9	7.5	8.3	7.9	7.2	7.1	6.9	6.7	5.9	

Table 9A—continued
ELECTRIC POWER USE BY INDUSTRIES
 Seasonally adjusted indexes, 1977 = 100

Series	SIC code	Indexes								Percentage change from				Indexes		
		1977 (bill. kWh)	1986 Avg.	1986				1987				previous quarter		year ago	1987 JUN	JUL
				Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2				
PETROLEUM PRODUCTS	29	34.7	118.5	117.1	118.8	123.0	118.5	122.4	1.4	3.6	-3.7	3.3	4.5	122.8	122.8	
RUBBER & PLASTICS PRODUCTS	30	23.1	130.2	127.2	131.7	133.6	136.5	141.6	3.5	1.4	2.2	3.8	11.4	145.7	148.0	
Tires	301	5.4	70.0	67.3	72.4	69.4	72.0	75.0	7.6	-4.2	3.9	4.2	11.5	77.1	79.4	
Rubber products, nec	306	2.2	96.4	93.0	97.8	97.9	99.6	100.9	5.1	.2	1.7	1.3	8.5	102.1	105.8	
Plastics products, nec	307	14.2	174.0	171.2	174.9	179.9	183.4	190.8	2.1	2.9	1.9	4.1	11.4	196.8	196.4	
LEATHER AND PRODUCTS	31	1.4	84.6	83.6	83.6	84.1	85.9	89.2	.1	.5	2.1	3.9	6.8	92.2	95.8	
Shoes	314	.7	78.6	77.1	76.6	78.5	83.8	88.6	-0.6	2.4	6.9	5.6	14.9	92.1	93.9	
CLAY, GLASS, AND STONE	32	31.4	105.3	105.7	104.2	105.1	106.1	106.2	-1.4	.9	.9	.1	.5	105.5	104.3	
Flat glass	321	1.3	105.5	107.6	105.5	102.0	111.5	116.2	-1.9	-3.3	9.3	4.2	8.0	114.2	111.3	
Pressed and blown glass	322	6.8	104.3	106.2	101.9	104.3	103.2	106.5	-4.0	2.3	-1.1	3.2	.3	104.1	105.1	
Cement	324	10.2	98.7	97.4	98.6	98.9	98.8	97.6	1.3	.3	-0.2	-1.2	.2	99.0	93.4	
Structural clay products	325	1.5	102.0	100.3	101.1	103.9	113.8	112.5	.9	2.7	9.5	-1.1	12.2	111.8	111.6	
Concrete products	327	3.6	112.2	111.8	111.2	112.6	112.1	103.6	-0.5	1.3	-0.5	-7.6	-7.3	102.2	105.0	
PRIMARY METALS	33	171.3	74.7	75.4	71.5	73.4	73.9	77.2	-5.1	2.6	.7	4.4	2.4	77.4	78.1	
Basic steel and mill prod.	331	65.7	70.2	70.4	67.9	68.4	65.4	67.0	-3.5	.7	-4.4	2.5	-4.8	68.1	69.4	
Iron and steel foundries	332	12.0	70.1	69.1	67.8	71.9	72.2	71.3	-2.0	6.1	.3	-1.2	3.1	70.3	73.0	
Primary nonferrous metals	333	78.1	85.9	85.5	88.9	85.2	85.8	102.6	3.9	-4.1	.6	19.6	19.9	102.9	102.4	
Aluminum	3334	70.3	72.4	73.2	64.9	72.1	78.6	77.1	-11.4	11.2	9.1	-1.9	5.4	76.9	76.9	
Nonferrous foundries	336	2.1	115.5	115.3	115.8	115.5	123.1	121.5	.5	-0.3	6.6	-1.4	5.4	123.4	124.7	
FABRICATED METAL PRODUCTS	34	26.4	115.8	115.5	115.0	117.9	118.2	119.8	-0.5	2.5	.2	1.4	3.7	121.1	123.3	
Metal cans	341	2.2	119.3	120.5	119.2	122.0	119.3	123.6	-1.0	2.3	-2.2	3.6	2.5	126.7	126.5	
Hardware	342	2.3	103.7	103.2	106.1	104.9	105.0	106.0	2.9	-1.2	.1	1.0	2.8	105.9	108.7	
Structural metal products	344	.8	111.5	110.8	113.1	114.4	111.7	116.5	2.0	1.2	-2.4	4.3	5.2	117.2	121.1	
Fasteners	345	1.6	105.1	104.3	105.9	107.4	102.5	113.4	1.5	1.5	-4.6	10.6	8.8	115.3	120.3	
Metal stampings	346	6.2	111.1	110.5	104.2	113.8	112.1	105.9	-5.7	9.2	-1.5	-5.5	-4.2	106.0	102.2	
