

# FEDERAL RESERVE statistical release



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## INDUSTRIAL PRODUCTION

Industrial production increased an estimated 0.1 percent in September, following a similar gain in August and an upward revised 0.5 percent increase for July. Output of consumer goods and equipment was led by gains in automotive products and transit equipment, respectively. However, production of some other types of equipment declined in September and output of materials and intermediate products changed little. At 125.3 percent of the 1977 average, industrial production in September was 0.8 percent higher than a year earlier, and in the third quarter grew at a 2.3 percent annual rate.

**Market Groupings.** Total output of consumer goods increased 0.3 percent in September, primarily due to an increase in auto assemblies to an annual rate of 7.7 million units from a 7.0 million rate in August. Among other durables, home goods declined somewhat in September following strong recent gains, and nondurable consumer goods output also edged down. Output of business equipment posted its third consecutive monthly gain in September but remained below its 1985 year-end level. In this grouping a large increase occurred in business vehicle production, while other equipment areas were sluggish. Defense and space equipment production posted a small gain in September after sharp increases in July and August. In September, as during most earlier months of this year, construction supplies increased and materials output remained sluggish.

**Industry Groupings.** Manufacturing output rose 0.3 percent in September to a level 2.2 percent above a year earlier with both durable and nondurable manufacturing contributing to the gains. However, mining production declined 0.4 percent further in September, falling to a level more than 11 percent below a year earlier. In this grouping, oil and gas well drilling rose for the second month after very sharp cutbacks earlier. Utilities output gained 0.8 percent in September.

### Industrial Production: Summary

Seasonally adjusted

Item	Index, 1977 = 100		Monthly percent change					Current month from a year ago
	1986		MAY	JUN	JUL	AUG	SEP	
	AUG	SEP						
<b>Total</b>	125.1	125.3	-0.4	.0	.5	-.1	-.1	-.8
<b>Market Groupings</b>								
<b>Products, total</b>	133.7	133.9	-0.2	.0	-.6	-.3	-.2	1.5
<b>Final products</b>	132.5	132.9	-0.4	-0.4	-.8	-.3	-.3	-.5
<b>Consumer goods</b>	124.9	125.2	-0.2	-.1	-.6	-0.1	-.3	3.4
<b>Durable goods</b>	115.3	116.9	-1.8	-.5	1.4	-0.6	1.4	3.3
<b>Nondurable goods</b>	128.5	128.3	-.3	-.0	-.3	-.0	-0.1	3.5
<b>Business equipment</b>	139.2	139.7	-0.5	-0.9	1.2	-.7	-.3	-0.6
<b>Defense and space</b>	181.5	181.9	-.0	-.2	-.7	1.1	-.2	4.3
<b>Intermediate products</b>	137.7	137.7	-.4	1.4	-.3	-.3	-0.1	4.8
<b>Construction supplies</b>	125.5	126.0	-0.1	-.5	-0.1	1.2	-.4	4.7
<b>Materials</b>	113.4	113.4	-0.7	-.1	-.4	-0.1	-.0	-0.4
<b>Industry Groupings</b>								
<b>Manufacturing</b>	129.4	129.8	-0.4	-.0	-.8	-.1	-.3	2.2
<b>Durable</b>	127.6	128.0	-0.9	-0.6	-.9	-.2	-.3	-.5
<b>Nondurable</b>	132.0	132.2	-.2	1.0	-.7	-0.1	-.2	4.6
<b>Mining</b>	96.5	96.1	-1.2	-0.9	-1.8	-0.6	-0.4	-11.2
<b>Utilities</b>	110.1	111.0	-0.8	-.1	2.0	-0.6	-.8	-2.0

