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# INDUSTRY WAGE SURVEY

## Machinery Manufacturing

MARCH—MAY 1964

Bulletin No. 1429

UNITED STATES DEPARTMENT OF LABOR  
W. Willard Wirtz, Secretary

BUREAU OF LABOR STATISTICS  
Ewan Clague, Commissioner





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## Preface

The results of a Bureau of Labor Statistics survey of occupational wages and supplementary practices in the machinery (except electrical) manufacturing industries in 21 areas are summarized in this bulletin. This is the 18th in a series of Bureau surveys in these industries and relates to data collected between March and May 1964. Separate releases for the areas, issued within a few months after the payroll period studied, may be obtained from the Bureau of Labor Statistics, Washington, D. C., 20212, or from any of its regional offices.

Occupational data are presented for the machinery industries as a whole in each area and separately in selected areas for special dies and tools, die sets, jigs and fixtures, and machine-tool accessories and measuring devices. The distributions of workers by occupational earnings contained in the separate area releases are included here for six jobs. Data on wage practices and supplementary benefits are presented for the industries as a whole in each area.

This study was conducted in the Bureau's Division of Occupational Pay, Toivo P. Kanninen, Chief, under the general direction of L. R. Linsenmayer, Assistant Commissioner for Wages and Industrial Relations. The analysis was prepared by Fred W. Mohr, under the immediate supervision of L. Earl Lewis. Field work for the survey was directed by the Assistant Regional Directors for Wages and Industrial Relations.

Other reports available from the Bureau's program of industry wage studies, as well as the addresses of the Bureau's six regional offices, are listed at the end of this bulletin.

## Contents

	Page	
Summary .....	1	
Industry characteristics .....	1	
Trends in earnings .....	2	
Occupational earnings, March-May 1964 .....	5	
Establishment practices and supplementary wage provisions.....	7	
Method of wage payment .....	7	
Scheduled weekly hours and overtime pay .....	7	
Shift differential provisions and practices.....	8	
Paid holidays.....	8	
Paid vacations .....	8	
Health, insurance, and pension plans.....	8	
 Tables:		
Occupational averages:		
1. Men .....	9	
2. Women .....	11	
3. By method of wage payment.....	12	
4. Special dies and tools and machine-tool accessories.....	13	
 Earnings distribution:		
5. Tool and die makers (other than jobbing) .....	15	
6. Machine-tool operators, production, class A .....	16	
7. Machine-tool operators, production, class B .....	17	
8. Machine-tool operators, production, class C .....	18	
9. Assemblers, class B .....	19	
10. Laborers, material handling .....	20	
 Establishment practices and supplementary wage provisions:		
11. Method of wage payment: plant workers.....	21	
12. Scheduled weekly hours: plant workers.....	22	
13. Scheduled weekly hours: office workers.....	23	
14. Overtime premium pay: plant workers .....	24	
15. Shift differential provisions: plant workers .....	25	
16. Shift differential practices: plant workers.....	27	
17. Paid holidays: plant workers .....	29	
18. Paid holidays: office workers .....	30	
19. Paid vacations: plant workers.....	31	
20. Paid vacations: office workers.....	34	
21. Health, insurance, and pension plans: plant workers .....	37	
22. Health, insurance, and pension plans: office workers .....	38	
 Chart. Percent increase in average straight-time hourly earnings, nonelectrical machinery manufacturing in 21 areas, January 1958 to specified dates .....		4
 Appendixes:		
A. Occupational averages—Chicago, New York, and Philadelphia Standard Metropolitan Statistical Areas and the parts of these areas covered in previous surveys .....	39	
B. Scope and method of survey .....	41	
C. Occupational descriptions.....	45	

# Industry Wage Survey—

## Machinery Manufacturing, March—May 1964

### Summary

Average straight-time hourly earnings of production workers in the non-electrical machinery manufacturing industries increased 2.7 percent between March—May 1963 and March—May 1964, in 21 metropolitan areas surveyed by the Bureau of Labor Statistics.<sup>1</sup>

Detroit and San Francisco—Oakland led in pay levels among the areas, and tool and die makers were the highest paid occupational group studied in most areas, as in previous surveys.

Although provisions for paid holidays, paid vacations, various types of health and insurance benefits and retirement pensions have been common in the machinery industries for a number of years, some liberalization has occurred since the Bureau's study of these benefits in March—June 1962.<sup>2</sup>

### Industry Characteristics

Machinery (nonelectrical) manufacturing, as defined for purposes of this study, includes establishments which may be grouped in nine general product categories: Engines and turbines; farm machinery and equipment; construction, mining, and material-handling machinery and equipment; metalworking machinery and equipment; special industry machinery, except metalworking machinery; general industrial machinery and equipment; office, computing, and accounting machines; service industry machines; and miscellaneous machinery.

A wide variety of machinery products was manufactured in each area studied. However, in some areas, one product group was predominant; for example, metalworking machinery and equipment in Worcester, and construction, mining, and material-handling machinery in Houston.

The 21 areas studied accounted for almost two-fifths of the 1.6 million workers in the Nation's nonelectrical machinery manufacturing industries.<sup>3</sup> Total employment within scope of the survey in the 21 areas had increased 7 percent since the 1963 study, compared with a nationwide increase of about 5 percent. Employment had risen in 16 of the areas studied with a somewhat greater rate of increase in Minneapolis—St. Paul and the 3 West Coast cities, Los Angeles—Long Beach, Portland, and San Francisco—Oakland than in the other areas studied.

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<sup>1</sup> See appendix B for scope and method of survey and definition of production workers, as used in this study. For definition of areas and the payroll period studied in the respective areas, see table in appendix B.

<sup>2</sup> Wages in the nonelectrical machinery manufacturing industries are studied each year as part of the Bureau's program of occupational wage surveys, but data on the prevalence of supplementary wage benefits are collected on a 2-year cycle. For a report on 1963 wages, see BLS Bulletin 1388 (1964) and for 1962 wage and supplementary benefits data, see BLS Bulletin 1352 (1963).

<sup>3</sup> Nationwide employment as reported in the Bureau's employment series. (See Employment and Earnings, June 1964.)

In the individual areas, total employment in establishments within the scope of the survey ranged from fewer than 5,000 in Denver and Portland to almost 103,000 in Chicago.<sup>4</sup> Other major areas of employment included Detroit (69,365), Los Angeles—Long Beach (55,154), and Milwaukee (48,287). Employment also exceeded 30,000 in Cleveland, Hartford, Newark and Jersey City, New York,<sup>5</sup> and Philadelphia;<sup>6</sup> it was between 20,000 and 30,000 in Boston and Minneapolis—St. Paul; between 10,000 and 20,000 in Buffalo, Houston, Pittsburgh, St. Louis, and San Francisco—Oakland; and between 5,000 and 10,000 in Baltimore, Dallas, and Worcester.

Approximately two-fifths of the workers within the scope of the survey were in establishments with fewer than 250 workers, a slightly larger proportion were in establishments with 250 to 2,499 workers, and approximately one-sixth were in establishments employing 2,500 or more. Although establishments employing 2,500 or more were found in 13 areas, Hartford and Milwaukee were the only areas in which as many as two-fifths of the workers were in such establishments. A majority of the workers in Denver, Detroit, New York, Portland, and San Francisco—Oakland and more than two-fifths in Boston, Cleveland, Dallas, and Los Angeles—Long Beach were in establishments with fewer than 250 workers.

