

# FEDERAL RESERVE statistical release



G.12.3

For release at 9:30 a.m. (EDT)  
August 15, 1984

## INDUSTRIAL PRODUCTION

Industrial production rose an estimated 0.9 percent in July following an upward revised 0.9 percent gain in June. Increases in output in July were widespread among products and materials. At 165.6 percent of the 1967 average, the July index was 10.6 percent higher than a year ago.

### Market Groupings

Output of consumer goods was up 0.6 percent reflecting a sharp gain in durables; production of non-durables was little changed. Autos were assembled at an annual rate of 7.9 million units compared to the 7.8 million rate in June. Production of goods for the home--appliances and furnishings--advanced sharply. Business equipment output increased 1.2 percent in July following upward revised gains of 1.7 and 1.8 percent in May and June, respectively. Over the last twelve months production of business equipment has increased 18.6 percent. Output of supplies for construction and business rose moderately in July.

Total materials output advanced 1.1 percent in July following a 0.9 percent gain in June and only a small increase in May. Durable materials gained 1.5 percent and nondurable materials, 1.0 percent; output of energy materials was unchanged overall.

### Industry Groupings

Manufacturing output increased 1.0 percent in July. Production at mines rose sharply with an especially large increase in coal output. Utility output, however, was off 0.7 percent due to a decline in electricity generation from the unusually high levels attained in June.

### Industrial Production: Summary

Seasonally adjusted

Item	Index, 1967 = 100		Monthly percent change					Current month from a year ago
	1984		MAR.	APR.	MAY	JUNE	JULY	
	JUNE	JULY						
<b>Total</b>	164.1	165.6	.5	.8	.4	.9	.9	10.6
<b>Market Groupings</b>								
<b>Products, total</b>	164.6	165.9	.4	.9	.5	.8	.8	9.9
<b>Final products</b>	162.7	164.0	.4	1.0	.6	1.0	.8	10.1
Consumer goods	162.9	163.8	.5	.7	.2	.7	.6	5.8
Durable goods	162.9	165.5	.4	.6	-.5	.9	1.6	8.2
Nondurable goods	162.9	163.1	.6	1.3	.4	.7	.1	4.8
Business equipment	179.6	181.8	.1	.8	1.7	1.8	1.2	18.6
Defense and space	133.4	135.1	.5	2.4	.0	.2	1.3	12.2
<b>Intermediate products</b>	171.8	172.7	.7	.5	.2	.2	.5	9.2
Construction supplies	159.2	159.8	1.6	.3	-.1	-.2	.4	9.6
<b>Materials</b>	163.3	165.1	.6	.7	.2	.9	1.1	11.7
<b>Industry Groupings</b>								
<b>Manufacturing</b>	165.3	166.9	.4	.8	.5	.7	1.0	10.8
Durable	154.4	156.7	.6	.8	.5	.7	1.5	14.5
Nondurable	181.1	181.8	.2	.8	.3	.8	.4	6.6
<b>Mining</b>	127.1	129.9	-.2	-.4	1.7	1.4	2.2	13.0
<b>Utilities</b>	185.1	183.8	2.0	1.5	-.1	1.4	-.7	4.4