Nonelectrical machinery	35	28.6	114.3	113.9	113.7	114.1	114.0	117.1	-0.1	.3	-0.1	2.7	2.8	120.7	120.9	
Engines and turbines	351	2.4	63.1	63.3	63.2	62.3	62.6	61.4	-0.1	-1.5	.5	-1.9	-3.0	61.5	61.7	
Farm equipment	352	2.1	51.3	49.8	51.9	51.8	49.2	54.3	4.1	-0.1	-5.0	10.4	9.1	55.5	59.4	
Construction equipment	353	5.1	78.3	78.7	77.1	75.3	71.6	75.3	-2.0	-2.4	-5.0	5.3	-4.3	79.0	79.0	
Metalworking machinery	354	3.8	115.3	114.7	115.3	117.2	113.8	117.9	.5	1.7	-2.9	3.6	2.8	123.6	124.5	
Special industry machinery	355	2.0	101.4	99.9	103.3	100.8	103.0	102.7	3.4	-2.4	2.2	-0.3	2.8	106.3	109.8	
General industrial mach.	356	4.6	108.5	108.7	109.1	108.2	108.6	110.4	.3	-0.8	.4	1.6	1.6	115.0	118.2	
Office and computing mach.	357	2.8	201.5	195.6	200.7	202.3	208.1	211.5	2.6	.8	2.9	1.7	8.2	214.7	210.2	
Service industry machinery	358	2.8	99.5	98.7	101.2	102.6	103.7	111.0	2.6	1.4	1.1	7.0	12.5	113.5	112.6	
ELECTRICAL MACHINERY	36	25.0	126.5	127.0	126.9	128.2	128.1	131.5	-0.1	1.0	-0.1	2.6	3.5	133.3	132.1	
Elect. distribution equip.	361	1.5	97.4	99.8	95.7	95.5	99.5	103.2	-4.0	-0.2	4.2	3.7	3.4	105.8	101.2	
Elect. indust. apparatus	362	4.3	79.1	79.0	80.8	78.7	82.8	84.6	2.3	-2.5	5.2	2.2	7.1	86.4	87.9	
Household appliances	363	2.7	93.0	94.0	95.1	94.2	93.4	93.0	1.2	-0.9	-0.8	-0.5	-1.1	94.8	92.8	
Lighting and wiring prod.	364	2.3	100.5	101.3	99.9	99.2	102.7	107.0	-1.3	-0.8	3.6	4.2	5.7	111.5	109.5	
Radio and TV sets	365	.9	119.0	117.7	115.7	120.4	116.7	111.2	-1.7	4.0	-3.1	-4.7	-5.1	113.9	107.5	
Communication equipment	366	4.6	167.6	167.4	163.5	171.2	170.1	167.7	-2.3	4.8	-0.7	-1.4	.2	168.9	164.7	
Electronic components	367	6.0	179.5	180.0	180.7	181.2	180.3	184.5	.4	.3	-0.5	2.3	2.5	184.0	183.1	
TRANSPORTATION EQUIPMENT	37	31.4	113.9	112.2	112.1	116.9	116.7	114.7	.0	4.3	-0.2	-1.7	2.2	117.0	116.0	
Motor vehicles and parts	371	19.3	100.3	98.9	96.9	103.1	103.9	98.5	-2.1	6.4	.8	-5.1	-0.4	98.7	97.6	
Aircraft and parts	372	6.5	149.8	149.0	154.1	151.9	155.1	159.7	3.4	-1.4	2.1	3.0	7.2	162.7	161.3	
Ships and boats	373	2.1	110.9	106.2	109.0	115.5	120.4	124.3	2.7	5.9	4.3	3.2	17.1	134.1	132.1	
INSTRUMENTS	38	5.5	149.9	149.5	150.4	150.7	151.1	155.5	.6	.2	.3	2.9	4.1	156.4	155.9	
Copiers and related equip.	386	1.4	134.2	134.0	135.5	130.0	130.5	133.5	1.1	-4.1	.3	2.3	-0.4	136.5	137.3	
MISCELLANEOUS MANUFACTURES	39	4.1	102.2	102.9	100.9	102.9	103.5	99.2	-1.9	1.9	.6	-4.2	-3.6	95.1	99.8	
SUPPLEMENTARY GROUPINGS																
TOTAL, LESS NUCLEAR NONDEFENSE	740.7	103.8	102.9	103.3	104.5	105.0	106.6	.3	1.2	.5	1.5	3.6	107.5	109.0		
UTILITY SALES TO INDUSTRY	715.7	99.9	98.9	99.4	100.8	101.0	102.3	.6	1.4	.2	1.3	3.5	103.4	104.5		
INDUSTRIAL GENERATION	70.1	84.3	83.2	81.7	86.3	84.6	82.6	-1.7	5.6	-2.0	-2.4	-0.7	82.5	86.0		