Establishments having labor-management contracts covering a majority of their workers employed seven-tenths of the production workers in the 21 areas combined. Such contract coverage included more than nine-tenths of the workers in Pittsburgh, Portland, St. Louis, and San Francisco—Oakland; more than three-fourths in Milwaukee, Hartford, Buffalo, Detroit, Cleveland, and Newark and Jersey City; and two-fifths or more in the remaining areas. The major unions were the International Association of Machinists and Aerospace Workers; International Union, United Automobile, Aerospace and Agricultural Implement Workers of America; and the United Steelworkers of America (all AFL—CIO). Approximately one-tenth of the office workers in the 21 areas were in establishments in which a majority of these workers were covered by union contract.

Women accounted for as much as a tenth of the plant-worker employment in the machinery industries only in Baltimore, Hartford, Los Angeles—Long Beach, St. Louis, and San Francisco—Oakland.

### Trends in Earnings

Average straight-time hourly earnings of production workers in the 21 areas rose 2.7 percent between March—May 1963 and March—May 1964, the same rate of increase as occurred between 1962 and 1963. (See table on next page and chart on page 4.<sup>7</sup>) The Newark and Jersey City area had the greatest increase (4.7 percent) between 1963 and 1964, with increases amounting to 3 percent or more in eight other areas. Boston, Houston, Los Angeles—Long Beach, and Pittsburgh were the only areas in which the rate of increase averaged less than 2 percent. General wage changes usually account for much of the year-to-year movement in wages, although other factors such as labor turnover, incentive earnings, and changes in employment in establishments with different pay levels also affect the trend in wages.

<sup>4</sup> In the current study, employment in this area relates to the Standard Metropolitan Statistical Area, as defined by the U.S. Bureau of the Budget in 1961; previous surveys were limited to part of the SMSA. (See table in appendix B.)

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> This chart shows percent increase since January 1958 whereas the charts in the earlier machinery bulletins showed the percent increase since January 1945.

Average hourly earnings of tool and die makers (other than jobbing) and those of material-handling laborers in all areas combined increased by 3.3 percent between 1963 and 1964 (11 and 7 cents an hour, respectively). Since 1945, when the Bureau started this series of occupational wage relationship studies for the machinery industries, average earnings for these occupations have increased 146 and 194 percent, respectively, compared with 163 percent for all production workers.

Indexes<sup>1</sup> of Average Straight-Time Hourly Earnings<sup>2</sup> of Production Workers in Machinery Manufacturing in Selected Areas<sup>3</sup> and Occupations, March-May 1964 and March-May 1963,<sup>4</sup> and Percent Change in Selected Periods<sup>5</sup>

Area and occupation	Indexes (1958-59=100)		Percent increase from—					
	Mar.- May 1964	Mar.- May 1963	Mar.-May 1963 to Mar.-May 1964	Mar.-June 1962 to Mar.-May 1963	Mar.-May 1961 to Mar.-June 1962	Jan. 1960 to Mar.-May 1961	Jan. 1959 to Jan. 1960	Jan. 1958 to Jan. 1959
All areas combined -----	118.2	115.1	2.7	2.7	2.8	3.1	4.1	3.3
<u>Area<sup>3</sup></u>								
Baltimore -----	121.5	118.0	3.0	4.9	1.9	4.3	2.8	6.1
Boston -----	120.4	118.7	1.4	2.8	3.0	4.3	5.1	4.6
Buffalo -----	118.6	114.9	3.2	3.5	1.9	4.0	3.4	2.7
Chicago -----	118.8	114.6	3.7	3.1	3.0	1.5	4.3	3.8
Cleveland -----	120.5	117.6	2.5	2.7	3.8	2.1	6.8	2.1
Dallas -----	118.4	113.8	4.0	2.6	2.6	3.1	3.0	3.5
Denver -----	115.1	112.2	2.6	2.5	1.1	3.2	3.6	2.3
Detroit -----	115.4	113.0	2.1	2.4	2.0	2.8	4.1	2.3
Hartford -----	122.3	117.7	3.9	3.2	2.4	4.7	4.7	3.1
Houston -----	113.5	112.0	1.4	1.9	2.1	<sup>6</sup> -.2	7.4	.9
Los Angeles-Long Beach -----	116.5	115.2	1.1	3.1	3.2	3.0	4.0	2.5
Milwaukee -----	118.2	115.3	2.6	2.5	3.0	3.5	3.9	3.3
Minneapolis-St. Paul -----	121.2	116.4	4.1	2.5	2.0	5.9	3.9	2.7
Newark and Jersey City -----	119.4	114.1	4.7	2.7	3.0	4.1	1.4	4.4
New York -----	118.6	115.1	3.1	3.0	3.7	4.0	2.9	1.3
Philadelphia -----	116.8	114.1	2.3	1.2	2.4	3.2	4.2	5.0
Pittsburgh -----	112.3	111.0	1.2	.6	1.6	2.9	2.8	5.5
Portland (Oreg.) -----	124.1	120.4	3.1	2.9	3.5	2.1	9.1	3.2
St. Louis -----	122.2	119.7	2.1	3.4	5.1	4.4	3.7	3.5
San Francisco-Oakland -----	119.6	116.3	2.9	3.3	2.5	3.0	2.5	8.5
Worcester -----	118.3	115.9	2.1	3.7	2.7	5.2	1.8	3.4
<u>Occupation</u>								
Laborers, material handling-----	119.6	115.8	3.3	2.9	2.3	4.0	3.4	4.7
Tool and die makers (other than jobbing) -----	119.2	115.4	3.3	2.4	2.7	3.6	3.9	4.1

<sup>1</sup> For the methodology used in constructing the indexes, see appendix B.

<sup>2</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

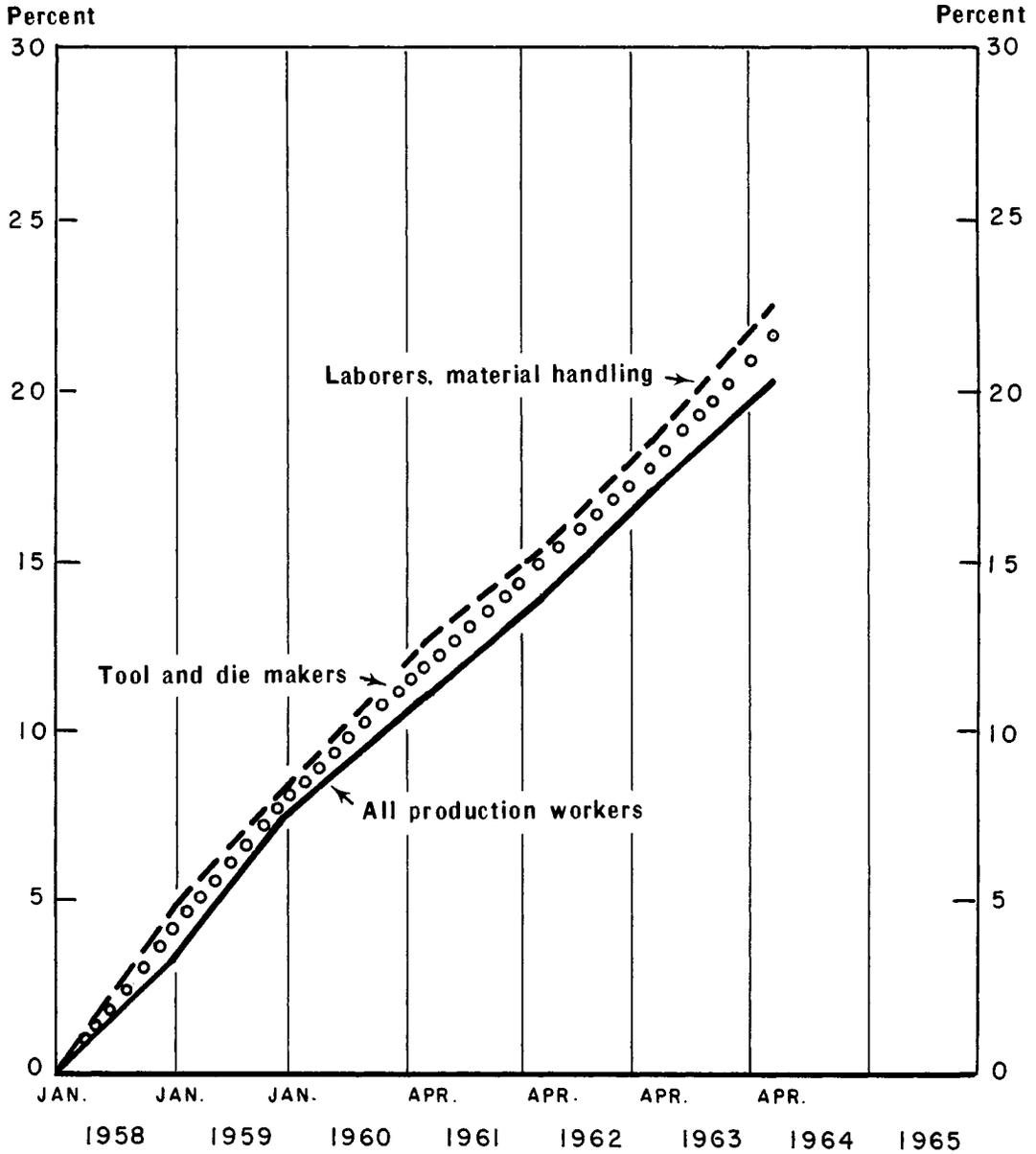
<sup>3</sup> For definition of areas, see table in appendix B.