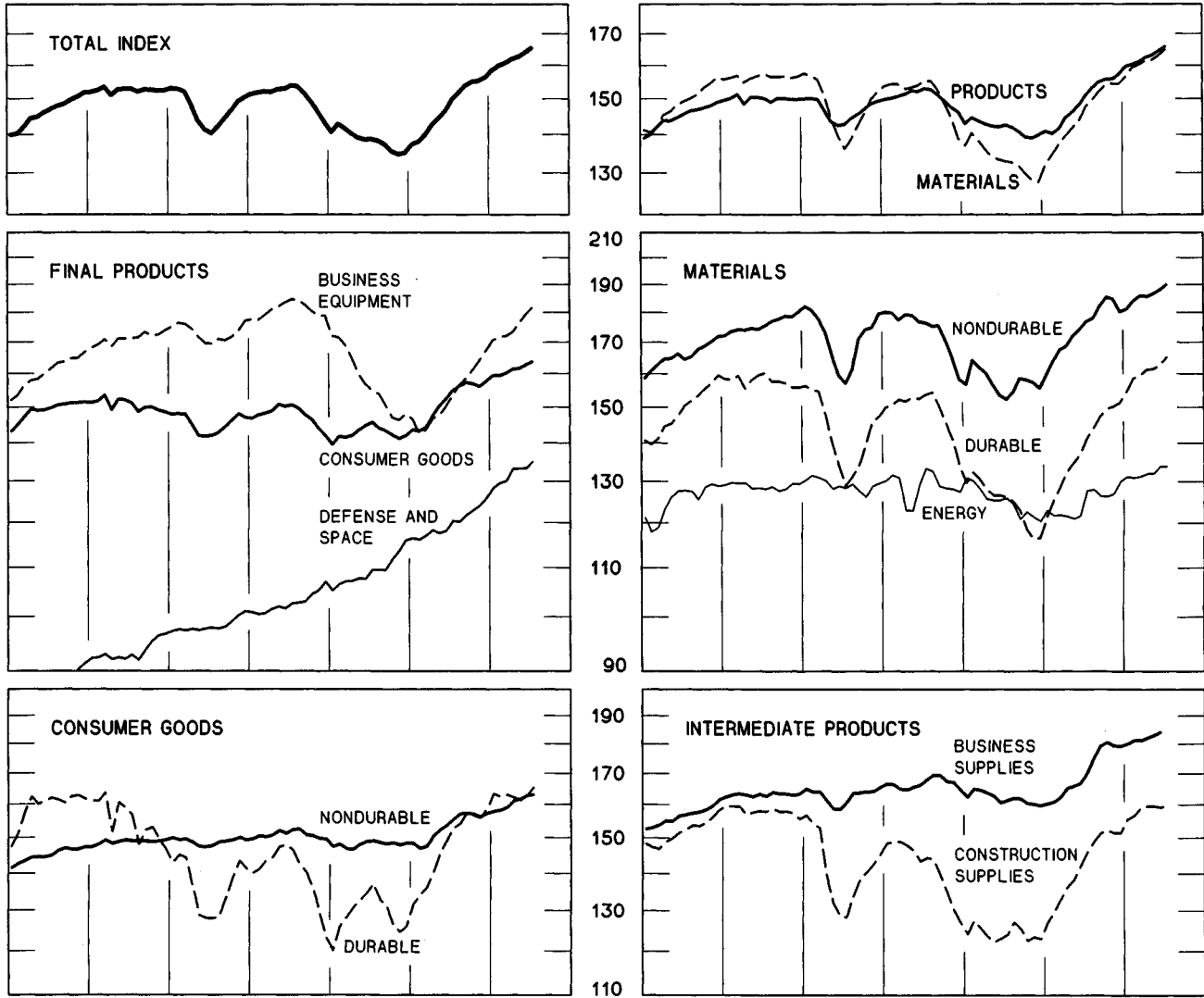
# FEDERAL RESERVE

## Industrial Production

### INDUSTRIAL PRODUCTION

JULY DATA

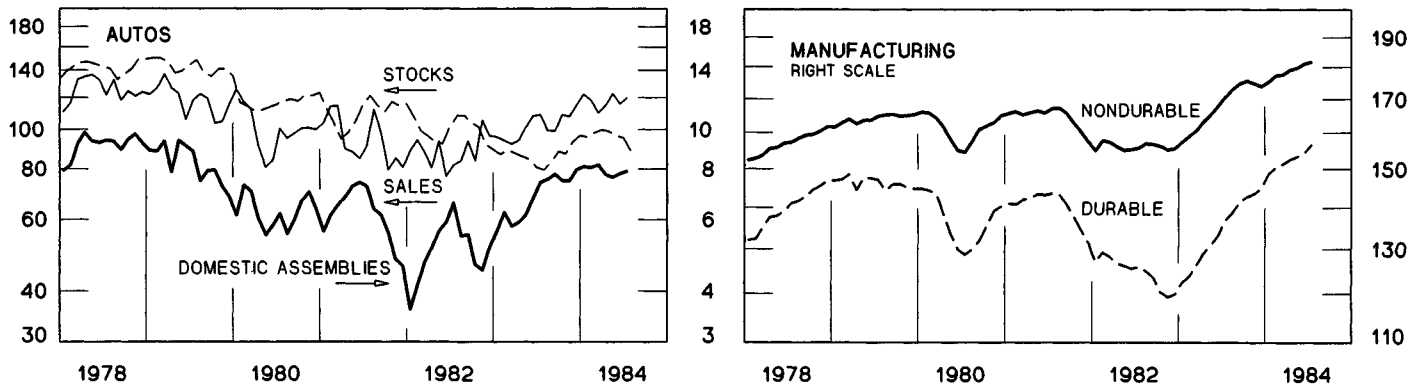
SEASONALLY ADJUSTED, RATIO SCALE, 1967=100



1969-70=100

ANNUAL RATE, MILLIONS OF UNITS

1967=100



AUTO SALES AND STOCKS INCLUDE IMPORTS





Table 2A  
**INDUSTRIAL PRODUCTION: INDUSTRY GROUPINGS**  
 Seasonally adjusted, 1967=100

MAJOR INDUSTRY GROUPINGS	SIC CODE	1967	1983	1983					1984							
		PRO- POR- TION	1983 AVG.	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY
<b>MINING AND UTILITIES</b>																
MINING		12.05	142.9	143.8	146.0	146.5	145.8	147.2	151.5	151.4	148.9	150.4	151.3	152.4	154.5	155.3
UTILITIES		6.36	116.6	115.0	116.1	117.1	118.3	121.1	123.7	124.8	124.1	123.8	123.3	125.4	127.1	129.9
<b>MANUFACTURING</b>																
NONDURABLE		87.95	148.2	150.6	152.8	155.1	156.2	156.4	156.8	159.5	161.4	162.1	163.4	164.2	165.3	166.9
DURABLE		35.97	168.1	170.6	172.9	174.6	175.6	174.8	173.9	175.2	177.2	177.6	179.1	179.7	181.1	181.8
<b>MINING</b>																
METAL MINING	10	.51	80.9	82.5	80.9	78.7	81.0	84.6	82.3	89.4	97.4	100.0	98.5	98.5	98.3	
COAL	11,12	.69	136.3	139.9	141.2	140.5	142.7	144.8	145.2	151.5	163.2	164.0	151.4	153.4	161.0	177.0
OIL AND GAS EXTRACTION	13	4.40	116.6	113.9	114.7	116.3	117.3	119.8	123.4	123.1	119.6	118.2	118.8	120.9	121.8	122.9