Note—The electric power use data by industry, shown in billions of kilowatt hours for 1977, are from the Census of Manufactures of that year and from other sources. They are provided for information and are not used as weights to compile the electric power use indexes. All index aggregations, with their detailed components, are calculated from the kilowatt hour data collected in the Federal Reserve survey of electric power use by industry. The electric power total includes only those major divisions of industries—mining and manufacturing—for which data are collected in this Federal Reserve survey. The total does not include gas or electric utility kilowatt hour use. The supplementary grouping, "Total, less nondefense, nuclear" is shown separately because the nondefense nuclear materials series (part of SIC 2819) accounts for a disproportionately large part of total electric power use. Since the value added proportion for this industry is a considerably smaller part of total IP than its share of total electric power use, excluding this component from total power use facilitates comparisons with total IP.

Table 9B—continued

ELECTRIC POWER USE BY INDUSTRIES

Not seasonally adjusted, 1977=100

Series	SIC code	1977 (bill. KWH)	Indexes						Percentage change from						Indexes	
			1986 Avg.	1986 Q2	Q3	Q4	1987 Q1	Q2	previous quarter				1986 Q2	1987 Q1	1986 JUN	1987 JUL
									1986 Q3	1986 Q4	1987 Q1	Q2				
PETROLEUM PRODUCTS	29	34.7	118.5	115.6	124.0	122.3	115.5	120.7	7.3	-1.4	-5.5	4.5	4.4	125.6	128.0	
RUBBER & PLASTICS PRODUCTS	30	23.1	130.2	128.7	133.6	132.6	133.8	143.3	3.8	-0.7	.9	7.1	11.4	149.2	142.7	
Tires	301	5.4	70.0	68.0	74.1	69.2	69.7	75.9	8.9	-0.7	.8	8.8	11.5	79.4	76.6	
Rubber products, nec	306	2.2	96.4	94.4	97.9	97.3	98.7	102.3	3.7	-0.6	1.5	3.6	8.5	105.2	100.3	
Plastics products, nec	307	14.2	174.0	173.2	177.5	178.4	180.1	193.1	2.4	.5	.9	7.2	11.5	201.0	191.5	
LEATHER AND PRODUCTS	31	1.4	84.6	83.5	85.9	82.3	85.2	89.3	2.8	-4.2	3.5	4.8	6.9	96.3	89.2	
Shoes	314	.7	78.6	76.1	80.4	75.7	83.6	87.7	5.7	-5.9	10.4	4.9	15.1	96.0	90.1	
CLAY, GLASS, AND STONE	32	31.4	105.3	106.7	108.4	106.8	99.0	107.3	1.6	-1.5	-7.3	8.4	.5	108.5	106.8	
Flat glass	321	1.3	105.5	107.2	108.1	101.6	109.2	115.7	.9	-6.0	7.5	6.0	8.0	115.7	112.9	
Pressed and blown glass	322	6.8	104.3	106.1	105.1	104.8	99.7	106.3	-0.9	-0.3	-4.9	6.7	.2	105.9	105.5	
Cement	324	10.2	98.7	99.9	106.9	103.8	82.8	100.2	7.0	-2.9	-20.2	21.0	.3	103.8	101.4	
Structural clay products	325	1.5	102.0	100.7	102.2	106.4	109.2	113.1	1.5	4.0	2.6	3.5	12.3	115.2	110.8	
Concrete products	327	3.6	112.2	113.3	113.9	113.2	107.2	105.0	.5	-0.6	-5.4	-2.0	-7.3	104.0	106.9	
PRIMARY METALS	33	171.3	74.7	77.4	70.3	71.7	74.8	79.2	-9.2	2.0	4.2	6.0	2.3	78.2	76.8	
Basic steel and mill prod.	331	65.7	70.2	74.9	65.5	64.7	67.0	71.3	-12.5	-1.2	3.6	6.5	-4.7	69.2	67.2	
Iron and steel foundries	332	12.0	70.1	71.8	66.8	70.3	72.0	74.0	-7.0	5.2	2.4	2.9	3.1	73.4	69.3	
Primary nonferrous metals	333	78.1	85.9	85.8	87.2	87.8	84.4	103.1	1.6	.7	-3.8	22.2	20.2	106.6	99.2	
Aluminum	3334	70.3	72.4	74.0	66.0	71.2	76.9	78.0	-10.9	8.0	8.0	1.3	5.4	77.2	80.0	
Nonferrous foundries	336	2.1	115.5	115.5	114.2	116.2	123.8	121.7	-1.1	1.8	6.5	-1.7	5.4	124.2	117.3	