<sup>4</sup> For the 1945-62 indexes, see appendix B of BLS Bulletin 1352.

<sup>5</sup> Data for periods shown as January cover various months of the winter.

<sup>6</sup> This decrease was the result of changes in incentive earnings and in the proportions of workers in some job classifications in establishments having different pay levels.

### Percent Increase in Average Straight-Time Hourly Earnings, Nonelectrical Machinery Manufacturing in 21 Areas, January 1958 to Specified Dates



The following tabulation shows the percent increase in wages of all production workers and the two occupations mentioned above, for selected periods since 1945:

	Percent increase between—			
	1945-50	1950-55	1955-60	1960-64
All production workers -----	44.7	30.9	24.2	11.7
Laborers, material handling-----	53.6	33.9	26.3	13.2
Tool and die makers (other than jobbing) -----	37.4	28.0	24.4	12.6

The rate of increase for all production workers between 1945 and 1950 was almost  $1\frac{1}{2}$  times the 1950-55 increase, which in turn was slightly more than  $1\frac{1}{4}$  times the 1955-60 increase. The average annual increase between 1955 and 1960 was 4.8 percent, compared with an average annual increase of 2.9 percent between 1960 and 1964. The rate of increase for material-handling laborers was much greater than the rate of increase for tool and die makers between 1945 and 1955, due largely to uniform cents-per-hour increases. Since 1955, the difference in rates of increase for these two jobs has been small; twice in the past 5 years (between 1959 and 1960 and between 1961 and 1962), the percent increase was slightly greater for tool and die makers than for laborers.

#### Occupational Earnings, March-May 1964

The occupations for which average hourly earnings data are presented in tables 1 and 2 accounted for almost one-half of the estimated 420,500 production workers within the scope of the study. In most areas, tool and die makers had the highest level of hourly earnings among the occupational groups studied. Men producing or maintaining tools and dies used in the establishments in which these workers were employed (i. e., other than jobbing) had average hourly earnings ranging from \$2.88 in Dallas and \$2.89 in Worcester to \$3.88 in San Francisco-Oakland; in 10 areas, their average earnings exceeded \$3.25 an hour. Among 13 areas for which data are shown for tool and die makers producing tools and dies for sale (i. e., jobbing), their average hourly earnings ranged from \$3.02 in Hartford to \$3.77 in St. Louis and \$3.80 in Chicago. In most of these areas, average hourly earnings of the two groups of tool and die makers (jobbing and other than jobbing) differed by less than 4 percent.

Average hourly earnings of men machine-tool operators (class A), who set up their own machines and perform a variety of machining operations to close tolerances, ranged from \$2.59 in Dallas to \$3.50 in St. Louis; their earnings averaged \$3 or more in 11 areas. For the intermediate group of machine-tool operators (class B), area average earnings ranged from \$2.11 to \$2.94 an hour, and in a majority of instances were at least 32 cents below those of class A operators. Area average hourly earnings of machine-tool operators (class C) who perform more routine repetitive operations ranged from \$1.76 to \$2.78 and were 32 cents or more below the earnings level of the intermediate group of operators in most areas.

In a majority of the areas, janitors, porters, and cleaners were the lowest paid of the men's jobs studied; their average hourly earnings ranged from \$1.57 in Dallas to \$2.47 in Detroit. Area average earnings of material-handling laborers ranged from \$1.66 to \$2.82 an hour.

Data are presented in table 4 for selected occupations in establishments primarily manufacturing special dies and tools, die sets, and jigs and fixtures in

Chicago, Cleveland, and Detroit; machine-tool accessories and measuring devices in Chicago and Detroit; and a combination of these two industries in Boston, Hartford, Los Angeles—Long Beach, Milwaukee, Newark and Jersey City, and New York.<sup>8</sup>

Women were most commonly employed in routine assembly and inspection or repetitive machining operations. Average hourly earnings of \$2 or more were recorded for class C assemblers in six areas, for class C inspectors in seven areas, and for class C machine-tool operators in six areas (table 2).

Incentive-paid workers generally had higher average earnings than time-rated workers in the same occupation (table 3).<sup>9</sup> The differences, however, varied considerably among occupations. For example, in Chicago, men class A assemblers paid on an incentive basis averaged 8 cents an hour more than those paid time rates (\$3.12 and \$3.04, respectively); the corresponding difference for class C machine-tool operators was 53 cents (\$2.66 and \$2.13). In Newark and Jersey City, the difference in average hourly earnings for incentive-paid and time-rated class A assemblers was 16 cents and for class C machine-tool operators, 56 cents.

The following tabulation, in which area average earnings for production workers are expressed as a percent of the average for Chicago,<sup>10</sup> shows that

<u>Relative pay levels</u>	
(Chicago=100)	
San Francisco—Oakland -----	108
Detroit-----	108
St. Louis-----	105
Portland (Oreg.)-----	105
Milwaukee -----	105
Pittsburgh -----	102
Cleveland-----	102
Chicago-----	100
Newark and Jersey City-----	98
Hartford -----	97
Buffalo-----	96
Denver-----	95
Los Angeles—Long Beach-----	95
New York -----	95
Baltimore-----	94
Philadelphia-----	94
Minneapolis—St. Paul -----	92
Houston-----	91
Worcester -----	90
Boston -----	90
Dallas -----	79

<sup>8</sup> The area releases mentioned in the preface also provide separate data for oilfield machinery in Los Angeles—Long Beach, paper and printing machinery in New York, and textile machinery in Philadelphia.

<sup>9</sup> The area releases include separate data for time- and incentive-paid workers in other occupations in addition to those shown in table 3. In comparing these averages, it should be noted that data for incentive and hourly rated workers usually relate to different establishments since both methods of wage payment were seldom found in individual plants.

<sup>10</sup> The pay index for production workers in this tabulation was based on 10 men's jobs common to all areas (assemblers, classes A and B; inspectors, class A; janitors, porters, and cleaners; laborers, material handling; machine-tool operators, production, classes A, B, and C; tool and die makers (other than jobbing); and welders, hand, class A). To minimize interarea differences in occupational composition, weights expressing constant employment relationships based on total employment in the respective jobs in all 21 areas were used. Aggregates were computed for each area by multiplying the straight-time hourly earnings for each job by these weights and totaling. The ratio of these aggregates formed the basis for the index.

wage levels were highest in San Francisco-Oakland and Detroit and lowest in Dallas. Pay levels in all areas, except Dallas, were within 10 percent of the Chicago average, ranging from 2 to 8 percent above the Chicago level in 7 areas and from 2 to 10 percent below in 12 areas.