# FEDERAL RESERVE



## Industrial Production

### INDUSTRIAL PRODUCTION

SEPTEMBER DATA

SEASONALLY ADJUSTED, RATIO SCALE, 1977=100

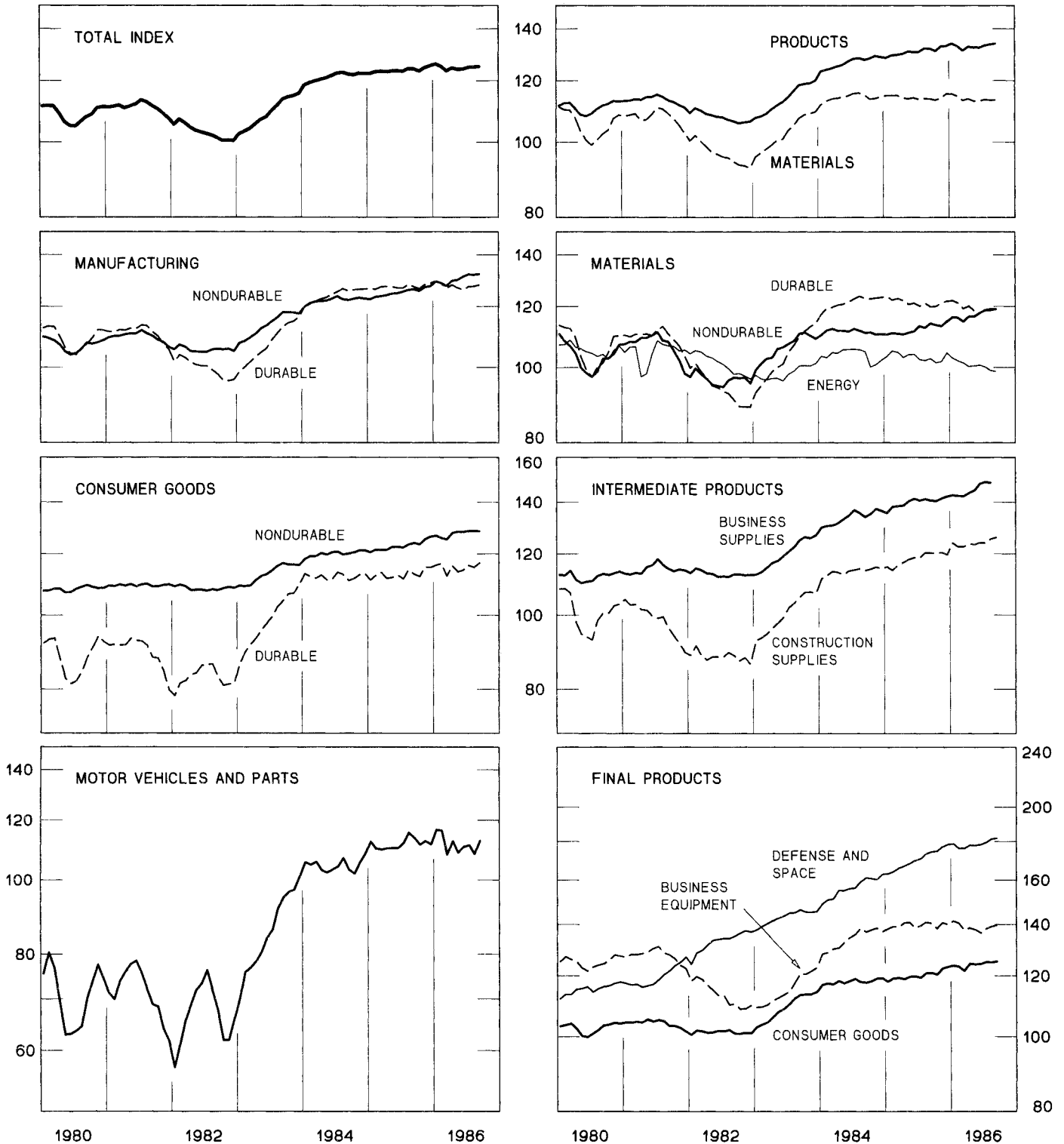


Table 1A

**INDUSTRIAL PRODUCTION: MARKET GROUPINGS**

Seasonally adjusted, 1977 = 100

Major Market Groupings	1977	1985	1985	OCT	NOV	DEC	1986								
	Pro- por- tion	Ann. Avg.					SEP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
TOTAL INDEX	100.00	123.8	124.3	123.6	124.8	125.6	126.2	125.3	123.6	124.7	124.2	124.2	124.9	125.1	125.3
PRODUCTS, TOTAL	57.72	130.8	132.0	131.0	132.8	133.0	134.0	132.9	131.2	132.7	132.4	132.4	133.2	133.7	133.9
FINAL PRODUCTS	44.77	131.1	132.2	131.0	133.1	133.2	133.9	132.8	130.6	132.1	131.6	131.1	132.1	132.5	132.9
CONSUMER GOODS	25.52	120.2	121.1	120.5	122.7	123.3	123.8	123.3	121.8	124.5	124.3	124.4	125.1	124.9	125.2
EQUIPMENT, TOTAL	19.25	145.4	146.9	144.9	147.0	146.4	147.5	145.4	142.3	142.3	141.2	140.0	141.3	142.5	143.0
INTERMEDIATE PRODUCTS	12.94	130.0	131.3	131.2	131.8	132.0	134.2	133.4	133.3	134.5	135.1	137.0	137.3	137.7	137.7
MATERIALS	42.28	114.2	113.8	113.4	113.9	115.4	115.5	114.8	113.3	113.8	113.0	113.1	113.5	113.4	113.4
CONSUMER GOODS	25.52	120.2	121.1	120.5	122.7	123.3	123.8	123.3	121.8	124.5	124.3	124.4	125.1	124.9	125.2
DURABLE CONSUMER GOODS	6.89	112.9	113.1	112.3	115.4	115.3	116.0	116.6	112.4	115.9	113.8	114.3	116.0	115.3	116.9
Automotive products	2.98	114.0	116.2	113.2	115.6	113.9	116.2	117.6	110.4	116.4	113.2	113.7	115.9	113.4	117.4
Autos and trucks, consumer	1.79	112.0	115.8	111.3	114.1	110.4	118.2	119.4	106.3	115.1	110.3	112.2	114.5	110.8	117.5
Autos, consumer	1.16	98.9	98.8	94.9	95.6	94.6	105.5	107.1	93.7	100.8	94.8	99.3	95.3	87.8	96.2
Trucks, consumer	.63	136.3	147.4	141.8	148.6	139.8	141.7	142.1	129.6	141.5	139.1	136.1	150.3	153.4	
Auto parts & allied gds	1.19	116.9	116.8	116.0	117.7	119.0	113.3	114.9	116.6	118.4	117.4	116.1	117.9	117.5	117.4
Home goods	3.91	112.2	110.7	111.6	115.3	116.4	115.8	115.8	113.9	115.5	114.3	114.8	116.0	116.7	116.4
Appliances, TV & air-cond	1.24	131.0	126.1	127.5	138.8	140.4	133.2	135.1	133.7	138.8	133.9	137.5	138.9	139.6	138.0
Appliances and TV	1.19	131.8	128.3	129.8	141.3	143.2	135.7	137.6	136.0	140.6	135.8	139.1	141.6	142.7	
Carpeting & furniture	.96	119.8	121.7	121.9	124.6	123.3	125.1	124.4	121.2	121.8	123.3	122.5	125.6	125.7	
Misc. home goods	1.71	94.3	93.3	94.4	93.1	95.1	98.0	97.0	95.5	95.0	94.1	94.1	94.1	95.1	
NONDURABLE CONSUMER GOODS	18.63	122.9	124.1	123.5	125.3	126.3	126.6	125.8	125.3	127.7	128.1	128.1	128.4	128.5	128.3
Clothing	3.34	95.0	96.3	96.4	98.0	97.9	98.4	96.4	96.2	97.5	96.6	95.9	96.7	95.9	
Consumer staples	15.29	129.0	130.1	129.4	131.3	132.5	132.8	132.3	131.6	134.3	135.0	135.1	135.3	135.6	135.4
Consumer foods & tobacco	7.80	128.8	130.1	128.7	130.5	131.6	130.1	131.1	130.3	131.9	132.4	133.3	132.0	132.8	
Nonfood staples	7.49	129.2	130.1	130.1	132.1	133.4	135.6	133.5	133.0	136.7	137.7	137.0	138.8	138.5	
Consumer chem. products	2.75	149.1	152.9	149.1	154.8	153.6	156.3	158.3	156.4	163.1	162.4	163.6	166.4	164.9	
Consumer paper products	1.88	141.9	142.6	143.5	143.2	146.5	148.9	143.4	143.1	145.1	148.6	147.1	146.4	146.6	
Consumer energy	2.86	101.8	99.9	103.0	103.1	105.4	107.0	103.2	104.0	106.0	106.8	104.8	107.4	107.7	
Consumer fuel	1.44	88.6	84.6	90.1	89.8	91.7	94.1	92.0	92.2	93.7	96.4	91.8	93.1	95.5	
Residential utilities	1.42	115.3	115.5	116.2	116.6	119.4	120.1	114.5	116.1	118.4	117.5	118.1	122.0		
EQUIPMENT, TOTAL	19.25	145.4	146.9	144.9	147.0	146.4	147.5	145.4	142.3	142.3	141.2	140.0	141.3	142.5	143.0
BUSINESS & DEFENSE EQUIP.	18.01	146.0	147.4	145.7	148.2	147.8	149.1	147.8	145.5	146.6	146.0	145.1	146.7	147.8	148.3
BUSINESS EQUIPMENT	14.34	139.6	140.4	138.3	140.8	140.0	141.5	140.5	137.7	138.6	137.9	136.6	138.3	139.2	139.7
Constr., mining, & farm	2.08	64.3	64.4	64.2	65.1	66.3	65.3	63.0	59.5	58.6	60.9	61.9	60.6	57.5	
Manufacturing equipment	3.27	110.7	112.2	110.0	110.5	111.6	113.0	112.9	112.4	111.9	111.9	111.7	112.6	113.1	113.1
Power equipment	1.27	83.5	84.3	85.3	84.1	85.4	82.9	82.3	82.0	83.0	82.9	83.5	81.7	83.2	82.9
Commercial equipment	5.22	121.9	121.9	121.3	121.6	121.0	121.7	121.8	121.4	121.4	121.9	121.9	121.9	121.6	121.6
Transit equipment	2.49	105.4	109.5	109.5	109.7	105.5	112.7	111.7	104.3	112.1	107.3	108.8	103.9	106.9	112.3
DEFENSE & SPACE EQUIPMENT	3.67	170.6	174.5	174.8	177.2	178.5	178.7	176.3	176.2	178.0	178.0	178.4	179.5	181.5	181.9
INTERMEDIATE PRODUCTS	12.94	130.0	131.3	131.2	131.8	132.0	134.2	133.4	133.3	134.5	135.1	137.0	137.3	137.7	137.7
Construction supplies	5.95	118.3	120.3	120.2	120.5	119.8	124.0	122.6	122.6	123.6	123.5	124.1	124.0	125.5	126.0
Business supplies	6.99	140.0	140.7	140.5	141.5	142.4	142.9	142.6	142.5	143.8	145.0	147.9	148.7	148.2	
Gen. business supplies	5.67	143.9	144.2	144.3	145.3	146.2	147.2	146.7	146.4	148.0	148.3	151.6	153.4	152.2	
Commercial energy prod.	1.31	122.9	125.4	123.8	125.4	126.2	124.4	124.9	125.6	125.8	130.7	131.9	128.3	130.8	
MATERIALS	42.28	114.2	113.8	113.4	113.9	115.4	115.5	114.8	113.3	113.8	113.0	113.1	113.5	113.4	113.4
DURABLE GOODS MATERIALS	20.50	121.4	119.9	120.1	121.2	121.9	122.2	121.3	119.3	120.2	118.4	117.8	118.6	118.7	118.9
Consumer durable parts	4.92	100.3	98.6	99.8	100.7	101.1	103.5	103.2	99.9	99.3	96.4	96.3	96.5	95.1	95.7
Equipment parts	5.94	158.0	155.4	152.7	154.0	154.1	153.8	153.0	153.7	154.8	152.3	151.8	154.2	155.7	155.4
Durable materials nec	9.64	109.7	108.9	110.3	111.4	112.8	112.2	111.0	108.0	109.4	108.8	107.9	108.0	107.9	108.3
Basic metal materials	4.64	84.8	84.0	85.5	87.8	87.9	85.2	83.0	79.6	82.9	78.9	76.7	77.4	76.3	
NONDURABLE GOODS MATERIALS	10.09	112.2	114.2	113.6	113.3	114.9	116.2	116.1	114.8	116.5	116.5	117.7	118.7	119.1	119.0
Textile, paper, & chem. mater.	7.53	112.2	114.4	113.7	113.4	115.0	116.5	116.5	115.5	115.9	116.9	118.2	119.0	119.9	119.8
Textile materials	1.52	98.7	104.3	105.2	106.1	103.8	104.1	107.5	105.7	106.7	108.4	109.5	111.2	113.0	
Pulp & paper materials	1.55	124.1	123.8	121.8	123.6	123.0	123.7	128.8	128.0	129.0	128.6	132.7	134.4	135.0	
Chemical materials	4.46	112.7	114.6	113.7	112.4	114.0	116.2	115.4	114.5	114.5	115.7	116.1	116.3	117.0	
Misc. nondurable materials	2.57	112.1	113.5	113.4	112.8	114.4	115.4	115.0	112.8	118.2	115.3	116.4	117.9	116.6	
ENERGY MATERIALS	11.69	103.4	102.8	101.5	101.8	104.5	103.0	102.1	101.4	100.4	100.5	100.8	100.2	99.2	98.8
Primary energy	7.57	107.2	106.3	105.5	106.5	108.1	106.9	106.7	107.4	106.2	106.7	106.5	104.7	103.5	
Converted fuel materials	4.12	96.4	96.2	94.2	93.3	97.9	95.8	93.6	90.5	89.7	89.2	90.4	92.0	91.3	