FABRICATED METAL PRODUCTS	34	26.4	115.8	115.5	117.0	116.1	117.7	119.8	1.3	-0.8	1.3	1.8	3.7	122.9	122.4	
Metal cans	341	2.2	119.3	122.3	125.5	117.8	115.3	125.5	2.7	-6.1	-2.2	8.8	2.6	132.8	130.8	
Hardware	342	2.3	103.7	102.9	107.8	103.9	104.6	105.7	4.7	-3.6	.7	1.1	2.7	107.7	106.3	
Structural metal products	344	.8	111.5	108.8	112.9	113.4	114.8	114.4	3.7	.5	1.2	-0.3	5.1	115.6	119.0	
Fasteners	345	1.6	105.1	103.9	107.0	105.5	103.4	113.0	3.0	-1.4	-2.0	9.3	8.8	115.5	116.2	
Metal stampings	346	6.2	111.1	112.0	104.6	111.3	112.5	107.3	-6.6	6.5	1.1	-4.6	-4.2	107.5	100.0	
NONELECTRICAL MACHINERY	35	28.6	114.3	113.4	119.2	111.8	111.2	116.6	5.1	-0.2	-0.5	4.9	2.9	123.8	123.2	
Engines and turbines	351	2.4	63.1	62.3	65.4	61.4	62.2	60.5	4.9	-0.1	1.4	-2.8	-3.0	61.6	62.2	
Farm equipment	352	2.1	51.3	50.1	50.9	49.9	51.7	54.7	1.6	-2.1	3.7	5.7	9.1	55.8	55.5	
Construction equipment	353	5.1	78.3	77.9	80.0	74.3	70.4	74.6	2.7	-7.1	-5.3	5.9	-4.3	80.2	81.3	
Metalworking machinery	354	3.8	115.3	113.9	118.6	114.4	114.1	117.1	4.1	-3.5	-0.2	2.6	2.8	123.9	125.2	
Special industry machinery	355	2.0	101.4	99.8	105.4	99.5	102.2	102.6	5.6	-5.5	2.7	.4	2.8	108.7	107.5	
General industrial mach.	356	4.6	108.5	109.5	112.0	105.9	107.1	111.3	2.3	-5.5	1.1	4.0	1.7	119.2	117.0	
Office and computing mach.	357	2.8	201.5	191.9	215.9	200.7	197.5	207.6	12.5	-7.0	-1.6	5.1	8.2	220.8	220.3	
Service industry machinery	358	2.8	99.5	99.3	106.6	99.5	100.7	111.8	7.4	-6.7	1.2	11.0	12.6	118.9	120.0	
ELECTRICAL MACHINERY	36	25.0	126.5	126.3	133.0	126.5	124.2	130.8	5.3	-4.9	-1.8	5.4	3.5	137.3	135.5	
Elect. distribution equip.	361	1.5	97.4	99.3	98.8	94.5	97.8	102.7	-0.5	-4.3	3.4	5.1	3.4	109.1	99.7	
Elect. indust. apparatus	362	4.3	79.1	80.4	81.6	77.2	82.0	86.2	1.4	-5.4	6.3	5.1	7.2	88.4	87.0	
Household appliances	363	2.7	93.0	95.5	94.8	92.1	94.3	94.5	-0.8	-2.9	2.4	.2	-1.1	99.6	90.9	
Lighting and wiring prod.	364	2.3	100.5	101.2	100.4	99.2	102.1	107.0	-0.8	-1.2	2.9	4.8	5.7	112.8	105.9	
Radio and TV sets	365	.9	119.0	116.1	125.9	117.6	110.6	109.7	8.4	-6.6	-6.0	-0.8	-5.5	117.0	112.8	
Communication equipment	366	4.6	167.6	165.0	179.1	168.0	159.0	165.4	8.6	-6.2	-5.4	4.0	.2	175.5	178.2	
Electronic components	367	6.0	179.5	178.5	192.3	179.9	171.3	183.2	7.7	-6.5	-4.8	6.9	2.6	190.9	192.4	
TRANSPORTATION EQUIPMENT	37	31.4	113.9	113.4	117.2	114.1	112.9	116.0	3.3	-2.6	-1.1	2.8	2.2	122.3	118.5	
Motor vehicles and parts	371	19.3	100.3	101.4	100.7	100.2	99.9	101.0	-0.8	-0.5	-0.3	1.2	-0.4	105.0	98.3	
Aircraft and parts	372	6.5	149.8	148.1	161.5	152.0	148.4	158.8	9.1	-5.9	-2.4	7.0	7.2	167.8	169.5	
Ships and boats	373	2.1	110.9	104.1	108.9	111.8	126.5	121.4	4.6	2.7	13.1	-4.0	16.6	131.7	129.5	
INSTRUMENTS	38	5.5	149.9	148.1	161.2	147.2	144.9	154.2	8.9	-8.7	-1.6	6.4	4.1	163.4	164.0	
Copiers and related equip.	386	1.4	134.2	133.9	141.1	128.9	126.5	133.3	5.4	-8.7	-1.9	5.4	-0.4	142.1	140.4	
MISCELLANEOUS MANUFACTURES	39	4.1	102.2	101.3	105.8	101.5	101.4	97.6	4.4	-4.0	-0.1	-3.7	-3.6	96.6	100.2	
SUPPLEMENTARY GROUPINGS																
TOTAL, LESS NUCLEAR NONDEFENSE		740.7	103.8	104.0	105.2	103.2	103.1	107.7	1.1	-1.8	-0.1	4.5	3.6	110.2	108.8	
UTILITY SALES TO INDUSTRY		715.7	99.9	100.3	101.4	99.3	99.0	103.7	1.1	-2.0	-0.3	4.8	3.5	106.2	104.7	
INDUSTRIAL GENERATION		70.1	84.3	83.5	82.1	83.9	86.1	82.9	-1.7	2.3	2.6	-3.6	-0.7	82.4	87.1	