The earnings distributions of men in six occupations are presented in tables 5-10.<sup>11</sup> The spread in earnings differed by area and occupation. For example, average hourly earnings of the middle half of the class B machine-tool operators ranged from \$2.50 to \$3.04 in Philadelphia and from \$2.85 to \$2.97 in San Francisco-Oakland. In Cleveland, the range of hourly earnings of the middle half of the class B assemblers was \$2.63 to \$3.07; for laborers, material handling, the corresponding range was \$2.31 to \$2.52.

### Establishment Practices and Supplementary Wage Provisions

Data were also obtained on methods of wage payment, work schedules, overtime premium pay, shift differential provisions and practices, and selected supplementary wage benefits including paid holidays and vacations, and health, insurance, and pension plans.

Method of Wage Payment.<sup>12</sup> Time-rated workers, in a majority of the areas, were generally paid according to formalized wage systems providing a range of rates for a specific occupation (table 11). Systems providing a single rate for a job, however, were found in each area and in four areas were more common than a range of rates. Rates of pay were determined on an individual basis for some plant workers in all except two of the areas studied; this method of payment applied to one-fourth or more of the workers in seven areas.

Incentive wage systems were reported in some establishments in all areas except Dallas, Portland, and San Francisco-Oakland. One-fourth or more of the workers were paid on this basis in Milwaukee, Hartford, Pittsburgh, and Worcester; at least one-eighth in Baltimore, Newark and Jersey City, Buffalo, Cleveland, St. Louis, Chicago, Philadelphia, Boston, and New York; and smaller proportions in the other areas. Most incentive payments were either individual bonus or individual piecework.

Scheduled Weekly Hours and Overtime Pay. Work schedules of 40 hours a week were in effect in establishments with a majority of the production workers in all areas except Dallas and Cleveland, where the proportions were slightly less than one-half (table 12). Office workers also typically had a 40-hour weekly schedule except in New York where 35 and 37<sup>1</sup>/<sub>2</sub> hours were more common (table 13).

Pay of 1<sup>1</sup>/<sub>2</sub> times the regular rate for work in excess of 8 hours a day or 40 hours a week was typically provided for production workers in nearly all areas studied (table 14). Double time pay after 12 hours a day or time and one-half for work outside an employee's regular work schedule were also reported in some establishments.

<sup>11</sup> The separate area releases also include distributions of workers' earnings for the other occupations studied.

<sup>12</sup> For definition of the different methods of wage payment, see appendix B.

Shift Differential Provisions and Practices. A large majority of the production workers in nearly all areas were in establishments which had provisions for late-shift operations with extra pay above day-shift rates (table 15). Slightly more than one-sixth of the workers in the 21 areas combined were employed on late shifts during the payroll period studied, approximately the same proportion as at the time of the March-June 1962 study. Late shifts accounted for more than one-fourth of all production workers in Baltimore, Houston, Milwaukee, Pittsburgh, and Portland and less than one-tenth in only two areas, Boston and New York (table 16). Total employment on second shifts in the 21 areas was nearly six times as great as employment on third-shift operations. Extra pay above day-shift rates was almost universally provided for these workers, but provisions differed considerably.

Paid Holidays. Virtually all workers were employed in establishments which provided paid holidays (tables 17 and 18). Eight days or more were provided annually by establishments employing a majority of the production and office workers in Boston, Newark and Jersey City, New York, Philadelphia, and Worcester. Six days or more were usually provided in the other areas. Half days in addition to full-day holidays were common in most areas.

Paid Vacations. Paid vacations of at least 1 week after 1 year, and 2 weeks after 5 years of service were provided in establishments employing nearly all production and office workers covered by the study (tables 19 and 20). Three-fourths or more of the production workers in all except four areas, and office workers in all except five areas were in establishments providing at least 3 weeks after 15 years of service. Four-week vacations after 25 years of service were provided in establishments having a majority of the plant workers in four areas and a majority of the office employees in eight areas.

Health, Insurance, and Pension Plans. Life, hospitalization, and surgical insurance benefits (with the employer paying at least part of the cost) were available to nine-tenths or more of the production and office workers in nearly all areas (tables 21 and 22). Sickness and accident insurance and medical insurance also were usually provided in most areas.

Pension plans (providing regular payments on retirement in addition to those under the Federal social security program) were reported by establishments employing a majority of the production workers in all except two areas and a majority of the office employees in all except three of the areas studied.

Table 1. Occupational Averages: Men

(Number and average straight-time hourly earnings<sup>1</sup> of men in selected occupations in machinery manufacturing, 21 selected areas, March-May 1964<sup>2</sup>)