STONE AND EARTH MINERALS	14	.75	122.8	121.2	125.0	126.5	127.4	132.2	133.9	134.8	133.0	135.8	140.4	144.5	146.2	
<b>NONDURABLE MANUFACTURES</b>																
FOODS	20	8.75	156.4	159.9	159.3	158.2	157.6	157.1	157.7	159.4	160.0	161.2	163.1	164.6		
TOBACCO PRODUCTS	21	.67	112.1	112.9	117.1	112.7	109.1	109.5	112.3	116.4	110.9	111.8	113.3	112.8		
TEXTILE MILL PRODUCTS	22	2.68	140.8	146.7	147.4	148.7	148.7	145.8	145.0	143.9	142.3	143.5	140.0	140.5	141.1	
APPAREL PRODUCTS	23	3.31														
PAPER AND PRODUCTS	26	3.21	164.3	165.1	168.6	170.4	171.5	172.1	170.1	172.3	176.6	173.8	172.4	170.9	173.0	173.7
PRINTING AND PUBLISHING	27	4.72	152.5	152.0	157.8	161.7	162.7	162.0	161.7	163.4	164.8	165.2	166.3	167.5	168.3	168.9
CHEMICALS AND PRODUCTS	28	7.74	215.0	218.3	220.3	224.1	228.4	225.6	221.1	221.5	224.8	225.0	228.3	227.9	232.2	
PETROLEUM PRODUCTS	29	1.79	120.3	124.3	123.2	125.1	123.6	125.4	114.4	118.8	127.6	127.0	126.8	127.9	127.6	125.0
RUBBER & PLASTICS PRODUCTS	30	2.24	291.9	296.1	306.9	310.9	310.8	309.1	314.4	317.2	318.5	323.8	328.0	334.1	335.9	
LEATHER AND PRODUCTS	31	.86	61.9	62.3	64.4	64.2	64.0	63.2	66.0	61.4	63.9	63.9	63.5	60.8	63.3	
<b>DURABLE MANUFACTURES</b>																
ORDNANCE, PVT & GOV'T	19,91	3.64	95.4	95.2	96.8	98.0	98.8	99.3	99.8	99.7	99.6	100.6	101.4	101.4	101.8	103.0
LUMBER AND PRODUCTS	24	1.64	137.2	141.3	141.6	142.3	141.7	141.0	143.8	146.0	145.6	149.3	151.2	146.3	147.4	