Explanatory Note

Coverage. The index is a measure of industrial production expressed as a percentage of output in a reference period (currently 1977). The changes in the physical output of the nation's factories, mines, and electric and gas utilities are represented by 252 individual series in the index, covering 27 pertinent two-digit codes of the *Standard Industrial Classification* (SIC). For each individual series, index series relatives are calculated first and are then aggregated in the following two ways: (1) market groupings, such as consumer goods, equipment, intermediate products, and materials, from which the seasonally adjusted total index is derived (tables 1A and 1B), and (2) industry groupings, such as SIC two-digit industries, and major aggregates of these groupings, such as durable and nondurable manufacturing, mining, and utilities (tables 2A and 2B).

Market groupings. For purposes of analysis the individual industrial output series are grouped into materials, intermediate products, and final products; together, the latter two form the products category. Materials are industrial output requiring further processing within industry; intermediate products are expected to become inputs in nonindustrial sectors such as construction, farming, and services; and final products are assumed to enter final use as items of private consumption, government use, or capital formation. In the index, final products are subdivided into consumer goods and equipment.

Timing. A first estimate of output for a month is published about the 15th of the following month. This estimate may be revised in each of the next three months as new data become available. After the fourth month, indexes are not revised further until the time of an annual revision or a benchmark revision. The last three benchmark revisions were published in 1971, 1976, and 1985. Such revisions are derived mainly from the quinquennial *Census of Manufactures*, the quinquennial *Census of Mineral Industries*, and the *Annual Survey of Manufactures*, all prepared by the Bureau of the Census, and the *Minerals Yearbook* of the Bureau of Mines.