Occupation	New England						Middle Atlantic						South									
	Boston		Hartford		Worcester		Buffalo		Newark and Jersey City		New York		Philadelphia		Pittsburgh		Baltimore		Dallas		Houston	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings						
Assemblers, class A.....	510	\$ 2.88	279	\$ 2.89	249	\$ 2.79	270	\$ 3.02	748	\$ 3.04	936	\$ 2.95	740	\$ 2.83	364	\$ 3.29	189	\$ 3.16	162	\$ 2.47	325	\$ 2.65
Assemblers, class B.....	369	2.54	759	2.46	191	2.53	122	2.71	657	2.70	755	2.42	759	2.47	201	3.00	154	2.60	167	1.99	168	2.44
Assemblers, class C.....	159	2.18	560	2.31	52	2.23	128	2.41	338	2.28	1,152	2.02	673	1.83	-	-	-	-	236	1.56	83	2.14
Electricians, maintenance.....	49	3.06	102	3.09	37	2.88	52	2.97	146	3.21	78	3.10	154	3.05	124	3.14	48	2.85	26	2.61	110	3.13
Inspectors, class A.....	179	2.84	202	2.77	104	2.71	87	3.07	226	2.93	229	3.06	418	2.89	179	3.24	82	2.95	51	2.67	178	2.98
Inspectors, class B.....	180	2.42	277	2.57	43	2.65	72	2.82	203	2.72	181	2.71	269	2.94	76	2.81	39	2.67	49	2.20	141	2.89
Inspectors, class C.....	83	2.10	576	2.44	8	2.15	22	2.28	163	2.48	99	1.98	41	2.28	-	-	30	2.05	-	-	21	2.38
Janitors, porters, and cleaners.....	205	1.91	247	2.18	119	1.96	139	2.15	312	1.98	280	1.99	343	1.98	170	2.25	109	1.88	141	1.57	304	1.91
Laborers, material handling.....	233	2.12	302	2.15	77	2.18	78	2.39	383	2.15	489	2.10	292	2.40	173	2.41	-	-	107	1.66	258	1.93
Machine-tool operators, production, class A <sup>3</sup> .....	1,579	2.83	1,388	3.02	815	2.76	721	2.88	1,705	2.99	2,490	2.99	2,751	2.87	1,813	3.11	794	2.96	678	2.59	1,403	2.89
Automatic-lathe operators, class A.....	-	-	-	-	-	-	-	-	11	3.19	43	3.29	37	3.09	-	-	-	-	54	2.67	105	2.89
Drill-press operators, radial, class A.....	100	2.87	64	3.04	75	2.72	-	-	145	3.05	133	3.10	270	2.77	113	2.87	32	3.18	23	2.41	75	2.82
Drill-press operators, single- or multiple-spindle, class A.....	94	2.93	24	2.96	20	2.93	8	2.65	42	2.71	113	2.92	126	2.64	-	-	20	3.08	12	2.36	47	2.66
Engine-lathe operators, class A.....	177	2.79	166	2.95	112	2.63	130	2.87	291	2.87	382	3.06	355	2.88	310	3.16	88	2.90	147	2.64	227	3.02
Grinding-machine operators, class A.....	208	2.84	419	3.07	169	2.70	67	3.01	220	3.04	170	3.09	324	2.83	249	3.02	32	3.15	79	2.66	107	2.86
Milling-machine operators, class A.....	165	2.92	148	3.02	113	2.84	-	-	385	2.99	518	3.02	287	2.86	276	3.12	98	3.42	70	2.58	203	2.87
Screw-machine operators, automatic, class A.....	53	2.93	104	3.15	17	3.10	-	-	36	3.20	38	3.41	-	-	10	2.96	-	-	33	2.54	-	-
Turret-lathe operators, hand (including hand screw machine), class A.....	230	2.72	200	2.94	121	2.73	-	-	234	3.04	206	3.02	415	2.81	191	3.07	124	2.99	191	2.55	334	2.89
Machine-tool operators, production, class B <sup>3</sup> .....	739	2.41	1,799	2.71	532	2.54	585	2.66	1,658	2.94	1,655	2.61	1,893	2.79	477	2.79	322	2.63	283	2.11	521	2.64
Automatic-lathe operators, class B.....	-	-	27	2.69	18	2.96	-	-	63	3.09	-	-	-	-	-	-	-	-	-	-	22	2.60
Drill-press operators, radial, class B.....	30	2.44	46	2.52	44	2.54	41	2.85	61	2.54	150	2.66	100	2.54	-	-	-	-	32	2.13	48	2.65
Drill-press operators, single- or multiple-spindle, class B.....	56	2.39	164	2.65	37	2.56	26	2.39	91	2.64	102	2.51	47	2.49	17	2.67	40	2.69	49	1.92	28	2.51
Engine-lathe operators, class B.....	41	2.54	57	2.45	29	2.43	145	2.54	99	2.61	276	2.79	132	2.74	77	3.16	-	-	-	-	31	2.55
Grinding-machine operators, class B.....	70	2.47	736	2.72	204	2.50	82	2.78	-	-	81	2.57	403	3.27	82	2.85	31	2.67	22	2.08	70	2.71
Milling-machine operators, class B.....	60	2.53	213	2.59	73	2.56	26	2.83	109	2.68	249	2.71	197	2.70	28	2.86	29	2.91	34	2.28	93	2.70
Screw-machine operators, automatic, class B.....	-	-	230	2.97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turret-lathe operators, hand (including hand screw machine), class B.....	132	2.39	96	2.76	65	2.45	63	2.68	91	2.94	77	2.71	224	3.04	23	3.04	32	2.82	65	2.08	124	2.71
Machine-tool operators, production, class C <sup>3</sup> .....	269	1.97	1,057	2.71	121	2.19	74	2.49	455	2.32	1,104	2.06	643	2.34	88	2.62	278	2.13	145	1.76	203	2.32
Drill-press operators, radial, class C.....	-	-	-	-	-	-	-	-	52	2.31	50	2.36	9	1.96	-	-	-	-	-	-	17	2.06
Drill-press operators, single- or multiple-spindle, class C.....	37	2.02	193	2.68	28	2.23	27	2.20	188	2.42	218	1.93	46	2.05	-	-	-	-	37	1.63	-	-
Engine-lathe operators, class C.....	-	-	494	2.86	36	2.22	22	2.74	27	2.33	-	-	27	2.04	-	-	-	-	-	-	-	-
Grinding-machine operators, class C.....	12	2.13	161	2.44	16	2.16	-	-	12	2.51	60	2.36	20	2.24	-	-	-	-	-	-	16	2.49
Milling-machine operators, class C.....	-	-	53	2.64	16	2.24	-	-	12	2.79	-	-	51	2.13	-	-	-	-	13	1.68	60	2.30
Turret-lathe operators, hand (including hand screw machine), class C.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, toolroom.....	69	2.75	343	2.98	32	2.70	184	3.03	883	3.03	241	3.05	380	3.11	132	3.17	160	2.84	94	2.82	141	3.00
Machinists, production.....	286	2.85	53	3.09	27	2.81	-	-	128	2.95	241	3.18	281	2.91	187	3.17	-	-	90	2.59	405	3.05
Tool and die makers (jobbing).....	314	3.13	305	3.02	-	-	177	3.09	686	3.19	397	3.27	1,232	3.30	-	-	-	-	-	-	-	-
Tool and die makers (other than jobbing).....	112	3.16	461	3.16	69	2.89	83	3.16	318	3.31	284	3.29	310	3.36	63	3.23	57	3.10	57	2.88	100	3.22
Welders, hand, class A.....	223	2.71	27	3.15	28	2.91	212	3.01	197	3.09	202	3.24	498	2.96	151	2.98	101	2.90	327	2.43	650	2.75
Welders, hand, class B.....	49	2.58	54	2.66	13	2.78	54	2.56	129	2.81	237	2.53	323	2.78	-	-	56	2.57	189	2.00	368	2.65

See footnotes at end of table.

Table 1. Occupational Averages: Men—Continued

(Number and average straight-time hourly earnings<sup>1</sup> of men in selected occupations in machinery manufacturing, 21 selected areas, March–May 1964<sup>2</sup>)