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	1985	1985				1986								
	Pro- por- tion	Ann- Avg.	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
<b>TOTAL INDEX</b>	100.00	123.0	128.6	126.2	124.3	121.6	122.9	124.9	123.1	123.8	123.2	126.9	123.2	127.7	129.6
<b>PRODUCTS, TOTAL</b>	57.72	130.9	138.4	134.8	132.4	128.4	129.5	130.8	129.0	130.6	130.6	135.8	132.9	137.9	140.6
<b>FINAL PRODUCTS</b>	44.77	131.1	138.2	134.7	132.6	128.7	130.3	131.2	128.8	129.9	129.8	134.4	131.3	136.2	139.1
<b>CONSUMER GOODS</b>	25.52	120.2	128.7	125.6	121.7	116.5	119.2	121.2	118.9	122.1	122.1	128.3	124.4	130.4	133.3
<b>EQUIPMENT, TOTAL</b>	19.25	145.4	150.6	146.8	146.9	145.0	145.0	144.4	141.9	140.2	140.0	142.5	140.4	143.9	146.7
<b>INTERMEDIATE PRODUCTS</b>	12.94	130.0	139.3	135.3	131.9	127.1	126.9	129.5	129.6	133.0	133.5	140.6	138.4	143.8	146.0
<b>MATERIALS</b>	42.28	114.2	115.2	114.4	113.2	112.3	113.9	116.8	115.1	114.5	113.1	114.8	110.1	113.6	114.7
<b>CONSUMER GOODS</b>	25.52	120.2	128.7	125.6	121.7	116.5	119.2	121.2	118.9	122.1	122.1	128.3	124.4	130.4	133.3
<b>DURABLE CONSUMER GOODS</b>	6.89	112.9	116.3	121.5	116.6	103.9	112.1	117.9	114.9	119.1	116.1	119.3	104.5	113.0	120.7
Automotive products	2.98	114.0	116.9	121.5	116.6	100.5	114.4	121.2	116.8	122.1	118.2	122.9	98.8	104.9	119.1
Autos and trucks, consumer	1.79	112.0	113.3	121.8	116.5	90.3	115.0	126.0	117.0	124.4	119.9	127.6	89.1	95.4	116.6
Autos, consumer	1.16	98.9	95.9	104.7	101.2	78.5	105.3	112.5	102.2	108.3	102.0	111.6	72.2	74.3	94.9
Trucks, consumer	.63	136.3	145.5	153.6	144.9	112.4	133.0	151.1	144.5	154.2	153.0	157.3	120.3	134.7	
Auto parts & allied gds	1.19	116.9	122.3	121.2	116.7	115.7	113.4	114.0	116.5	118.7	115.6	115.8	113.4	119.3	122.9
Home goods	3.91	112.2	115.9	121.5	116.7	106.6	110.3	115.3	113.4	116.8	114.5	116.6	108.8	119.2	121.8
Appliances, TV & air-cond	1.24	131.0	129.1	149.0	141.8	117.7	132.4	137.1	131.7	143.0	135.9	136.2	127.2	140.3	141.5
Appliances and TV	1.19	131.8	132.7	153.3	145.6	120.5	134.4	138.7	132.3	142.1	136.5	136.7	130.0	145.5	
Carpeting & furniture	.96	119.8	129.1	127.3	125.4	117.6	115.4	125.8	122.8	124.2	122.2	126.1	115.9	128.8	
Misc. home goods	1.71	94.3	98.9	98.4	93.6	92.3	91.6	93.7	95.0	93.8	94.6	97.1	91.5	98.5	
<b>NONDURABLE CONSUMER GOODS</b>	18.63	122.9	133.3	127.0	123.6	121.1	121.8	122.4	120.4	123.3	124.4	131.6	131.8	136.9	138.0
Clothing	3.34	95.0	101.0	98.6	97.0	93.1	93.3	95.6	95.9	96.4	96.3	99.7	94.1	100.6	
Consumer staples	15.29	129.0	140.4	133.3	129.4	127.2	128.0	128.3	125.8	129.1	130.5	138.6	140.1	144.8	146.1
Consumer foods & tobacco	7.80	128.8	140.1	135.9	130.4	124.7	123.9	125.2	125.0	127.7	129.7	137.7	133.9	140.9	
Nonfood staples	7.49	129.2	140.7	130.6	128.9	129.8	132.3	131.5	126.6	130.6	131.3	139.5	146.5	148.8	149.8
Consumer chem. products	2.75	149.1	168.7	154.8	152.2	145.8	145.7	150.7	147.2	157.0	157.5	169.5	176.7	175.9	
Consumer paper products	1.88	141.9	154.0	146.2	140.2	138.1	140.6	140.5	138.3	140.0	142.7	149.6	153.6	160.9	
Consumer energy	2.86	101.8	105.1	97.0	99.1	108.9	114.1	107.1	99.1	99.2	98.6	104.0	113.0	114.8	
Consumer fuel	1.44	88.6	87.0	90.1	93.2	95.7	92.0	86.7	85.0	90.3	96.6	95.3	96.0	96.8	
Residential utilities	1.42	115.3	123.6	104.0	105.1	122.4	136.7	127.8	113.5	108.3	100.6	112.9	130.3		
<b>EQUIPMENT, TOTAL</b>	19.25	145.4	150.6	146.8	146.9	145.0	145.0	144.4	141.9	140.2	140.0	142.5	140.4	143.9	146.7
<b>BUSINESS &amp; DEFENSE EQUIP.</b>	18.01	146.0	151.4	147.4	147.6	145.6	146.1	146.8	145.4	144.5	144.9	147.9	145.9	149.3	152.1
<b>BUSINESS EQUIPMENT</b>	14.34	139.6	145.6	140.8	139.8	136.4	137.5	139.1	137.3	136.1	136.4	140.0	137.9	141.6	144.6
Constr, mining, & farm	2.08	64.3	66.5	64.2	64.1	64.8	63.3	65.1	60.3	58.6	60.5	62.4	59.9	57.5	
Manufacturing equipment	3.27	110.7	115.5	110.9	110.3	110.3	109.2	113.3	112.9	111.0	110.6	113.9	111.2	114.4	115.9
Power equipment	1.27	83.5	87.9	86.6	85.0	85.4	81.2	81.8	82.2	81.1	81.0	84.6	78.9	83.6	86.4
Commercial equipment	5.22	217.9	228.4	217.2	216.4	211.6	210.4	211.2	210.2	206.2	208.0	212.2	221.0	226.6	227.4
Transit equipment	2.49	105.4	107.1	111.9	109.7	98.9	112.4	113.3	109.1	115.1	112.2	116.3	94.2	99.4	109.8
<b>DEFENSE &amp; SPACE EQUIPMENT</b>	3.67	170.6	174.2	173.3	177.8	181.8	179.8	176.9	177.1	177.5	177.9	178.6	177.0	179.2	181.6
<b>INTERMEDIATE PRODUCTS</b>	12.94	130.0	139.3	135.3	131.9	127.1	126.9	129.5	129.6	133.0	133.5	140.6	138.4	143.8	146.0
Construction supplies	5.95	118.3	125.4	124.3	121.0	114.9	116.0	117.7	120.1	124.6	125.0	129.1	123.7	129.0	131.3
Business supplies	6.99	140.0	151.2	144.7	141.1	137.6	136.1	139.6	137.6	140.2	140.8	150.4	150.9	156.5	
Gen. business supplies	5.67	143.9	154.5	150.1	145.9	141.2	138.9	142.5	142.3	145.0	145.6	153.3	154.0	160.1	
Commercial energy prod.	1.31	122.9	136.7	121.6	120.7	121.9	124.4	127.0	117.4	119.1	120.1	138.0	137.8	140.6	
<b>MATERIALS</b>	42.28	114.2	115.2	114.4	113.2	112.3	113.9	116.8	115.1	114.5	113.1	114.8	110.1	113.6	114.7
<b>DURABLE GOODS MATERIALS</b>	20.50	121.4	122.2	121.4	120.0	118.3	118.2	121.8	121.4	121.2	120.2	120.7	115.6	118.5	121.2
Consumer durable parts	4.92	100.3	101.0	101.7	101.0	99.1	100.4	103.7	101.8	100.5	97.7	98.2	92.3	93.9	98.0
Equipment parts	5.94	158.0	156.3	152.9	154.9	156.0	153.7	152.9	154.9	153.0	152.5	153.6	150.9	153.8	156.2
Durable materials nec	9.64	109.7	111.9	112.0	108.3	104.8	105.3	112.0	110.8	112.2	111.7	111.9	105.7	109.3	111.5
Basic metal materials	4.64	84.8	82.9	84.3	81.8	79.8	82.8	86.4	86.2	89.0	84.9	80.6	72.4	73.4	
<b>NONDURABLE GOODS MATERIALS</b>	10.09	112.2	115.7	116.0	113.3	108.4	113.9	119.4	117.4	118.7	117.0	120.2	112.2	118.8	120.1
Textile, paper, & chem. mater.	7.53	112.2	115.6	114.6	113.6	109.4	114.3	119.9	118.5	118.4	118.3	120.7	111.9	118.9	120.4
Textile materials	1.52	98.7	104.6	110.2	108.3	93.2	103.8	112.0	109.0	108.3	112.5	112.9	94.6	115.8	
Pulp & paper materials	1.55	124.1	124.7	122.3	124.4	120.4	128.7	132.9	132.6	131.9	129.0	135.7	124.9	134.9	
Chemical materials	4.46	112.7	116.2	113.4	111.7	111.2	112.9	118.2	116.9	117.2	116.5	118.2	113.4	114.4	
Misc. nondurable materials	2.57	112.1	116.0	120.0	112.4	105.2	112.8	117.6	114.0	119.5	113.1	118.7	112.9	118.4	
<b>ENERGY MATERIALS</b>	11.69	103.4	102.5	100.6	101.3	105.2	106.4	105.7	102.1	99.1	97.5	99.6	98.5	100.7	98.4
Primary energy	7.57	107.2	106.7	106.4	106.3	107.4	108.4	109.6	108.7	105.8	105.0	105.7	101.2	104.4	
Converted fuel materials	4.12	96.4	94.9	90.0	92.1	101.2	102.6	98.6	90.1	86.6	83.8	88.5	93.5	93.8	

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	1985	1985				1986								
		Pro- por- tion	Ann- Avg- 	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
<b>MINING AND UTILITIES</b>		15.79	110.0	110.1	108.8	108.8	110.2	109.8	106.8	105.4	104.2	103.1	102.6	102.2	101.6	101.7
MINING		9.83	108.8	108.2	106.9	106.9	107.4	108.1	105.1	103.0	101.0	99.8	98.9	97.1	96.5	96.1
UTILITIES		5.96	111.9	113.3	111.8	111.9	114.8	112.5	109.7	109.3	109.4	108.5	108.6	110.8	110.1	111.0
<b>MANUFACTURING</b>		84.21	126.4	127.0	126.3	127.8	128.2	129.4	128.7	127.2	128.7	128.2	128.3	129.3	129.4	129.8
NONDURABLE		35.11	125.1	126.4	125.8	127.2	127.5	129.3	128.7	127.7	129.6	129.9	131.2	132.1	132.0	132.2
DURABLE		49.10	127.3	127.4	126.7	128.2	128.7	129.5	128.7	126.8	128.1	127.0	126.2	127.4	127.6	128.0
<b>MINING</b>																
Metal mining	10	.50	75.0	73.8	76.0	78.3	77.3	73.5	77.2	75.9	76.0	72.0	65.9			
Coal	11,12	1.60	126.8	126.9	122.9	125.8	128.4	130.8	126.5	124.7	124.4	124.0	127.3	120.2	122.2	
Oil & gas extraction	13	7.07	106.2	105.4	104.4	103.6	104.2	104.9	101.1	99.2	96.2	95.1	93.3	92.3	90.8	90.3
Stone & earth minerals	14	.66	118.3	118.8	118.5	118.0	114.6	113.5	116.8	111.6	115.0	112.4	114.5	111.8	114.8	
<b>NONDURABLE MANUFACTURES</b>																
Foods	20	7.96	130.2	132.2	129.4	131.5	132.1	132.0	132.9	132.2	133.1	133.7	134.6	133.9	134.9	
Tobacco products	21	.62	100.2	98.9	103.2	102.8	100.3	93.8	97.0	93.6	100.3	101.6	97.6	100.0		
Textile mill products	22	2.29	103.2	107.0	107.7	110.0	107.7	107.9	109.9	108.0	111.4	111.3	112.6	113.1	113.5	
Apparel products	23	2.79	100.9	101.8	102.1	103.8	104.5	105.5	102.8	102.8	103.1	102.6	101.7	103.3	101.5	
Paper & products	26	3.15	127.6	128.0	127.7	128.9	131.3	133.6	132.6	132.4	134.1	133.2	137.2	138.3	138.6	
Printing & publishing	27	4.54	153.9	153.4	154.5	156.8	157.6	160.9	156.7	157.8	161.6	161.9	164.0	166.0	163.5	164.0
Chemicals & products	28	8.05	127.1	129.1	127.3	128.2	128.1	131.7	132.0	130.2	132.8	131.5	134.2	134.8	135.1	
Petroleum products	29	2.40	86.8	85.3	87.9	87.6	88.9	94.7	90.1	88.6	91.3	95.7	91.8	91.8	94.5	93.1
Rubber & plastics prod.	30	2.80	146.9	148.8	149.0	150.1	149.4	150.2	151.1	147.8	146.8	150.1	152.2	155.7	154.9	
Leather & products	31	.53	68.5	70.1	68.2	68.7	66.4	65.4	64.8	62.7	61.5	59.5	57.9	61.9	61.7	
<b>DURABLE MANUFACTURES</b>																
Lumber & products	24	2.30	113.4	116.0	116.2	115.0	116.1	120.5	120.3	120.7	121.3	121.6	120.9	119.7		
Furniture & fixtures	25	1.27	139.7	142.8	140.0	142.2	140.5	141.2	143.2	142.9	145.9	146.2	147.1	150.8	149.5	
Clay, glass, stone prod.	32	2.72	115.5	117.4	116.1	116.7	118.2	120.0	119.3	120.0	121.6	120.2	120.8	119.6	119.8	
Primary metals	33	5.33	80.5	80.8	81.9	82.9	81.7	82.4	80.3	76.3	78.1	74.8	71.4	73.5	72.6	72.6
Iron & steel	331,2	3.49	70.4	70.3	72.4	73.9	71.6	72.2	69.5	64.3	65.6	60.2	58.3	61.4	59.9	
Fabricated metal prod.	34	6.46	107.3	106.7	107.9	107.6	108.2	109.2	108.5	107.6	108.2	106.5	106.6	105.5	106.5	107.1
Nonelectrical machinery	35	9.54	145.3	144.2	141.7	144.8	146.2	144.9	143.9	141.7	140.8	141.3	140.4	142.6	142.9	141.5
Electrical machinery	36	7.15	168.4	164.5	164.2	166.9	168.7	166.1	164.8	165.2	166.8	166.0	163.2	166.8	167.0	167.5
Transportation equip.	37	9.13	121.4	124.5	123.3	124.8	124.0	128.2	127.5	122.6	126.2	124.1	125.1	125.6	125.3	127.4
Motor vehicles & pts.	371	5.25	111.5	113.7	111.4	112.6	111.4	116.5	116.4	108.1	112.6	108.7	110.6	111.2	108.3	112.8
Aerospace & misc.	372-6,9	3.87	134.9	139.1	139.4	141.3	141.0	143.9	142.6	142.4	144.8	145.0	144.7	145.1	148.5	147.2
Instruments	38	2.66	139.1	139.0	138.4	139.9	140.4	141.5	141.9	142.0	142.4	140.3	139.9	141.7	142.6	142.6
Miscellaneous mfrs.	39	1.46	96.1	95.3	95.0	94.8	96.6	100.9	100.9	99.0	99.2	101.0	98.3	97.9	98.2	
<b>UTILITIES</b>																
Electric		4.17	119.7	120.8	119.4	120.1	122.4	119.7	119.5	119.8	121.6	121.7	123.1	125.4	124.4	