FURNITURE AND FIXTURES	25	1.37	170.5	175.2	179.0	180.7	181.0	177.5	177.9	183.8	185.6	184.6	186.6	190.5	193.9	
CLAY, GLASS, STONE PROD	32	2.74	143.4	145.8	147.9	151.7	151.9	152.7	153.8	157.8	160.4	160.2	160.0	161.6	159.7	
<b>PRIMARY METALS</b>																
IRON AND STEEL	33,2	6.57	85.4	85.5	87.5	90.6	95.3	92.2	90.4	93.2	98.4	97.5	99.3	98.3	95.9	97.4
FABRICATED METAL PRDCT	34	5.93	120.2	122.7	126.0	127.4	126.9	128.5	129.2	131.7	132.8	134.9	135.5	136.5	137.2	138.5
NONELECTRICAL MACHINERY	35	9.15	150.6	154.2	157.3	158.3	159.2	161.8	164.3	169.5	170.9	171.9	174.9	178.8	182.2	183.0
ELECTRICAL MACHINERY	36	8.05	185.5	188.3	189.2	195.8	198.4	200.1	201.5	206.2	209.9	212.0	214.6	214.4	215.8	222.0
<b>TRANSPORTATION EQUIP</b>																
MOTOR VEHICLES & PLS	371	4.50	137.1	142.3	144.3	150.9	150.9	152.9	158.9	166.3	164.4	165.8	161.9	163.0	165.0	167.5
AEROSPACE & MISC	372-9	4.77	99.6	98.5	99.2	100.0	101.6	103.2	104.3	105.3	107.7	107.5	108.8	108.6	110.9	113.0
INSTRUMENTS	38	2.11	158.7	159.3	161.6	163.6	163.0	163.0	164.6	167.8	168.6	169.7	171.0	171.8	174.3	175.7
MISCELLANEOUS MFRS	39	1.51	146.2	153.7	153.1	151.7	149.1	148.9	149.3	151.1	152.0	152.3	152.1	152.0	148.9	151.3
<b>UTILITIES</b>																
ELECTRIC		3.88	196.0	200.9	205.4	204.5	200.7	200.2	208.0	206.8	200.0	204.6	207.7	207.1	210.6	208.5