Source data. The indexes of industrial production are constructed from monthly data of two types: (1) directly measured output in physical units; and (2) estimates of output derived from data on input, expressed in physical units, adjusted by conversion factors that relate these inputs to physical output. The data on directly measured physical product (pounds, yards, barrels, and the like) are obtained from reports of the Bureau of the Census, the Bureau of Mines, other government agencies, and trade associations. When suitable monthly data on physical product are unavailable, estimates of physical output based on input data (kilowatt hours, production-worker hours) are used. The hours worked by production workers are collected in the monthly establishment survey of the Bureau of Labor Statistics, while data on the kilowatt hours used in industry are collected from electric utilities by the Federal Reserve Banks. The estimates of input conversion are based mainly on historical relationships that were derived from censuses and annual surveys and, when appropriate, on more recent cyclical, technological and statistical developments. Users of the index should bear in mind that, especially for the first and second estimates of a given month's indexes, the available source data are limited and are subject to change in the months following their initial receipt as well as in benchmark revisions.

Seasonal adjustment. Individual series are seasonally adjusted by the X-11 Method II of the Bureau of the Census with the intervention analysis technique applied to the series. The seasonal factors currently being used are based on data through 1985. The individual series and the major aggregate series are seasonally adjusted independently, and the factors for the aggregate series in the summary table and in tables 1 and 2 are reviewed monthly. The seasonally adjusted total index is aggregated from the seasonally adjusted market groupings of the index and may not precisely equal an aggrega-

tion of the seasonally adjusted industry groupings. A simple aggregation of the seasonally adjusted individual series within groupings may not precisely equal the seasonally adjusted groupings, primarily because aggregates are adjusted independently.

Weights. The total index and the various groupings of the component series are currently aggregated on the basis of 1977 value-added weights, which are shown in the first column of the index tables under the heading proportions. Value-added weights for 1972 are used for the 1972-77 period, while 1967 weights are used for the 1967-72 period. The weight years for earlier periods after World War II are 1963, 1958, 1954, and 1947. The indexes for the various periods are linked to provide the continuous final results expressed in relation to the 1977 comparison year taken as 100. The gross-value-weighted product series are expressed in terms of 1982 dollars.

Formula. The symbolic expression for the total index (I) is

$$I_t = \sum \left(\frac{q_{77} p_{77}}{\sum q_{77} p_{77}} \right) \cdot \left(\frac{q_t}{q_{77}} \right) \cdot 100 = \frac{\sum q_t p_{77}}{\sum q_{77} p_{77}} \cdot 100,$$

where q is quantity, p is Census value added per unit of output, t represents the t th period, and 77 denotes base-year values.

Reliability. The median of the revisions in total industrial production, without regard to sign, between the first and fourth estimates is 0.3 percent: that is, in about half of the cases the absolute value of the revision from the first to the fourth estimate was less than 0.3 percent. (This calculation used data for the period from January 1972 to January 1985.) Over the same period, positive changes in the first estimate were confirmed in the fourth estimate (available three months later) about 94 percent of the time. Negative changes in the first estimate were confirmed in the fourth estimate about 85 percent of the time. Thus the likelihood is high that the first estimate for a month will indicate the direction of change in the total index in a reliable manner. However, the magnitude of change as first estimated typically is revised during the next three months; these revisions are based on revised and more complete data sources. The estimates for the higher aggregates generally are considered more reliable than the estimates for their individual components. Revisions to the components often offset each other and thereby reduce the size of revisions to the aggregates.

Rounding. Changes shown for index components may not aggregate to changes for totals because of independent rounding. Percentage changes are calculated from indexes expressed in more digits following the decimal point than shown in their rounded form in the present release. Therefore, percentage changes calculated from the rounded indexes may not entirely coincide with the percentage changes calculated from unrounded indexes.

Literature. *Industrial Production—1986 Edition* contains a more detailed description of the index and the procedures used in compiling it, plus a history of its development, a glossary of terms, and a bibliography. The new edition was published in December 1986. To obtain copies of *Industrial Production—1986 Edition*, write to the Publication Services, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. The price of this volume of about 440 pages is \$9.00 per copy. Selected data on industrial production are also published monthly in the Financial and Business Statistics section of the *Federal Reserve Bulletin*.

Release date. The industrial production index is released in mid-month. For the specific date, phone 202-452-3206 about the 11th of the month.