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

Series	1985				1986								
	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
	CHANGE FROM PREVIOUS MONTH												
TOTAL INDEX	-0.1	-0.6	1.0	-6.1	.5	-0.7	-1.3	.8	-0.4	.0	.5	-1	-1.1
Final products	.0	-0.9	1.6	-1.1	.5	-0.8	-1.7	1.2	-0.4	-0.4	.8	.3	-3.1
Consumer goods	.1	-0.5	1.8	.5	.4	-0.3	-1.2	2.2	-0.2	.1	.6	-0.1	-3.1
Durable consumer goods	-1.2	-0.7	2.8	-0.1	.6	.5	-3.6	3.1	-1.8	.5	1.4	-0.6	1.4
Nondurable consumer goods	.6	-0.5	1.5	.8	.3	-0.6	-0.4	1.9	.3	.0	.3	.0	-0.1
Business equipment	-0.4	-1.5	1.8	-0.5	1.1	-0.7	-2.0	.6	-0.5	-0.9	1.2	.7	-3.1
Construction Supplies	-0.1	-0.1	.2	-0.6	3.5	-1.1	.0	.8	-0.1	.5	-0.1	1.2	-4.1
Materials	-0.1	-0.4	.5	1.3	.0	-0.6	-1.3	.5	-0.7	.1	.4	-0.1	-0.1
Durable goods materials	-1.1	.1	.9	.6	.2	-0.7	-1.7	.7	-1.4	-0.5	.7	.1	-2.1
Nondurable goods materials	1.3	-0.5	-0.3	1.4	1.2	-0.1	-1.2	1.5	.0	1.1	.8	.3	.0
Manufacturing	-0.2	-0.5	1.2	.4	.9	-0.6	-1.2	1.2	-0.4	.0	.8	.1	-3.1
Durable manufacturing	-0.5	-0.6	1.2	.4	.6	-0.7	-1.4	1.0	-0.9	-0.6	.9	.2	-3.1
Nondurable manufacturing	.3	-0.5	1.1	.3	1.4	-0.5	-0.8	1.5	.2	1.0	.7	-0.1	-2.1
Mining and utilities	1.2	-1.2	.0	1.3	-0.4	-2.7	-1.4	-1.1	-1.0	-0.5	-0.3	-0.6	.1
	CHANGE FROM SAME MONTH A YEAR EARLIER												
TOTAL INDEX	1.6	1.2	1.7	2.3	2.9	1.7	.2	1.2	.5	.5	1.2	.5	-8.1
Final products	2.9	1.6	2.6	3.0	3.8	2.2	.5	1.4	.4	.4	1.1	.2	-5.1
Consumer goods	2.9	2.0	3.0	3.5	4.8	3.6	2.1	4.7	3.8	3.7	4.8	3.3	3.4
Durable consumer goods	2.0	.6	2.2	1.8	4.4	3.6	-1.0	3.8	1.6	1.5	4.1	.7	3.3
Nondurable consumer goods	3.3	2.4	3.3	4.1	5.0	3.6	3.2	5.1	4.6	4.5	5.0	4.2	3.5
Business equipment	2.5	.4	1.6	2.2	2.3	1.0	-0.9	-1.5	-2.1	-1.4	-0.9	-1.2	-0.6
Construction Supplies	5.3	4.8	4.4	4.3	7.4	7.2	5.6	5.6	4.6	4.6	4.5	4.2	4.7
Materials	-1.2	-0.3	.0	.9	.5	-0.1	-1.5	-0.3	-0.7	-0.9	-0.1	-0.5	-0.4
Durable goods materials	-2.5	-2.2	-1.5	-1.1	-1.1	-0.9	-2.9	-1.7	-1.9	-2.8	-1.3	-2.1	-0.8
Nondurable goods materials	2.8	2.2	2.6	3.9	5.3	4.7	3.6	5.4	4.9	5.6	4.8	5.6	4.2
Manufacturing	2.1	1.3	2.2	2.6	3.6	2.8	1.1	2.1	1.5	1.7	2.4	1.7	2.2
Durable manufacturing	1.3	.5	1.4	1.7	2.3	1.8	-0.4	.4	-0.3	-0.6	.4	-0.4	.5
Nondurable manufacturing	3.3	2.5	3.3	3.8	5.5	4.3	3.2	4.4	4.2	5.1	5.3	4.7	4.6
Mining and utilities	-1.6	.2	-1.0	.3	-1.3	-4.9	-5.2	-5.0	-5.9	-6.9	-5.7	-6.6	-7.6