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

	1983					1984						
	AUG.	SEP.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY
<b>CHANGE FROM PREVIOUS MONTH</b>												
TOTAL INDEX	1.4	1.3	.8	.2	.6	1.5	.9	.5	.8	.4	.9	.9
FINAL PRODUCTS	1.1	.9	.4	.3	1.3	1.5	.3	.4	1.0	.6	1.0	.8
CONSUMER GOODS	1.0	.6	-.3	-.5	1.0	1.1	-.1	.5	.7	.2	.7	.6
DURABLE CONSUMER GOODS	.9	2.1	-.5	-.5	1.7	3.0	-.6	.4	-.6	-.5	.9	1.6
NONDURABLE CONSUMER GOODS	1.0	.1	-.1	-.6	.8	.4	.2	.6	1.3	.4	.7	.1
BUSINESS EQUIPMENT	2.2	1.3	1.6	1.7	2.0	2.0	.7	.1	.8	1.7	1.8	1.2
INTERMEDIATE PRODUCTS	2.6	2.0	.7	-.6	-.1	1.5	.7	.7	.5	.2	.2	.5
MATERIALS	1.3	1.7	1.2	.3	.0	1.4	1.8	.6	.7	.2	.9	1.1
DURABLE GOODS MATERIALS	2.2	2.2	1.4	.6	.7	2.2	2.6	.6	1.1	.1	.7	1.5
NONDURABLE GOODS MATERIALS	.6	2.4	1.6	-.3	-2.4	.5	1.6	1.0	-.1	.5	.8	1.0
<b>MANUFACTURING</b>												
NONDURABLE	1.5	1.5	.7	.1	.3	1.7	1.2	.4	.8	.5	.7	1.0
DURABLE	1.3	1.0	-.6	-.5	-.5	.7	1.1	.2	.8	.3	.8	.4
MINING AND UTILITIES	1.5	2.0	.8	.6	1.0	2.5	1.3	.6	.8	.5	.7	1.5
<b>CHANGE FROM SAME MONTH A YEAR AGO</b>												
TOTAL INDEX	9.7	12.0	14.2	15.1	15.5	15.4	15.9	14.9	13.7	12.7	12.1	10.6
FINAL PRODUCTS	6.7	8.6	10.1	10.8	11.3	12.4	13.8	13.4	12.2	11.5	11.1	10.1
CONSUMER GOODS	8.5	9.7	10.3	10.5	11.1	11.1	11.2	11.0	9.3	7.5	6.9	5.8
DURABLE CONSUMER GOODS	16.0	20.0	23.9	25.1	26.0	24.2	20.9	19.7	15.4	10.9	9.2	8.2
NONDURABLE CONSUMER GOODS	5.7	6.1	5.8	5.5	6.0	6.5	7.6	7.9	7.0	6.2	6.1	4.8
BUSINESS EQUIPMENT	1.8	5.4	9.7	12.1	13.0	16.4	20.5	19.8	18.1	19.5	19.6	18.6
INTERMEDIATE PRODUCTS	12.1	15.1	17.6	16.7	16.9	16.8	16.3	15.2	13.4	12.6	11.2	9.2
MATERIALS	12.7	15.3	18.5	20.3	20.9	18.6	18.2	16.6	15.6	14.3	13.6	11.7
DURABLE GOODS MATERIALS	15.3	19.8	26.1	29.1	29.9	27.2	26.6	23.9	21.8	19.9	18.8	17.1
NONDURABLE GOODS MATERIALS	15.2	15.0	17.1	17.5	15.9	13.5	12.3	11.0	10.1	8.5	8.0	7.3
<b>MANUFACTURING</b>												
NONDURABLE	10.7	13.1	15.7	16.7	16.6	16.7	16.8	15.5	14.2	13.2	12.1	10.8
DURABLE	10.2	11.4	12.4	12.6	11.8	11.3	11.4	10.5	9.7	8.6	7.9	6.6
MINING AND UTILITIES	11.1	14.7	18.7	20.4	20.9	21.3	21.5	19.9	18.2	17.1	15.9	14.5
<b>MINING AND UTILITIES</b>												
	3.3	4.9	3.8	4.8	8.1	7.1	8.3	9.2	8.9	9.1	10.7	8.0

