Occupation	Middle West												Far West							
	Chicago		Cleveland		Detroit		Milwaukee		Minneapolis—St. Paul		St. Louis		Denver		Los Angeles—Long Beach		Portland		San Francisco—Oakland	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings						
Assemblers, class A	2,954	\$3.05	1,058	\$3.17	626	\$3.37	679	\$3.16	626	\$2.71	316	\$3.02	72	\$2.92	1,717	\$2.92	325	\$3.20	223	\$3.40
Assemblers, class B	2,593	2.73	952	2.92	1,290	2.90	1,248	2.93	1,051	2.53	431	2.76	50	2.45	1,162	2.36	-	-	310	2.93
Assemblers, class C	881	2.34	252	2.56	707	2.51	482	2.85	175	2.54	344	2.33	32	2.33	531	2.04	15	2.61	-	-
Electricians, maintenance	366	3.41	199	3.18	231	3.62	202	3.32	55	3.20	55	3.41	-	-	133	3.14	8	3.19	33	3.68
Inspectors, class A	849	3.06	295	3.03	548	3.37	523	3.16	233	2.85	94	3.22	48	3.02	631	3.10	40	3.22	137	3.30
Inspectors, class B	668	2.78	217	2.94	545	2.97	422	2.93	158	2.59	-	-	8	2.58	152	2.61	-	-	-	-
Inspectors, class C	352	2.58	64	2.77	91	2.88	128	2.49	-	-	61	2.58	-	-	64	2.33	-	-	-	-
Janitors, porters, and cleaners	1,114	2.18	480	2.28	1,037	2.47	500	2.41	283	2.12	177	2.22	56	2.01	641	2.11	53	2.42	134	2.43
Laborers, material handling	1,965	2.29	401	2.43	663	2.71	719	2.50	302	2.34	342	2.27	-	-	321	2.40	82	2.66	32	2.82
Machine-tool operators, production, class A <sup>3</sup>	8,252	3.16	4,733	3.09	5,249	3.38	2,294	3.23	1,755	2.81	717	3.50	357	3.06	4,952	3.08	622	3.20	1,448	3.39
Automatic-lathe operators, class A	267	3.30	42	3.09	40	3.09	100	3.25	64	2.78	-	-	-	-	105	2.97	-	-	17	3.53
Drill-press operators, radial, class A	890	3.08	333	3.02	61	3.47	187	3.15	105	2.82	37	3.12	-	-	280	2.97	80	3.17	50	3.47
Drill-press operators, single- or multiple-spindle, class A	321	3.01	162	3.27	90	3.19	118	3.17	141	2.67	-	-	-	-	230	2.76	-	-	-	-
Engine-lathe operators, class A	1,078	3.16	403	3.09	561	3.40	242	3.17	291	2.79	-	-	38	3.05	777	3.13	188	3.21	233	3.43
Grinding-machine operators, class A	1,263	3.19	748	3.16	2,354	3.39	238	3.30	141	2.78	48	3.44	-	-	1,249	3.19	16	3.15	-	-
Milling-machine operators, class A	831	3.13	678	3.15	653	3.41	238	3.24	119	2.84	77	3.38	22	3.45	545	3.02	115	3.20	-	-
Screw-machine operators, automatic, class A	164	3.31	288	3.14	125	3.29	88	3.28	60	3.21	56	3.33	-	-	90	3.12	-	-	-	-
Turret-lathe operators, hand (including hand screw machine), class A	1,158	3.19	765	3.02	560	3.19	516	3.19	417	2.87	65	3.12	83	3.25	875	3.07	73	3.19	134	3.38
Machine-tool operators, production, class B <sup>3</sup>	3,933	2.84	1,711	2.92	4,807	2.91	1,498	2.93	952	2.57	486	2.85	121	2.55	1,690	2.46	94	2.85	492	2.90
Automatic-lathe operators, class B	142	3.12	82	2.69	69	2.88	35	2.68	9	2.60	-	-	-	-	-	-	-	-	-	-
Drill-press operators, radial, class B	311	2.82	82	2.85	361	2.62	330	2.89	166	2.66	-	-	24	2.63	103	2.47	30	2.74	57	3.01
Drill-press operators, single- or multiple-spindle, class B	617	2.85	280	3.14	617	2.83	219	2.87	220	2.54	-	-	13	2.27	255	2.36	25	2.87	84	2.96
Engine-lathe operators, class B	234	2.80	218	2.96	309	3.20	166	2.78	-	-	78	2.70	12	2.66	-	-	-	-	-	-
Grinding-machine operators, class B	743	2.75	307	2.95	1,702	2.92	157	3.04	30	2.61	49	2.83	10	2.38	226	2.50	-	-	20	2.98
Milling-machine operators, class B	508	2.87	189	2.90	643	2.88	212	3.01	52	2.56	46	2.87	15	2.68	172	2.42	-	-	-	-
Screw-machine operators, automatic, class B	68	2.90	48	2.66	215	3.12	22	3.05	-	-	-	-	-	-	-	-	-	-	-	-
Turret-lathe operators, hand (including hand screw machine), class B	523	2.80	184	2.81	458	2.89	177	3.01	44	2.60	77	2.69	23	2.46	209	2.63	18	2.87	53	2.95
Machine-tool operators, production, class C <sup>3</sup>	1,883	2.18	597	2.46	1,296	2.67	355	2.52	167	2.21	162	2.49	17	2.36	584	2.06	26	2.78	232	2.47
Drill-press operators, radial, class C	67	2.53	15	2.53	13	2.36	41	2.39	-	-	-	-	-	-	-	-	-	-	-	-
Drill-press operators, single- or multiple-spindle, class C	553	2.06	160	2.35	185	2.61	73	2.76	70	2.23	75	2.34	-	-	25	2.39	-	-	75	2.62
Engine-lathe operators, class C	71	2.33	37	2.48	-	-	-	-	-	-	14	2.83	-	-	-	-	-	-	-	-
Grinding-machine operators, class C	377	2.25	129	2.45	297	2.50	25	2.45	-	-	38	2.37	-	-	125	1.86	-	-	-	-
Milling-machine operators, class C	158	2.39	56	2.56	262	2.70	-	-	-	-	-	-	-	-	62	2.34	-	-	-	-
Turret-lathe operators, hand (including hand screw machine), class C	102	2.28	79	2.53	20	2.75	81	2.32	29	2.12	-	-	-	-	18	2.10	-	-	-	-
Machine-tool operators, toolroom	1,487	3.40	832	3.09	5,069	3.65	513	3.34	405	2.85	334	3.42	-	-	1,007	3.31	16	3.32	-	-
Machinists, production	117	3.40	-	-	-	-	-	-	-	-	257	3.36	-	-	1,200	3.23	86	3.22	347	3.40
Tool and die makers (jobbing)	1,646	3.80	849	3.24	4,762	3.70	285	3.61	134	3.40	425	3.77	-	-	813	3.51	-	-	-	-
Tool and die makers (other than jobbing)	790	3.53	177	3.44	475	3.61	299	3.59	283	3.19	218	3.65	39	3.10	367	3.39	-	-	138	3.88
Welders, hand, class A	2,370	3.07	464	2.97	323	3.25	508	3.15	555	2.86	309	3.12	113	2.94	1,883	3.07	385	3.20	497	3.38
Welders, hand, class B	742	3.08	269	2.71	357	2.79	549	2.98	286	2.70	110	2.44	-	-	300	2.54	-	-	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.<sup>2</sup> Payroll periods covered in individual areas are indicated in the table in appendix B.<sup>3</sup> Includes data for operators of other machine tools in addition to those shown separately.

NOTE: Dashes indicate no data reported or data that do not meet publication criteria.

Table 2. Occupational Averages: Women

(Number and average straight-time hourly earnings<sup>1</sup> of women in selected occupations in machinery manufacturing, 10 selected areas, March-May 1964)

Occupation <sup>2</sup>	New England				Middle Atlantic					
	Hartford		Worcester		Newark and Jersey City		New York		Philadelphia	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Assemblers, class B .....	-	-	-	-	-	-	62	\$1.86	299	\$2.04
Assemblers, class C .....	898	\$2.34	7	\$2.13	342	\$2.17	480	1.72	-	-
Inspectors, class B .....	-	-	-	-	-	-	17	2.51	-	-
Inspectors, class C .....	508	2.17	-	-	-	-	49	2.14	-	-
Machine-tool operators, production, class B .....	-	-	-	-	11	2.74	-	-	-	-
Machine-tool operators, production, class C <sup>3</sup> .....	254	2.29	29	1.92	-	-	87	1.67	188	2.33
Drill-press operators, single- or multiple-spindle, class C .....	203	2.34	-	-	-	-	-	-	-	-
Milling-machine operators, class C .....	41	2.11	-	-	-	-	-	-	-	-
	Middle West								Far West	
	Chicago		Cleveland		Detroit		St. Louis		Los Angeles-Long Beach	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Assemblers, class B .....	120	\$2.52	-	-	25	\$2.65	11	\$2.42	189	\$2.19
Assemblers, class C .....	1,935	1.85	99	\$2.42	640	2.57	649	2.52	1,331	1.85
Inspectors, class B .....	72	2.43	-	-	83	2.92	-	-	92	2.48
Inspectors, class C .....	197	2.02	174	2.49	431	2.64	289	2.33	61	2.20
Machine-tool operators, production, class B .....	-	-	-	-	120	3.02	-	-	43	2.43
Machine-tool operators, production, class C <sup>3</sup> .....	633	2.01	117	2.28	148	2.62	-	-	-	-
Drill-press operators, single- or multiple-spindle, class C .....	254	2.05	-	-	55	2.57	-	-	-	-
Milling-machine operators, class C .....	41	2.26	-	-	51	2.72	-	-	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> The separate area releases also include average hourly earnings for women class A assemblers in New York (\$2.40); assemblers, class C in Boston (\$1.76), Dallas (\$1.35), and Minneapolis-St. Paul (\$1.87); inspectors, class A in Chicago (\$2.58); machine-tool operators, production, class A in Chicago (\$2.96); machine-tool operators, production, class B in San Francisco-Oakland (\$2.97); and machine-tool operators, production, class C in Baltimore (\$2.38).