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

Series	SIC Code	1977	1985	1985					1986							
		Pro- por- tion	Ann. Avg.	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
<b>FABRICATED METAL PRODUCTS</b>	34	6.46	107.3	107.4	106.7	107.9	107.6	108.2	109.2	108.5	107.6	108.2	106.5	106.6	105.5	106.5
Metal containers	341	.52	85.6	88.9	87.4	86.8	87.1	88.7	90.1	88.8	85.3	93.6	90.6	91.7	88.3	89.4
Hardware, tools, cutlery	342	.73	100.8	100.4	99.1	99.1	99.4	100.8	100.4	99.1	100.2	101.9	100.1	104.4	103.5	105.5
Structural metal prod.	344	1.67	108.1	109.0	108.8	108.9	108.6	109.0	109.4	107.7	107.8	109.5	109.7	107.8	107.5	108.0
Fasteners, stamp, etc.	345-7	1.95	109.8	110.5	108.8	109.8	109.4	110.4	114.8	116.5	111.3	113.1	108.4	107.9	107.5	109.1
<b>NONELECTRICAL MACHINERY</b>	35	9.54	145.3	145.4	144.2	141.7	144.8	146.2	144.9	143.9	141.7	140.8	141.3	140.4	142.6	142.9
Engine & farm equip.	351,2	1.48	63.0	62.2	60.8	61.7	62.5	62.8	64.0	62.8	61.7	63.3	60.9	61.0	60.5	59.5
Construct. & allied eq.	353	1.68	77.5	78.4	77.8	78.5	78.9	79.9	78.1	77.1	74.3	72.2	76.0	76.6	73.4	76.3
Metalworking machinery	354	1.24	126.9	130.1	128.7	125.9	128.5	130.7	132.3	130.6	131.0	128.3	129.5	134.9	134.0	135.8
Spec. & genl. ind. eq.	355,6	2.12	96.9	97.4	97.1	95.1	94.7	95.1	95.1	95.7	95.2	96.6	95.9	95.0	96.2	95.1
Office, serv., & misc.	357-9	3.02	265.2	260.6	262.5	253.8	263.4	265.7	266.6	263.9	257.2	252.9	252.1	250.7	255.7	254.5
<b>ELECTRICAL MACHINERY</b>	36	7.15	168.4	165.8	164.5	164.2	166.9	168.7	166.1	164.8	165.2	166.8	166.0	163.2	166.8	167.0
Major elect. eq. & pts	361,2	1.27	89.9	90.7	88.4	85.3	86.6	87.2	88.9	88.9	88.4	90.3	91.3	90.9	91.3	90.8
Household appliances	363	.75	124.3	124.5	120.2	120.0	131.9	126.2	129.1	133.5	131.9	138.3	131.9	137.8	137.1	138.4
Cooking equipment	3631	-.11	227.2	214.4	197.9	195.5	264.6	222.4	260.6	269.5	258.3	258.8	266.6	296.0	234.4	253.1
Refrigeration appl.	3632	-.17	94.2	111.0	95.9	92.3	96.4	97.1	94.2	109.5	101.8	119.3	103.5	117.0	107.7	121.1
Laundry appliances	3633	-.12	127.7	123.9	125.7	132.4	132.1	136.7	130.5	133.5	133.0	155.2	137.9	133.2	164.7	147.1
Misc. appliances	3634-6,9	-.35	104.8	102.7	105.3	104.8	106.7	105.9	103.5	101.8	105.6	103.3	100.6	99.2	104.5	107.2
TV and radio sets	365	-.44	144.7	139.5	137.1	137.2	158.5	166.8	154.2	148.2	143.9	154.0	147.5	139.8	147.9	152.6
Communication equipment	366	2.01	217.8	219.3	218.9	219.7	221.6	220.5	218.6	216.0	215.1	217.9	218.4	207.1	216.5	218.5
Electronic components	367	1.31	257.9	245.6	241.9	239.3	240.1	242.0	241.8	241.4	247.8	247.6	243.4	239.2	242.4	239.3
TV tubes	3671-3	-.13	117.6	106.2	106.8	109.5	126.6	120.7	142.0	129.1						
Misc. electrical supp.	369	.70	119.6	118.1	116.2	117.4	116.4	120.0	116.0	114.8	115.2	115.5	118.9	113.8	117.6	118.3
Storage battery, repl.	3691	-.13	123.5	127.4	122.7	122.9	122.0	123.6	108.0	113.8	123.4	138.3	140.5	123.7	137.6	
<b>TRANSPORTATION EQUIPMENT</b>	37	9.13	121.4	125.0	124.5	123.3	124.8	124.0	128.2	127.5	122.6	126.2	124.1	125.1	125.6	125.3
Motor vehicles & parts	371	5.25	111.5	115.6	113.7	111.4	112.6	111.4	116.5	116.4	108.1	112.6	108.7	110.6	111.2	108.3
Autos, total		1.82	112.9	115.5	112.7	108.3	108.9	108.0	120.4	122.3	107.0	115.1	108.2	113.4	108.8	100.2
Consumer		1.16	98.9	101.2	98.8	94.9	95.6	94.6	105.5	107.1	93.7	100.8	94.8	99.3	95.3	87.8
Business		-.66	137.6	140.8	137.4	132.0	132.5	131.6	146.8	149.0	130.4	140.3	132.0	138.2	132.6	122.2
Trucks and buses		1.03	126.7	140.6	135.9	131.3	136.3	130.4	135.0	133.0	119.9	131.8	126.8	125.6	136.4	140.4
Business vehicles		-.41	111.9	121.5	118.2	115.2	117.4	116.0	124.6	118.9	104.9	117.0	107.9	109.4	115.0	120.4
Consumer trucks		-.63	136.3	153.1	147.4	141.8	148.6	139.8	141.7	142.1	129.6	141.5	139.1	136.1	150.3	153.4
Truck trailers	3715	-.09	130.5	128.8	130.4	126.8	125.9	129.7	130.9	111.6	123.7	125.8	133.5	135.0	133.3	133.3
Motor vehicle parts	3714	2.31	102.9	103.8	103.9	104.3	104.4	105.0	104.6	104.5	103.0	101.4	100.1	100.8	101.0	99.3
Aircraft and parts	372	2.09	140.4	145.2	145.5	147.0	149.2	148.5	153.9	151.5	152.3	154.6	155.7	156.5	155.6	161.3
Ships and boats	373	.66	84.2	81.7	82.2	83.9	83.5	86.8	88.0	83.9	84.4	85.8	85.9	84.5	86.7	89.3
Rail & misc trans eq.	374-6,9	1.11	154.8	160.6	161.3	157.1	161.0	164.2	161.5	156.0	157.8	160.2	159.2	157.4	159.0	162.2
Railroad equipment	374	-.27	31.2	44.6	46.9	36.4	32.6	31.2	21.8	9.8	18.3	31.5	29.0	20.2	20.6	27.8
<b>INSTRUMENTS</b>	38	2.66	139.1	141.0	139.0	138.4	139.9	140.4	141.5	141.9	142.0	142.4	140.3	139.9	141.7	142.6
Equipment instr. & pts	381-4	1.52	156.5	156.6	154.3	156.7	159.0	160.7	160.1	160.8	161.9	163.9	161.9	162.0	162.0	165.4
<b>MISC. MANUFACTURES</b>	39	1.46	96.1	96.5	95.3	95.0	94.8	96.6	100.9	100.9	99.0	99.2	101.0	98.3	97.9	98.2
Misc. cons. goods	391,3,4,6	.84	92.6	92.8	91.4	93.2	91.7	93.2	96.5	95.9	95.4	94.5	95.2	94.4	93.4	94.1
Misc. bus. supplies	395,9	.62	101.0	103.9	102.5	102.1	101.3	101.3	102.8	105.9	100.1	103.6	108.9	102.6	105.2	104.2
<b>ELECTRIC UTILITIES</b>	49	4.17	119.7	117.6	120.8	119.4	120.1	122.4	119.7	119.5	119.8	121.6	121.7	123.1	125.4	124.4
Elec. util. generation		1.76	115.5	113.5	115.9	116.6	116.1	117.3	114.0	114.4	113.2	114.9	116.8	117.0	121.5	
Fossil fuel generation		1.41	109.0	106.6	107.8	108.3	108.4	110.9	107.8	107.0	105.9	107.5	110.0	110.7	115.1	
Hydro & nuclear gener.		-.35	141.4	141.1	148.5	149.5	147.2	143.1	139.0	144.2	142.5	144.6	144.1	141.9	147.4	
Elec. util. sales		2.41	122.8	120.7	124.3	121.4	122.9	126.1	123.8	123.2	124.6	126.5	125.3	127.6	128.3	
Residential elec.		-.95	123.7	120.5	122.7	123.7	124.8	127.9	127.5	124.4	124.0	128.0	125.6	128.0	134.8	
Nonresidential elec.		1.46	122.2	120.8	125.4	120.0	121.7	125.0	121.4	122.5	124.9	125.6	125.1	127.4	124.0	
Industrial elec.		-.68	107.1	107.1	109.0	104.1	103.8	108.2	104.4	105.9	108.7	107.7	104.4	104.7	103.9	
Commercial & other elec.		-.78	135.4	132.8	139.7	133.8	137.2	139.6	136.1	136.9	139.0	141.2	143.2	147.1	141.5	

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	1985	1985					1986							
		Pro- por- tion	Ann- Avg.	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
<b>FABRICATED METAL PRODUCTS</b>	34	6.46	107.3	108.9	109.8	109.1	108.0	106.6	104.6	108.3	107.4	107.7	106.2	108.4	104.1	107.9
Metal containers	341	.52	85.6	93.9	92.5	87.1	85.4	83.2	83.4	87.2	84.3	92.7	90.3	95.2	92.2	94.4
Hardware, tools, cutlery	342	.73	100.8	102.2	103.0	101.5	100.0	98.0	95.1	101.0	100.9	99.9	99.4	105.4	101.8	107.5
Structural metal prod.	344	1.67	108.1	111.6	112.8	112.5	111.4	111.7	106.1	103.3	104.3	105.5	107.7	109.2	107.8	110.6
Fasteners, stamp, etc.	345-7	1.95	109.8	110.3	111.2	111.4	109.5	105.8	107.4	118.4	115.6	114.5	108.7	110.7	104.4	108.9
<b>NOELECTRICAL MACHINERY</b>	35	9.54	145.3	151.3	152.2	143.8	143.3	140.5	139.9	142.3	140.4	136.8	138.4	143.8	145.1	148.7
Engine & farm equip.	351,2	1.48	63.0	59.9	60.7	60.7	62.4	64.1	64.1	64.2	63.6	63.4	61.1	61.1	58.6	57.3
Construct. & allied eq.	353	1.68	77.5	78.8	80.8	78.8	78.7	79.7	76.4	78.1	73.4	70.8	74.1	77.2	74.1	76.7
Metalworking machinery	354	1.24	126.9	130.7	133.7	129.3	126.6	126.2	127.9	133.5	132.4	129.2	127.9	134.7	131.7	136.5
Spec. & genl. ind. eq.	355,6	2.12	96.9	97.7	100.5	94.9	95.3	94.6	92.8	96.1	96.1	95.3	95.4	96.2	94.1	95.4
Office, serv., & misc.	357-9	3.02	265.2	282.8	280.9	261.4	259.7	250.2	250.5	252.6	249.8	242.0	246.7	258.7	268.4	276.3
<b>ELECTRICAL MACHINERY</b>	36	7.15	168.4	165.8	167.5	169.7	169.5	166.5	165.0	164.1	164.8	166.2	164.6	163.3	161.3	167.0
Major elect. eq. & pts	361,2	1.27	89.9	92.7	93.1	88.6	86.4	84.3	86.2	87.1	87.8	88.0	90.2	92.6	90.9	92.8
Household appliances	363	.75	124.3	118.4	125.6	136.6	127.9	109.3	129.9	139.8	135.5	144.0	132.2	138.0	122.0	131.7
Cooking equipment	3631	.11	227.2	208.8	207.6	235.3	271.0	198.6	259.6	269.1	248.9	258.7	279.1	286.6	224.7	246.5
Refrigeration appl.	3632	.17	94.2	80.7	102.0	103.9	83.3	69.3	96.3	118.1	114.9	134.6	109.7	123.5	109.7	88.2
Laundry appliances	3633	.12	127.7	125.0	126.5	152.8	118.4	115.5	138.8	148.0	142.1	159.0	134.0	135.0	137.3	148.3
Misc. appliances	3634-6,9	.35	104.8	105.4	110.5	115.4	106.9	97.9	101.7	106.3	107.0	107.2	95.8	98.8	90.2	110.1
TV and radio sets	365	.44	144.7	155.3	145.0	182.0	175.9	139.7	142.2	136.8	126.9	138.9	143.9	134.6	143.5	169.1
Communication equipment	366	2.01	217.8	215.7	217.1	218.7	224.1	228.2	219.7	215.7	217.0	215.9	216.1	207.2	213.8	214.8
Electronic components	367	1.31	257.9	247.0	244.5	242.1	243.6	244.6	240.8	238.8	245.8	246.3	242.1	241.5	234.8	240.5
TV tubes	3671-3	.13	117.6	118.4	115.9	130.2	130.8	89.0	135.3	130.1						
Misc. electrical supp.	369	.70	119.6	117.7	124.8	126.2	122.5	128.6	117.2	109.9	109.7	108.7	112.3	111.2	109.3	118.1
Storage battery, repl.	3691	.13	123.5	133.7	161.0	160.9	147.6	162.4	114.5	96.9	98.8	102.7	106.7	107.0	112.3	
<b>TRANSPORTATION EQUIPMENT</b>	37	9.13	121.4	116.1	123.4	126.5	126.4	120.3	127.9	129.5	126.6	129.3	127.4	130.3	114.6	118.0
Motor vehicles & parts	371	5.25	111.5	103.0	112.2	117.2	114.0	101.5	115.3	119.9	113.9	117.9	114.5	120.0	95.3	98.7
Autos, total		1.82	112.9	90.7	109.5	119.4	115.5	89.6	120.2	128.4	116.6	123.7	116.5	127.4	82.4	84.8
Consumer		1.16	98.9	79.5	95.9	104.7	101.2	78.5	105.3	112.5	102.2	108.3	102.0	111.6	72.2	74.3
Business		.66	137.6	110.6	133.5	145.6	140.9	109.2	146.5	156.5	142.2	150.8	142.0	155.3	100.5	103.4
Trucks and buses		1.03	126.7	126.7	131.8	141.3	132.4	105.5	130.1	141.5	131.5	143.1	139.9	145.2	109.5	124.3
Business vehicles		.41	111.9	109.4	110.7	122.4	113.2	94.9	125.7	126.7	111.6	126.0	119.8	126.6	92.9	108.5
Consumer trucks		.63	136.3	137.9	145.5	153.6	144.9	112.4	133.0	151.1	144.5	154.2	153.0	157.3	120.3	134.7
Truck trailers	3715	.09	130.5	128.5	136.9	129.1	127.8	132.8	116.3	111.0	131.4	129.3	134.3	140.3	117.1	133.0
Motor vehicle parts	3714	2.31	102.9	101.0	104.6	104.1	104.1	107.8	104.9	104.0	103.2	101.6	100.8	102.1	98.3	96.7
Aircraft and parts	372	2.09	140.4	139.5	144.9	147.4	151.7	152.9	154.5	153.8	154.0	154.1	155.2	155.7	151.6	155.1
Ships and boats	373	.66	84.2	78.6	80.6	83.6	84.9	88.3	87.6	84.5	85.6	86.9	87.1	85.0	84.5	86.0
Rail & misc. trans. eq.	374-6,9	1.11	154.8	156.4	161.2	157.0	161.9	166.9	161.6	156.2	159.5	161.4	160.1	158.1	154.3	158.7
Railroad equipment	374	.27	31.2	35.4	47.8	39.0	33.3	31.9	21.1	9.2	19.0	31.6	30.8	22.5	19.7	22.1
<b>INSTRUMENTS</b>	38	2.66	139.1	143.6	143.7	139.8	139.7	139.6	138.0	139.2	140.4	139.8	138.6	142.6	143.1	145.2
Equipment instr. & pts	381-4	1.52	156.5	162.9	164.1	157.9	156.6	155.6	154.1	157.1	159.3	159.0	159.5	165.8	167.1	172.4
<b>MISC. MANUFACTURES</b>	39	1.46	96.1	103.0	103.0	99.1	93.8	90.9	93.2	100.3	97.6	96.3	99.2	100.3	98.0	103.9
Misc. cons. goods	391,3,4,6	.84	92.6	98.7	98.5	97.1	89.7	86.2	89.8	94.4	95.0	92.6	94.6	97.9	92.4	100.1
Misc. bus. supplies	395,9	.62	101.0	108.8	109.1	102.0	99.4	97.3	97.7	108.3	101.1	101.3	105.5	103.7	105.7	109.1
<b>ELECTRIC UTILITIES</b>	49	4.17	119.7	127.7	127.0	110.4	112.1	123.3	127.0	127.4	114.1	112.6	109.2	125.7	135.7	136.8
Elec. util. generation		1.76	115.5	124.9	115.3	107.3	109.7	120.7	119.9	117.0	107.9	106.0	108.6	122.4	134.0	
Fossil fuel generation		1.41	109.0	121.9	109.7	102.1	102.4	113.9	113.7	107.5	97.9	95.0	99.1	115.8	130.0	
Hydro & nuclear gener.		.35	141.4	137.0	137.7	128.1	138.6	147.7	145.0	155.0	147.7	149.9	146.6	148.7	149.8	
Elec. util. sales		2.41	122.8	129.8	135.6	142.6	113.8	125.3	132.1	135.0	118.6	117.4	109.6	128.2	137.0	
Residential elec.		.95	123.7	134.5	134.7	105.5	107.7	132.4	152.2	144.2	120.2	112.8	100.4	120.3	147.2	
Nonresidential elec.		1.46	122.2	126.7	136.2	117.2	117.8	120.6	119.0	128.9	117.6	120.4	115.7	133.3	130.4	
Industrial elec.		.68	107.1	109.0	115.4	103.5	104.4	103.2	98.7	110.6	104.9	107.8	102.5	109.1	103.9	
Commercial & other elec.		.78	135.4	142.1	154.3	129.1	129.5	135.8	136.7	144.9	128.6	131.3	127.1	154.4	153.4	