**Table 5**  
**INDUSTRIAL PRODUCTION: INDEXES; 1967=100**  
Quarterly averages, seasonally adjusted

SUMMARY GROUPINGS	1983				1984	
	I	II	III	IV	I	II
TOTAL INDEX	138.5	144.5	151.8	155.5	159.8	163.0
PRODUCTS, TOTAL	140.9	146.3	153.0	156.3	160.4	163.5
FINAL PRODUCTS	139.6	144.6	150.6	153.7	158.0	161.3
CONSUMER GOODS	143.8	150.2	156.1	156.9	159.7	162.0
DURABLE CONSUMER GOODS	134.1	145.1	154.9	157.1	163.0	162.2
AUTOMOTIVE PRODUCTS	141.0	152.4	169.3	173.7	183.6	181.2
HOME GOODS	130.2	141.0	146.7	147.7	151.4	151.5
NONDURABLE CONSUMER GOODS	147.6	152.1	156.6	156.8	158.4	161.9
CLOTHING						
CONSUMER STAPLES	158.0	162.7	167.2	166.2	167.1	171.6
CONSUMER ENERGY	141.9	152.3	155.5	154.5	154.5	159.1
(HOME GOODS AND CLOTHING)	120.9	128.6	133.7	136.3	140.2	140.3
EQUIPMENT	133.9	137.0	143.0	149.3	155.8	160.4
BUSINESS EQUIPMENT	144.3	148.3	156.2	164.2	171.6	176.5
INDUSTRIAL EQUIPMENT	115.1	114.8	123.3	128.7	134.4	138.2
COMMERCIAL, TRANSIT, FARM EQ.	178.2	187.0	194.3	205.3	214.6	220.9
DEFENSE AND SPACE EQUIPMENT	116.5	117.9	120.8	124.2	129.3	133.3
INTERMEDIATE PRODUCTS	145.6	152.5	161.9	165.8	169.0	171.4
CONSTRUCTION SUPPLIES	129.9	139.0	148.7	151.8	157.1	159.4
BUSINESS SUPPLIES	161.2	166.0	175.0	179.8	180.9	183.2
COMMERCIAL ENERGY PRODUCTS	179.8	182.6	187.4	187.5	190.2	190.9
MATERIALS	134.8	141.7	149.9	154.3	158.8	162.2
DURABLE GOODS MATERIALS	125.2	134.7	144.2	150.3	157.6	161.8
BASIC METAL MATERIALS	82.2	88.9	92.9	97.3	101.2	104.5
NONDURABLE GOODS MATERIALS	163.7	171.7	179.1	183.5	183.7	186.9
TEXTILE, PAPER AND CHEMICAL MAT	169.3	179.6	188.0	193.2	193.2	196.4
TEXTILE MATERIALS	107.2	113.7	121.2	122.4	120.1	120.2
PAPER MATERIALS	149.9	153.4	162.8	167.4	165.8	166.7
CHEMICAL MATERIALS	204.7	219.4	227.8	235.0	236.7	242.1
ENERGY MATERIALS	122.2	121.5	127.4	127.8	131.2	132.7
MANUFACTURING	138.4	145.2	152.8	156.5	161.0	164.3
DURABLE	124.2	131.1	139.1	143.8	150.2	153.5
NONDURABLE	159.0	165.5	172.7	174.8	176.7	180.0
MINING AND UTILITIES	138.8	139.4	145.4	148.2	150.2	152.7
MINING	116.7	112.3	116.1	121.0	124.2	125.3
UTILITIES	163.6	169.6	178.2	178.4	179.2	183.4

**Table 6**  
**INDUSTRIAL PRODUCTION:**  
**GROSS VALUE OF PRODUCTS**  
Billions of 1972 dollars at annual rates,  
seasonally adjusted

	1983				1984	
	I	II	III	IV	I	II
PRODUCTS, TOTAL	580.2	601.6	628.0	640.5	657.9	665.6
FINAL PRODUCTS	449.0	465.0	483.3	493.1	506.6	513.9
CONSUMER GOODS	312.2	324.9	337.3	340.1	346.1	349.6
DURABLE CONSUMER GOODS	79.5	86.1	94.0	94.9	99.0	97.6
AUTOMOTIVE PRODUCTS	37.9	41.2	47.0	47.6	50.7	49.4
HOME GOODS	41.6	45.0	47.0	47.3	48.4	48.2
NONDURABLE CONSUMER GOODS	232.7	238.8	243.3	245.3	247.0	252.0
CLOTHING						
CONSUMER STAPLES	204.7	209.8	213.0	214.0	214.8	219.5
CONSUMER ENERGY	40.7	43.4	44.3	44.1	44.1	45.4
(HOME GOODS AND CLOTHING)	69.6	74.0	77.3	78.5	80.6	80.6
EQUIPMENT	136.7	140.1	146.0	153.0	160.5	164.4
BUSINESS EQUIPMENT	88.2	91.0	95.6	101.2	106.6	108.9
INDUSTRIAL EQUIPMENT	36.2	36.1	38.7	40.1	42.1	43.4
COMMERCIAL, TRANSIT, FARM EQ.	51.9	54.8	56.9	61.1	64.5	65.4
DEFENSE AND SPACE EQUIPMENT	48.6	49.2	50.4	51.8	54.0	55.5
INTERMEDIATE PRODUCTS	131.2	136.6	144.7	147.4	151.3	151.7
CONSTRUCTION SUPPLIES	55.6	58.8	63.2	63.8	66.9	66.8
BUSINESS SUPPLIES	75.6	77.8	81.5	83.6	84.5	84.9
COMMERCIAL ENERGY PRODUCTS	19.6	20.0	20.4	20.4	20.7	20.9