<sup>3</sup> Includes data for operators of other machine tools in addition to those shown separately.

NOTE: Dashes indicate no data reported or data that do not meet publication criteria.

Table 3. Occupational Averages: By Method of Wage Payment

(Number and average straight-time hourly earnings<sup>1</sup> of men in selected occupations in machinery manufacturing, 12 selected areas, March-May 1964)

Occupation	New England						Middle Atlantic					
	Boston		Hartford		Worcester		Newark and Jersey City		New York		Philadelphia	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Assemblers, class A:												
Timeworkers.....	351	\$2.65	142	\$2.82	-	-	610	\$3.01	825	\$2.90	-	-
Incentive workers.....	159	3.38	137	2.97	-	-	138	3.17	111	3.33	-	-
Assemblers, class B:												
Timeworkers.....	286	2.41	193	2.44	128	\$2.52	412	2.58	720	2.39	721	\$2.46
Incentive workers.....	83	3.00	566	2.47	63	2.55	245	2.91	35	2.96	38	2.64
Assemblers, class C:												
Timeworkers.....	-	-	140	2.33	-	-	205	2.27	808	1.92	660	1.81
Incentive workers.....	-	-	-	-	-	-	133	2.30	344	2.26	13	2.62
Machine-tool operators, production, class A:												
Timeworkers.....	1,151	2.69	718	2.86	630	2.65	1,434	2.98	2,224	2.95	2,432	2.83
Incentive workers.....	428	3.21	670	3.20	185	3.15	271	2.99	266	3.34	319	3.22
Machine-tool operators, production, class B:												
Timeworkers.....	647	2.36	734	2.47	364	2.41	-	-	1,580	2.58	1,295	2.56
Incentive workers.....	92	2.70	1,065	2.87	168	2.80	210	2.79	-	-	598	3.30
Machine-tool operators, production, class C:												
Timeworkers.....	-	-	-	-	82	2.10	330	2.17	1,020	2.07	342	2.08
Incentive workers.....	-	-	625	2.81	39	2.37	125	2.73	-	-	-	-
	South			Middle West						Far West		
	Baltimore		Chicago		Cleveland		Milwaukee		St. Louis		Los Angeles-Long Beach	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Assemblers, class A:												
Timeworkers.....	67	\$2.85	2,369	\$3.04	763	\$2.95	412	\$2.94	-	-	-	-
Incentive workers.....	122	3.32	585	3.12	295	3.74	267	3.50	-	-	-	-
Assemblers, class B:												
Timeworkers.....	101	2.52	2,047	2.62	625	2.70	679	2.67	271	\$2.49	-	-
Incentive workers.....	53	2.75	546	3.12	327	3.34	569	3.23	-	-	-	-
Assemblers, class C:												
Timeworkers.....	-	-	720	2.19	153	2.49	153	2.46	-	-	-	-
Incentive workers.....	-	-	161	3.03	99	2.67	329	3.02	-	-	-	-
Machine-tool operators, production, class A:												
Timeworkers.....	544	2.76	6,262	3.10	3,754	2.96	995	3.02	311	3.22	4,726	\$3.08
Incentive workers.....	250	3.39	1,990	3.33	979	3.56	1,299	3.39	406	3.72	226	3.09
Machine-tool operators, production, class B:												
Timeworkers.....	-	-	2,633	2.68	1,232	2.71	847	2.77	193	2.70	1,667	2.46
Incentive workers.....	-	-	1,300	3.16	479	3.46	651	3.14	293	2.94	23	2.64
Machine-tool operators, production, class C:												
Timeworkers.....	-	-	1,706	2.13	575	2.45	188	2.32	110	2.31	-	-
Incentive workers.....	-	-	177	2.66	22	2.72	167	2.76	52	2.86	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

NOTE: Dashes indicate no data reported or data that do not meet publication criteria.

Table 4. Occupational Averages: Special Dies and Tools and Machine-Tool Accessories

(Number and average straight-time hourly earnings<sup>1</sup> of men in selected occupations in establishments primarily manufacturing special dies and tools and machine-tool accessories, 9 selected areas, March-May 1964)

Occupation	Chicago				Cleveland		Detroit			
	Special dies and tools <sup>2</sup>		Machine-tool accessories <sup>3</sup>		Special dies and tools <sup>2</sup>		Special dies and tools <sup>2</sup>		Machine-tool accessories <sup>3</sup>	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Electricians, maintenance .....	-	-	11	\$3.01	7	\$3.10	54	\$3.64	-	-
Inspectors, class A .....	-	-	37	2.99	15	3.26	18	3.85	96	\$3.24
Inspectors, class B .....	-	-	30	2.70	-	-	-	-	68	3.12
Janitors, porters, and cleaners .....	76	\$1.99	77	2.16	59	1.99	332	2.44	145	2.33
Laborers, material handling .....	36	2.28	24	2.53	10	2.37	172	2.72	15	2.86
Machine-tool operators, production, class A <sup>4</sup> .....	-	-	533	3.19	-	-	-	-	1,819	3.26
Engine-lathe operators, class A .....	-	-	59	3.32	-	-	-	-	175	3.27
Grinding-machine operators, class A .....	-	-	295	3.21	-	-	-	-	1,120	3.28
Milling-machine operators, class A .....	-	-	84	3.07	-	-	-	-	314	3.34
Turret-lathe operators, hand (including hand screw machine), class A .....	-	-	41	2.97	-	-	-	-	79	2.97
Machine-tool operators, production, class B <sup>4</sup> .....	160	2.82	388	2.69	190	2.62	305	3.02	1,080	2.83
Engine-lathe operators, class B .....	-	-	55	2.80	-	-	-	-	51	2.93
Grinding-machine operators, class B .....	63	2.57	149	2.63	-	-	-	-	642	2.81
Milling-machine operators, class B .....	-	-	63	2.74	19	2.64	42	3.09	294	2.88
Turret-lathe operators, hand (including hand screw machine), class B .....	-	-	44	2.79	-	-	-	-	56	2.60
Machine-tool operators, production, class C <sup>4</sup> .....	57	2.08	197	2.24	44	2.28	155	2.64	398	2.52
Grinding-machine operators, class C .....	-	-	63	2.19	-	-	-	-	218	2.49
Milling-machine operators, class C .....	-	-	67	2.25	-	-	40	2.75	102	2.52
Machine-tool operators, toolroom .....	767	3.58	52	3.10	529	3.00	4,599	3.65	89	3.65
Tool and die makers (jobbing) .....	1,625	3.81	-	-	837	3.24	4,738	3.70	-	-
Tool and die makers (other than jobbing) .....	-	-	44	3.59	-	-	-	-	39	3.54
Welders, hand, class A .....	6	3.16	9	3.51	15	3.03	26	3.62	14	3.25

See footnotes at end of table.