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									
	1984 Q2	Q3	Q4	1985 Q1	Q2	Q3	Q4	1986 Q1	Q2	Q3
Industrial production	121.1	122.7	122.5	123.1	123.5	124.0	124.7	125.0	124.4	125.1
Products, total	126.0	128.0	128.7	129.1	130.4	131.6	132.3	132.7	132.5	133.6
Final products	126.6	128.7	129.3	129.7	130.6	131.7	132.4	132.5	131.6	132.5
Consumer goods	117.9	118.1	118.8	118.8	119.5	120.5	122.1	123.0	124.4	125.1
Durable consumer goods	111.8	112.5	112.6	112.4	112.1	113.0	114.3	115.0	114.7	116.0
Automotive products	109.5	109.5	109.0	113.7	112.4	115.9	114.2	114.7	114.4	115.6
Home goods	113.5	114.7	115.3	111.4	111.8	110.8	114.4	115.2	114.8	116.4
Nondurable consumer goods	120.2	120.2	121.1	121.2	122.2	123.2	125.0	125.9	128.0	128.4
Equipment, total	138.1	142.6	143.4	144.0	145.3	146.5	146.1	145.0	141.2	142.3
Business & defense equipment	137.2	141.5	142.6	144.0	145.8	146.9	147.3	147.5	145.9	147.6
Business equipment	132.6	137.1	137.8	138.8	140.0	140.3	139.7	139.9	137.7	139.0
Defense and space equipment	155.3	158.8	161.3	164.5	168.4	172.9	176.8	177.1	178.1	181.0
Intermediate products	124.0	125.8	126.5	127.2	129.9	131.2	131.7	133.7	135.5	137.6
Construction supplies	113.5	114.5	115.0	115.3	117.9	119.8	120.2	123.1	123.7	125.2
Business supplies	133.0	135.4	136.3	137.4	140.2	140.9	141.5	142.7	145.6	
Commercial energy products	118.2	119.3	120.6	121.5	122.3	123.1	125.1	125.0	129.5	
Materials	114.4	115.5	114.1	114.9	114.0	113.8	114.3	114.5	113.3	113.4
Durable goods materials	121.0	123.1	123.1	123.0	121.4	120.4	121.1	120.9	118.8	118.7
Basic metal materials	87.8	85.5	84.3	84.1	84.3	84.0	87.1	82.6	79.5	
Nondurable goods materials	111.7	111.7	110.7	110.7	111.0	113.4	113.9	115.7	116.9	118.9
Textile, paper, & chem materials	112.2	112.4	110.5	111.2	110.6	113.3	114.0	116.2	117.0	119.6
Textile materials	104.3	102.3	95.0	93.2	95.2	101.7	105.0	105.8	108.2	
Pulp and paper materials	127.6	128.0	125.7	126.6	121.6	123.8	124.8	128.8	130.1	
Chemical materials	109.5	110.4	110.6	112.0	112.1	113.6	113.4	115.3	115.4	
Energy materials	105.2	105.4	101.1	104.4	103.7	102.5	102.6	102.2	100.6	99.4
Manufacturing	123.0	124.7	124.9	125.3	126.1	126.8	127.4	128.4	128.4	129.5
Durable	123.5	125.9	126.4	126.8	127.3	127.5	127.9	128.3	127.1	127.6
Nondurable	122.3	122.9	122.9	123.3	124.6	125.9	126.8	128.6	130.2	132.1
Mining and Utilities	111.7	112.2	109.5	111.6	109.8	109.1	109.3	107.3	103.3	101.9
Mining	112.1	113.7	108.6	110.1	109.9	107.9	107.1	105.4	99.9	96.6
Utilities	111.1	109.7	110.8	114.1	109.6	111.1	112.8	110.5	108.9	110.6

**Table 6**  
**INDUSTRIAL PRODUCTION: GROSS VALUE OF PRODUCTS**  
 Billions of 1982 dollars at annual rates, seasonally adjusted

SERIES	1982 Dollars	1985 Ann. Avg.	Billions of 1982 Dollars at Annual Rates											
			1985 Quarters			1986 Quarters			1986 Months					
			Q2	Q3	Q4	Q1	Q2	Q3	APR	MAY	JUN	JUL	AUG	SEP
Products, total	1376.8	1650.9	1648.5	1652.6	1671.9	1683.1	1683.5	1681.6	1686.3	1687.6	1676.7	1672.0	1682.5	1690.3
Final products	1084.5	1282.3	1279.7	1281.4	1297.3	1304.7	1299.2	1292.9	1307.0	1301.1	1289.5	1284.8	1292.6	1301.3
Consumer goods	703.7	820.7	817.2	818.9	834.0	842.7	849.5	846.3	852.3	852.4	843.8	843.6	846.7	848.6
Durable consumer goods	133.3	195.7	193.7	197.7	197.6	199.6	198.6	201.3	201.3	196.8	197.9	201.2	199.0	203.8
Automotive products	65.9	108.0	106.1	110.9	108.2	109.6	108.8	110.5	111.0	107.3	108.0	110.6	108.1	112.9
Home goods	67.4	87.8	87.6	86.7	89.4	90.0	89.9	90.8	90.3	89.4	89.9	90.6	90.9	90.9
Nondurable consumer goods	570.4	625.0	623.5	621.3	636.3	643.1	650.9	644.9	651.0	655.7	645.9	642.4	647.7	644.7
Equipment, total	380.8	461.7	462.5	462.5	463.4	462.0	449.7	446.6	454.7	448.7	445.7	441.2	445.9	452.8
Business & defense equipment	345.4	430.4	431.2	430.8	434.0	437.0	432.8	431.3	436.3	431.9	430.3	426.2	430.5	437.1
Business equipment	278.0	343.7	345.8	343.4	343.5	345.9	341.9	339.3	345.2	341.0	339.3	335.2	338.4	344.3
Defense and space equipment	67.4	86.7	85.4	87.4	90.4	91.0	91.0	92.0	91.1	90.9	91.0	91.0	92.1	92.8
Intermediate products	292.2	368.6	368.8	371.2	374.6	378.4	384.3	388.7	379.3	386.4	387.2	387.2	389.9	389.0
Construction supplies	108.3	144.8	144.4	146.9	147.1	150.3	151.1	152.9	150.4	151.2	151.8	151.6	153.3	153.7
Business supplies	183.9	223.8	224.4	224.2	227.5	228.1	233.2		228.9	235.2	235.4	235.6	236.6	
Commercial energy products	63.4	72.6	73.0	72.5	75.3	73.8	77.6		74.6	80.7	77.4	75.9		