**Table 7**  
**INDUSTRIAL PRODUCTION: GROSS VALUE OF PRODUCTS**  
Billions of 1972 dollars at annual rates, seasonally adjusted

MAJOR MARKET GROUPINGS	1972	1983					1984								
	DOLLSARS	1983	1983	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY
PRODUCTS, TOTAL	507.4	612.6	620.5	626.6	637.0	637.8	638.4	645.4	655.1	656.9	661.8	661.1	665.6	670.0	673.9
FINAL PRODUCTS	390.9	472.6	478.2	481.8	489.9	490.7	490.8	497.8	505.3	505.0	509.6	509.0	514.2	518.6	520.5
CONSUMER GOODS	277.5	326.7	333.7	336.7	341.6	340.2	338.3	341.9	345.3	345.3	347.7	347.8	349.8	351.1	352.3
DURABLE CONSUMER GOODS	82.0	88.6	93.5	93.3	95.3	94.3	94.1	96.2	99.2	98.5	99.4	97.7	96.8	98.2	99.9
AUTOMOTIVE PRODUCTS	41.1	43.5	46.5	46.7	47.9	47.0	47.0	48.9	50.8	50.3	50.9	49.3	49.1	49.9	50.9
HOME GOODS	40.9	45.2	47.0	46.6	47.5	47.3	47.1	47.3	48.4	48.2	48.5	48.4	47.7	48.3	49.0
NONDURABLE CONSUMER GOODS	195.5	240.0	240.2	243.4	246.2	245.9	244.2	245.7	246.1	246.8	248.2	250.1	252.9	252.9	252.4
CLOTHING	28.5														
CONSUMER STAPLES	167.0	210.4	210.2	213.5	215.3	215.0	213.4	213.6	213.9	214.5	216.0	217.4	220.6	220.5	219.8
CONSUMER ENERGY PRDCT	39.2	43.1	43.6	44.0	45.2	43.6	44.3	44.3	43.5	44.2	44.6	44.9	45.6	45.8	
(HOME GOODS & CLOTHING)	69.4	74.9	77.1	76.5	78.4	78.2	77.9	79.4	80.6	80.5	80.7	81.0	80.1	80.7	81.7
EQUIPMENT	113.4	144.0	144.5	145.1	148.4	150.5	152.5	155.9	160.0	159.7	161.9	161.2	164.4	167.5	168.2
BUSINESS EQUIPMENT	80.6	94.0	94.1	95.0	97.6	99.2	100.8	103.5	106.4	105.6	107.6	105.7	109.1	111.8	111.1
INDUSTRIAL EQUIPMENT	34.4	37.8	37.6	39.1	39.3	39.4	40.1	40.8	41.9	42.1	42.3	42.6	43.5	44.2	44.6
COM'L, TRANSIT, FARM EQ	46.2	56.2	56.5	56.0	58.3	59.8	60.7	62.7	64.5	63.5	65.4	63.1	65.6	67.6	66.4
DEFENSE & SPACE EQUIP.	32.7	50.0	50.4	50.1	50.8	51.3	51.8	52.5	53.5	54.1	54.3	55.5	55.3	55.6	57.1
INTERMEDIATE PRODUCTS	116.6	140.0	142.3	144.8	147.1	147.1	147.6	147.6	149.8	151.9	152.2	152.2	151.4	151.4	153.5
CONSTRUCTION SUPPLIES	57.8	60.4	62.6	63.1	63.8	63.9	63.8	63.8	63.8	65.7	67.9	67.2	66.6	66.5	67.6
BUSINESS SUPPLIES	58.8	79.6	79.7	81.7	83.2	83.2	83.8	83.7	84.1	84.9	84.3	85.0	84.8	84.9	
COMMERCIAL ENERGY PRDCT	15.6	20.1	20.1	20.4	20.7	20.4	20.5	20.4	20.9	20.9	20.3	20.9	20.9	20.8	