Table 7  
**INDUSTRIAL PRODUCTION: DIFFUSION INDEXES**  
 Percent of component series higher than in earlier months

	ONE MONTH EARLIER	THREE MONTHS EARLIER	SIX MONTHS EARLIER
<b>1977-85</b>			
AVERAGE	53.7	56.1	57.6
HIGH	76.6	79.4	88.3
LOW	26.4	23.2	23.0
<b>1984</b>			
AUGUST	46.0	52.0	59.1
SEPTEMBER	48.2	48.8	57.3
OCTOBER	51.0	47.4	51.8
NOVEMBER	53.0	49.6	52.8
DECEMBER	53.2	51.4	53.2
<b>1985</b>			
JANUARY	51.8	55.8	48.2
FEBRUARY	55.8	55.6	47.6
MARCH	54.8	56.0	54.8
APRIL	51.0	55.6	53.6
MAY	54.6	54.0	56.9
JUNE	53.4	52.2	59.1
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
<b>1986</b>			
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	55.6	46.0	47.6
AUGUST	51.6	54.0	54.6

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

	1985 Ann. Avg.	Millions of Units													
		1985 SEP	OCT	NOV	DEC	1986 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Autos, total	8.2	8.1	7.8	7.8	7.7	8.6	8.7	7.6	8.1	7.6	8.0	7.6	7.0	7.7	







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

Series	SIC code	1977 (bil. KWH)	Indexes						Percentage change from				Indexes		
			1985 Avg.	1985 Q2	Q3	Q4	1986 Q1	Q2	previous quarter		year ago		1985 AVL	1986 ADG	
									1985 Q3	1986 Q4	1985 Q2	1986 Q1			
PETROLEUM PRODUCTS	29	34.7	112.9	113.0	113.6	113.5	115.0	117.1	.6	-0.2	1.3	1.9	3.7	111.7	124.4
RUBBER & PLASTICS PRODUCTS	30	23.1	126.3	125.5	125.6	128.7	128.7	127.2	.1	2.5	.0	-1.1	1.4	133.0	131.2
Tires	3011	5.4	77.4	78.5	75.0	76.6	71.2	67.3	-4.5	2.1	-7.0	-5.5	-14.3	72.1	73.4
Rubber products, nec	3061	2.2	94.0	94.4	90.3	95.5	97.1	93.0	-4.3	5.8	1.7	-4.2	-1.4	99.1	98.1
Plastics products, nec	3071	14.2	164.1	161.9	164.9	168.5	170.3	171.2	1.9	2.2	1.0	.6	5.8	175.8	173.5
LEATHER AND PRODUCTS	31	1.4	88.4	88.9	89.0	88.0	87.4	83.6	.1	-1.2	-0.6	-4.4	-6.0	84.1	80.9
Shoes	3141	.7	79.4	79.6	79.2	78.0	82.3	77.1	-0.4	-1.5	5.5	-6.3	-3.1	74.3	73.4
CLAY, GLASS, AND STONE	32	31.4	104.9	104.7	104.8	105.3	106.7	105.7	.1	.4	1.3	-1.0	-.9	102.3	105.5
Flat glass	3211	1.3	101.0	96.5	99.2	106.2	107.1	107.6	2.7	7.0	-.9	-.4	11.4	107.0	106.4
Pressed and blown glass	3221	6.8	102.4	101.7	102.5	102.3	104.8	106.2	-.8	-0.2	2.5	1.3	4.5	99.7	104.6
Cement	3241	10.2	98.3	98.9	98.4	97.4	100.7	97.4	-0.6	-1.0	3.4	-3.4	-1.6	94.0	98.8
Structural clay products	3251	1.5	100.0	100.7	100.8	98.5	102.9	100.3	.1	-2.3	4.5	-2.6	-0.4	101.0	101.7
Concrete products	3271	3.6	109.4	110.8	110.1	111.7	113.5	111.8	-0.6	1.4	1.7	-1.5	-.9	109.2	108.9
PRIMARY METALS	33	171.3	80.2	78.5	79.8	79.3	78.4	75.4	1.6	-0.5	-1.2	-3.9	-4.0	72.1	70.4
Basic steel and mill prod.	3311	65.7	74.6	70.3	75.9	76.9	73.9	70.4	7.9	1.4	-3.9	-4.8	-1.1	70.5	67.4
Iron and steel foundries	3321	12.0	78.6	80.0	76.6	76.9	71.6	69.1	-4.2	.3	-6.8	-3.5	-13.5	64.4	71.3
Primary nonferrous metals	3331	78.1	89.2	82.3	94.9	86.3	84.2	85.5	15.2	-9.1	-2.4	1.6	3.9	85.2	90.7
Aluminum	3334	70.3	78.5	78.7	74.4	76.2	80.2	73.2	-5.5	2.4	5.3	-8.7	-7.0	61.9	63.6
Nonferrous foundries	3361	2.1	115.4	118.1	115.6	110.0	115.6	115.3	-2.1	-4.9	5.1	-0.3	-2.4	114.7	120.1
FABRICATED METAL PRODUCTS	34	26.4	114.4	114.8	114.5	114.7	114.9	115.9	-0.3	-.2	-.2	-.6	-.6	115.0	114.6
Metal cans	3411	2.2	112.3	110.8	113.9	116.1	115.8	120.5	2.8	1.9	-0.3	4.1	8.8	118.1	118.1
Hardware	3421	2.3	102.7	103.6	101.0	102.0	100.7	103.2	-2.5	1.0	-1.3	2.5	-0.4	106.2	107.5
Structural metal products	3441	.8	112.2	114.0	114.0	111.8	107.9	110.8	.0	-1.9	-3.5	2.7	-2.8	110.7	110.7
Fasteners	3451	1.6	102.7	105.3	101.1	99.1	102.9	104.3	-4.0	-2.0	3.8	1.3	-1.0	110.0	101.6
Metal stampings	3461	6.2	113.2	113.5	110.8	114.9	116.4	110.5	-2.3	3.7	1.3	-5.1	-1.6	104.4	105.1
NONELECTRICAL MACHINERY	35	28.6	115.1	115.0	114.3	116.1	115.8	113.9	-0.6	1.6	-0.3	-1.6	-1.0	115.0	114.6
Engines and turbines	3511	2.4	70.2	70.6	68.5	65.6	63.5	63.3	-3.0	-4.2	-3.1	-0.4	-10.3	66.4	62.4
Farm equipment	3521	2.1	57.6	59.7	56.9	54.2	52.0	49.8	-4.6	-4.8	-4.0	-4.2	-16.5	52.2	49.8
Construction equipment	3531	5.1	86.4	85.6	86.0	87.3	82.2	78.7	.5	1.4	-5.8	-4.3	-8.0	76.8	79.2
Metalworking machinery	3541	3.8	110.5	109.7	111.1	112.9	114.2	114.7	1.3	1.6	1.1	-.5	4.6	114.2	114.4
Special industry machinery	3551	2.0	101.2	100.2	102.1	100.1	101.9	99.9	1.9	-2.0	1.8	-1.9	-0.3	103.4	104.4
General industrial mach.	3561	4.6	109.5	109.9	110.8	108.7	108.2	108.7	.8	-1.9	-0.5	-.5	-1.1	111.2	108.5
Office and computing mach.	3571	2.8	203.4	205.9	202.6	204.4	207.9	195.6	-1.6	-.9	1.7	-5.9	-5.0	202.5	198.5
Service industry machinery	3581	2.8	95.3	95.7	94.5	94.2	95.5	98.7	-1.3	-0.3	1.4	3.3	3.1	100.7	104.3
ELECTRICAL MACHINERY	36	25.0	123.8	124.8	123.2	123.3	124.1	127.0	-1.2	-.0	-.7	2.3	1.8	128.4	126.3
Elect. distribution equip.	3611	1.5	100.1	99.2	102.0	101.9	98.6	99.8	2.8	-0.1	-3.3	1.2	-.5	98.1	102.2
Elect. indust. apparatus	3621	4.3	80.6	80.8	79.9	75.7	78.0	79.0	-1.1	-5.2	3.1	1.2	-2.2	83.7	79.0
Household appliances	3631	2.7	93.8	94.8	94.4	92.2	89.0	94.0	-0.4	-2.4	-3.5	5.7	-0.8	95.9	95.6
Lighting and wiring prod.	3641	2.3	100.2	100.2	99.1	99.6	101.6	101.3	-1.1	.6	2.0	-0.4	1.1	103.8	102.1
Radio and TV sets	3651	.9	115.7	115.0	114.5	116.5	122.7	117.7	-0.4	1.7	5.3	-4.0	2.4	112.2	117.8
Communication equipment	3661	4.6	166.1	168.1	164.6	167.2	169.5	167.4	-2.1	1.6	1.3	-1.2	-0.4	164.6	162.6
Electronic components	3671	6.0	168.3	168.8	165.5	169.5	176.2	180.0	-1.9	2.4	3.9	2.2	6.6	183.2	177.4
TRANSPORTATION EQUIPMENT	37	31.4	110.5	110.2	110.2	112.1	114.5	112.2	.0	1.8	2.2	-2.1	1.8	113.0	110.5
Motor vehicles and parts	3711	19.3	98.3	97.9	97.2	99.3	103.2	98.9	-0.7	2.2	3.9	-4.1	1.1	97.7	94.5
Aircraft and parts	3721	6.5	137.6	135.1	140.6	140.9	143.7	149.0	4.1	-.2	2.0	3.7	10.3	152.5	153.4
Ships and boats	3731	2.1	118.7	120.6	115.3	116.6	113.0	106.2	-4.4	1.1	-3.0	-6.1	-12.0	127.8	98.1
INSTRUMENTS	38	5.9	141.9	141.9	141.4	146.5	149.2	149.5	-0.4	3.6	1.9	.1	5.3	151.1	155.9
Copiers and related equip.	3861	1.4	123.9	122.8	121.6	128.9	136.9	134.0	-1.0	6.0	6.2	-2.1	9.2	136.0	146.6
MISCELLANEOUS MANUFACTURES	39	4.1	100.1	101.1	99.8	99.6	102.4	102.9	-1.3	-0.3	2.8	-.5	1.7	101.7	101.1
<b>SUPPLEMENTARY GROUPINGS</b>															
TOTAL, LESS NUCLEAR NONDEFENSE		740.7	104.2	103.8	104.3	104.0	104.7	102.9	.5	-0.3	.6	-1.7	-0.9	103.6	102.9
UTILITY SALES TO INDUSTRY		715.7	101.4	102.0	101.0	100.6	100.7	98.9	-0.9	-0.4	.1	-1.8	-3.0	99.5	99.4
INDUSTRIAL GENERATION		70.1	83.4	82.3	81.9	84.9	86.2	83.2	-0.4	3.7	1.5	-3.5	1.1	82.8	80.5