**Table 8**  
**INDUSTRIAL PRODUCTION: DIFFUSION INDEXES**  
 Percent of component series higher than in earlier months

	ONE MONTH EARLIER	THREE MONTHS EARLIER	SIX MONTHS EARLIER
<b>1967-83</b>			
AVERAGE	54.2	57.1	59.3
HIGH	75.5	83.8	87.0
LOW	22.6	15.7	14.7
<b>1982</b>			
JUNE	46.4	44.0	39.8
JULY	53.0	48.9	46.2
AUGUST	45.5	53.8	40.4
SEPTEMBER	45.5	44.7	42.8
OCTOBER	35.1	39.6	43.8
NOVEMBER	48.1	39.8	43.8
DECEMBER	46.2	38.7	36.0
<b>1983</b>			
JANUARY	64.9	63.0	46.0
FEBRUARY	45.5	61.7	48.1
MARCH	70.4	67.9	60.9
APRIL	59.4	60.0	68.3
MAY	44.9	74.5	74.3
JUNE	66.0	71.7	77.2
JULY	75.5	79.4	75.1
AUGUST	57.9	76.0	79.1
SEPTEMBER	75.5	83.8	86.6
OCTOBER	56.0	69.8	87.0
NOVEMBER	56.6	67.2	80.9
DECEMBER	60.6	60.2	79.1
<b>1984</b>			
JANUARY	70.6	68.9	78.7
FEBRUARY	58.7	73.4	80.4
MARCH	56.4	68.3	71.9
APRIL	53.8	55.7	71.3
MAY	53.6	55.5	72.1
JUNE	57.0	60.2	71.9

NOTE: THE DIFFUSION INDEXES SHOW THE PERCENT OF THE INDUSTRIAL PRODUCTION INDEX'S 235 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 PROMOUNCED CYCLICAL PATTERNS THAN DIFFUSION INDEXES BASED ON CHANGES OVER SHORTER PERIODS.











## Explanatory Note

**Coverage.** The industrial production index is a measure of the physical output of the Nation's factories, mines, and electric and gas utilities expressed as a percentage of production in a base period, currently 1967. The 235 individual series representing Standard Industrial Classification (SIC), 1967 edition, codes 10-14, 19-39, 49, and 91 (part) are calculated first as index series relatives. These relatives are aggregated into: (1) market groupings (such as consumer goods, equipment, intermediate products, and materials) from which the total is derived and (2) industry groupings (for example, SIC 2-digit industries) and major aggregates of these groupings, such as manufacturing, mining, and utilities.

**Timing.** A first estimate of output for a month is published about the 15th of the following month. This estimate may revise in each of the next 3 months as new data become available. After the fourth month, indexes are not further revised until an annual or a benchmark revision.

**Source data.** The monthly indexes of industrial production are built up from data of two types: (1) directly-measured physical product data, (2) estimates of physical product output derived from input data adjusted by conversion factors that relate these inputs to physical output. The directly measured physical product data (lbs., tons, etc.) are obtained from reports of the Bureau of the Census, Bureau of Mines, other Government agencies, and trade associations. Estimates of physical output based on input data are used when appropriate monthly physical product data are not available. The major input data are (1) hours worked by production workers as indicated by the monthly establishment survey of the Bureau of Labor Statistics, and (2) industrial electric power use as ascertained from utilities by the Federal Reserve Banks. The input conversion estimates are based mainly on their historical trends and recent developments.

**Seasonal adjustment.** Individual series are seasonally adjusted by the X-11 version of the Method II seasonal adjustment procedure developed by the Bureau of the Census. The seasonal adjustment factors for the basic aggregate series in the summary table and in Tables 1 and 2 are reviewed and edited monthly. The seasonal factors currently being used were developed from data through 1983.

**Weights.** The total index and various groupings of component series are combined on the basis of 1967 value-added weights (shown in the first column of the index tables). The gross-value-weighted product series are expressed in terms of 1972 dollars.

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

$$I_t = \sum \left( \frac{q_{67} p_{67}}{\sum q_{67} p_{67}} \right) \cdot \left( \frac{q_t}{q_{67}} \right) \cdot 100 = \frac{\sum q_t p_{67}}{\sum q_{67} p_{67}} \cdot 100$$

where  $q$  is quantity,  $p$  is Census value-added per unit of output, and  $t$  represents the  $t$ -th period.

**Reliability.** The median of the revisions in total IP, without regard to sign, between the first and fourth estimates is 0.3 per cent; 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 per cent. (Calculated on the basis of data for the January 1972 to December 1982 period.)

**Rounding.** Changes shown for index components may not aggregate to changes for totals due to independent rounding.