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	Indexes								Percentage change from				Indexes	
		1977 (bill. KWH)	1985 Avg.	1985			1986		previous quarter		year ago		1985 JUL	1986 AUG	
				Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
PETROLEUM PRODUCTS	29	34.7	112.9	111.4	118.7	112.8	112.2	115.6	6.5	-4.9	-0.5	3.1	3.7	116.4	129.6
RUBBER & PLASTICS PRODUCTS	30	23.1	126.3	126.9	127.4	127.8	126.0	128.7	.4	.3	-1.4	2.2	1.4	128.2	134.6
Tires	301	5.4	77.4	79.3	76.8	76.3	68.8	68.0	-3.2	-0.7	-9.9	-1.0	-14.2	69.5	76.0
Rubber products, nec	306	2.2	94.0	95.7	90.6	94.9	96.2	94.4	-5.4	4.7	1.4	-1.9	-1.4	93.9	99.9
Plastics products, nec	307	14.2	164.1	163.7	167.3	167.1	167.1	173.2	2.2	-0.1	-0.1	3.7	5.8	171.4	177.3
LEATHER AND PRODUCTS	31	1.4	88.4	89.0	91.6	86.0	86.8	83.5	2.9	-6.1	.9	-3.7	-6.1	78.3	87.6
Shoes	314	.7	79.4	78.6	83.2	75.2	82.1	76.1	5.9	-9.6	9.1	-7.3	-3.2	71.2	82.4
CLAY, GLASS, AND STONE	32	31.4	104.9	105.8	109.0	107.0	99.5	106.7	3.1	-1.9	-6.9	7.2	.9	104.7	110.1
Flat glass	321	1.3	101.0	96.2	101.7	105.8	104.9	107.2	5.7	4.1	-0.8	2.1	11.5	108.5	110.2
Pressed and blown glass	322	6.8	102.4	101.5	105.6	102.7	101.3	106.1	4.0	-2.7	-1.4	4.7	4.5	100.1	108.4
Cement	324	10.2	98.3	101.6	106.7	102.3	84.4	99.9	5.0	-4.1	-17.5	18.3	-1.7	102.0	108.1
Structural clay products	325	1.5	100.0	101.2	101.9	100.8	98.8	100.7	.7	-1.1	-2.0	1.9	-0.5	100.3	102.6
Concrete products	327	3.6	109.4	112.3	112.8	112.2	108.6	113.3	.4	-0.5	-3.2	4.3	.9	111.1	113.1
PRIMARY METALS	33	171.3	80.2	80.6	78.5	77.5	79.3	77.4	-2.7	-1.1	2.2	-2.3	-4.0	70.9	70.3
Basic steel and mill prod.	331	65.7	74.6	74.8	73.2	72.7	75.7	74.9	-2.2	-0.6	4.1	-1.1	.0	68.3	66.0
Iron and steel foundries	332	12.0	78.6	83.1	75.4	75.1	71.4	71.8	-9.2	-0.5	-4.9	.6	-13.5	61.1	69.9
Primary nonferrous metals	333	78.1	89.2	82.7	93.0	88.8	82.9	85.8	12.4	-4.5	-6.7	3.5	3.7	82.6	89.0
Aluminum	3334	70.3	78.5	79.5	75.7	75.2	78.4	74.0	-4.7	-0.7	4.2	-5.6	-7.0	64.4	66.3
Nonferrous foundries	336	2.1	115.4	118.3	113.9	110.7	116.2	115.5	-3.7	-2.7	4.9	-0.6	-2.4	107.8	117.3
FABRICATED METAL PRODUCTS	34	26.4	114.4	114.8	116.5	113.0	114.4	115.5	1.6	-3.0	1.2	1.0	.6	114.2	117.3
Metal cans	341	2.2	112.3	112.4	120.0	112.1	111.7	122.3	6.7	-6.6	-0.3	9.5	8.8	122.1	125.1
Hardware	342	2.3	102.7	103.3	102.6	101.0	100.2	102.9	-0.7	-1.6	-0.8	2.7	-0.4	103.8	109.8
Structural metal products	344	.8	112.2	111.9	113.8	110.8	110.8	108.8	1.6	-2.6	.1	-1.8	-2.8	108.7	110.6
Fasteners	345	1.6	102.7	105.0	102.2	97.3	103.7	103.9	-2.6	-4.8	6.6	.2	-1.0	106.2	103.9
Metal stampings	346	6.2	113.2	115.0	111.2	112.5	116.7	112.0	-3.3	1.1	3.7	-4.0	-2.6	102.1	105.6
NONELECTRICAL MACHINERY	35	28.6	115.1	114.5	119.8	113.7	112.9	113.4	4.6	-5.1	-0.7	.4	-1.0	117.2	120.7
Engines and turbines	351	2.4	70.2	69.5	70.8	64.6	63.1	62.3	1.9	-8.6	-2.3	-1.3	-10.3	66.9	66.6
Farm equipment	352	2.1	57.6	60.0	55.8	52.1	54.4	50.1	-7.1	-6.6	4.4	-7.9	-16.5	48.8	50.2
Construction equipment	353	5.1	86.4	84.7	89.3	86.1	81.0	77.9	5.4	-3.5	-5.9	-3.8	-8.0	79.0	81.4
Metalworking machinery	354	3.8	110.5	108.9	114.3	110.1	114.5	113.9	5.0	-3.6	3.9	-0.5	4.6	114.8	119.0
Special industry machinery	355	2.0	101.2	100.1	104.2	98.8	101.1	99.8	4.1	-5.2	2.3	-1.3	-0.3	101.2	108.0
General industrial mach.	356	4.6	109.5	110.7	113.9	106.6	109.5	109.5	2.8	-6.6	.3	2.7	-1.1	110.1	111.9
Office and computing mach.	357	2.8	203.4	201.9	218.0	202.6	197.3	191.9	8.0	-7.1	-2.6	-2.7	-4.9	212.3	218.9
Service industry machinery	358	2.8	95.3	96.3	99.5	91.3	92.6	99.3	3.4	-8.3	1.4	7.2	3.1	107.4	107.8
ELECTRICAL MACHINERY	36	25.0	123.8	124.1	129.2	121.6	120.3	126.3	4.1	-5.8	-1.1	5.0	1.8	131.8	132.6
Elect. distribution equip.	361	1.5	100.1	98.8	105.3	100.9	96.8	99.3	6.6	-4.2	-4.1	2.6	.5	96.7	106.6
Elect. indust. apparatus	362	4.3	80.6	82.3	80.7	74.2	77.2	80.4	-1.9	-8.0	4.1	4.2	-2.2	82.9	80.5
Household appliances	363	2.7	93.8	96.3	94.1	90.0	89.8	95.5	-2.3	-4.4	-0.3	6.4	-0.8	94.0	91.9
Lighting and wiring prod.	364	2.3	100.2	100.1	99.6	99.6	101.0	101.2	-0.4	.0	1.3	.3	1.2	100.3	100.4
Radio and TV sets	365	.9	115.7	113.4	124.5	113.7	116.4	116.1	9.8	-8.7	2.3	-0.2	2.4	117.8	130.5
Communication equipment	366	4.6	166.1	165.7	180.4	164.3	158.4	165.0	8.8	-8.9	-3.6	4.2	-0.4	178.0	178.7
Electronic components	367	6.0	168.3	167.6	176.1	168.4	167.3	178.5	5.1	-4.3	-0.7	6.7	6.5	192.5	189.6
TRANSPORTATION EQUIPMENT	37	31.4	110.5	111.4	115.1	109.3	110.7	113.4	3.4	-5.1	1.3	2.4	1.8	115.5	116.7
Motor vehicles and parts	371	19.3	98.3	100.3	101.0	96.5	99.1	101.4	.7	-4.5	2.7	2.4	1.1	98.4	100.3
Aircraft and parts	372	6.5	137.6	134.2	147.4	141.0	137.5	148.1	9.8	-4.3	-2.5	7.7	10.3	160.2	160.7
Ships and boats	373	2.1	118.7	118.0	115.4	112.9	118.7	104.1	-2.2	-2.2	5.1	-12.3	-11.8	125.2	100.6
INSTRUMENTS	38	5.5	141.9	140.6	151.6	143.1	143.1	148.1	7.8	-5.6	.0	3.5	5.3	158.9	168.9
Copiers and related equip.	386	1.4	123.9	122.6	126.6	127.7	132.8	133.9	3.3	.8	4.0	.9	9.2	139.0	155.9
MISCELLANEOUS MANUFACTURERS	39	4.1	100.1	99.6	104.6	98.2	100.3	101.3	5.0	-6.1	2.0	1.0	1.7	102.0	107.4
<b>SUPPLEMENTARY GROUPINGS</b>															
TOTAL, LESS NUCLEAR NONDEFENSE		740.7	104.2	104.9	106.3	102.8	102.8	104.0	1.3	-3.3	.0	1.2	-0.9	103.5	105.7
UTILITY SALES TO INDUSTRY		715.7	101.4	103.4	103.0	99.1	98.7	100.3	-0.4	-3.7	-0.4	1.6	-3.0	99.8	102.0
INDUSTRIAL GENERATION		70.1	83.4	82.7	82.3	82.6	87.7	83.5	-0.5	.4	6.1	-4.8	1.0	83.8	82.8

## 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 sum-

mary 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 aggregation 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.** *The Handbook of the Industrial Production Index* 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 *Handbook* is scheduled to be published in late 1986. Selected data on industrial production are also published monthly in the Financial and Business Statistics section of the *Federal Reserve Bulletin*.