Table 4. Occupational Averages: Special Dies and Tools and Machine-Tool Accessories—Continued

(Number and average straight-time hourly earnings<sup>1</sup> of men in selected occupations in establishments primarily manufacturing special dies and tools and machine-tool accessories, 9 selected areas, March–May 1964)

Occupation	Boston		Hartford		Los Angeles— Long Beach		Milwaukee		Newark and Jersey City		New York	
	Special dies and tools <sup>2</sup> and machine-tool accessories <sup>3</sup>											
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Electricians, maintenance .....	-	-	6	\$2.87	-	-	-	-	6	\$2.85	-	-
Inspectors, class A .....	7	\$2.87	52	2.64	132	\$3.27	7	\$3.55	22	2.99	-	-
Inspectors, class B .....	10	2.53	42	2.41	18	2.83	-	-	-	-	-	-
Janitors, porters, and cleaners .....	14	1.78	18	1.91	76	1.88	7	2.00	62	1.70	28	\$1.71
Laborers, material handling .....	-	-	-	-	-	-	-	-	19	1.70	23	1.66
Machine-tool operators, production, class A <sup>4</sup> .....	76	2.81	488	3.08	300	3.33	-	-	99	3.11	198	3.03
Engine-lathe operators, class A .....	-	-	67	2.99	51	3.42	-	-	-	-	-	-
Grinding-machine operators, class A .....	52	2.87	268	3.14	163	3.45	-	-	71	3.11	-	-
Milling-machine operators, class A .....	-	-	36	2.89	14	3.18	-	-	-	-	-	-
Turret-lathe operators, hand (including hand screw machine), class A .....	-	-	31	2.82	-	-	9	3.18	-	-	-	-
Machine-tool operators, production, class B <sup>4</sup> .....	125	2.43	477	2.48	197	2.43	54	2.64	131	2.58	287	2.56
Engine-lathe operators, class B .....	-	-	32	2.36	8	2.53	8	2.66	8	2.51	-	-
Grinding-machine operators, class B .....	10	2.57	301	2.52	101	2.47	21	2.65	-	-	-	-
Milling-machine operators, class B .....	-	-	83	2.40	13	2.63	-	-	-	-	-	-
Turret-lathe operators, hand (including hand screw machine), class B .....	-	-	-	-	32	2.36	-	-	-	-	-	-
Machine-tool operators, production, class C <sup>4</sup> .....	-	-	107	2.18	-	-	30	2.51	190	2.17	114	1.93
Grinding-machine operators, class C .....	-	-	-	-	-	-	-	-	23	2.28	-	-
Milling-machine operators, class C .....	-	-	32	2.07	-	-	-	-	-	-	-	-
Machine-tool operators, toolroom .....	-	-	139	2.71	689	3.34	206	3.40	601	2.91	173	2.96
Tool and die makers (jobbing) .....	203	3.09	357	3.02	785	3.51	285	3.61	686	3.19	397	3.27
Tool and die makers (other than jobbing) .....	-	-	39	2.94	38	3.30	-	-	-	-	-	-
Welders, hand, class A .....	-	-	-	-	68	3.23	-	-	-	-	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.<sup>2</sup> Includes die sets, jigs and fixtures, also.<sup>3</sup> Includes measuring devices also.<sup>4</sup> Includes data for operators of other machine tools in addition to those shown separately.

NOTE: Dashes indicate no data reported or data that do not meet publication criteria.

Table 5. Earnings Distribution: Tool and Die Makers (Other Than Jobbing)

(Percent distribution of men by straight-time hourly earnings<sup>1</sup> in machinery manufacturing, 20 selected areas, March-May 1964)

Average hourly earnings <sup>1</sup>	New England			Middle Atlantic				South			Middle West						Far West			
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	San Francisco-Oakland
\$ 2.20 and under \$ 2.30.....	-	-	2.9	-	-	-	-	-	-	5.3	-	-	-	-	-	-	-	-	-	-
\$ 2.30 and under \$ 2.40.....	-	0.4	-	-	-	-	-	-	-	5.3	-	-	-	-	-	-	-	-	-	-
\$ 2.40 and under \$ 2.50.....	-	.2	5.8	2.4	-	-	-	-	-	3.5	-	-	-	-	-	-	-	-	-	-
\$ 2.50 and under \$ 2.60.....	0.9	.7	1.4	-	-	1.1	-	-	5.3	15.8	-	-	1.1	-	-	-	-	-	-	-
\$ 2.60 and under \$ 2.70.....	.9	1.3	2.9	-	1.3	.7	-	-	-	3.5	-	-	-	-	-	-	-	-	-	-
\$ 2.70 and under \$ 2.80.....	5.4	6.5	13.0	2.4	5.3	1.4	1.9	17.5	3.5	3.5	-	0.4	-	-	8.1	-	-	-	-	-
\$ 2.80 and under \$ 2.90.....	14.3	5.6	39.1	-	4.4	3.9	4.8	-	7.0	12.3	-	.1	-	-	1.0	4.6	-	15.4	-	-
\$ 2.90 and under \$ 3.00.....	13.4	15.8	-	25.3	4.4	3.9	7.1	3.2	15.8	7.0	6.0	3.4	-	-	.4	-	-	7.7	-	-
\$ 3.00 and under \$ 3.10.....	14.3	18.9	17.4	18.1	12.9	8.1	8.1	3.2	7.0	14.0	7.0	4.4	7.3	8.6	-	12.0	2.8	28.2	2.2	-
\$ 3.10 and under \$ 3.20.....	1.8	11.7	1.4	8.4	11.9	9.2	13.9	12.7	19.3	21.1	27.0	7.6	9.6	-	2.3	17.3	.5	33.3	.5	-
\$ 3.20 and under \$ 3.30.....	13.4	4.8	4.3	22.9	6.0	8.5	12.3	15.9	21.1	-	18.0	5.2	13.0	-	8.7	17.0	-	5.1	8.2	-
\$ 3.30 and under \$ 3.40.....	5.4	13.9	11.6	1.2	6.6	25.0	7.7	6.3	14.0	-	42.0	8.5	8.5	8.4	10.7	16.3	-	10.3	43.3	-
\$ 3.40 and under \$ 3.50.....	22.3	5.4	-	-	17.0	25.7	9.0	28.6	7.0	1.8	-	8.7	29.9	11.2	10.4	20.5	4.6	-	16.9	-
\$ 3.50 and under \$ 3.60.....	1.8	-	-	-	4.1	3.9	9.7	12.7	-	-	-	11.1	11.9	5.9	23.1	2.8	10.6	-	28.3	-
\$ 3.60 and under \$ 3.70.....	5.4	14.5	-	19.3	2.8	6.7	1.3	-	-	3.5	-	18.4	1.1	12.2	7.0	-	54.1	-	.5	-
\$ 3.70 and under \$ 3.80.....	.9	-	-	-	23.3	2.1	16.1	-	-	3.5	-	20.5	9.6	28.8	19.1	-	22.9	-	-	-
\$ 3.80 and under \$ 3.90.....	-	.2	-	-	-	-	.6	-	-	-	-	7.2	1.7	21.5	6.7	1.1	.9	-	-	71.7
\$ 3.90 and under \$ 4.00.....	-	-	-	-	-	-	1.0	-	-	-	-	1.4	1.7	3.2	7.4	-	1.4	-	-	26.1
\$ 4.00 and over.....	-	-	-	-	-	-	6.5	-	-	-	-	3.0	4.5	.2	3.7	-	2.3	-	-	2.2
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers.....	112	461	69	83	318	284	310	63	57	100	790	177	475	283	218	39	367	138		
Average hourly earnings <sup>1</sup> .....	\$ 3.16	\$ 3.16	\$ 2.89	\$ 3.16	\$ 3.31	\$ 3.29	\$ 3.36	\$ 3.23	\$ 3.10	\$ 2.88	\$ 3.22	\$ 3.53	\$ 3.44	\$ 3.61	\$ 3.59	\$ 3.19	\$ 3.65	\$ 3.10	\$ 3.39	\$ 3.88

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 6. Earnings Distribution: Machine-Tool Operators, Production, Class A

(Percent distribution of men by straight-time hourly earnings, <sup>1</sup> in machinery manufacturing, 21 selected areas, March-May 1964)

Average hourly earnings <sup>1</sup>	New England			Middle Atlantic				South			Middle West					Far West					
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	Portland	San Francisco-Oakland
Under \$2.00.....	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
\$2.00 and under \$2.10.....	0.4	0.1	2.5	.8	-	0.4	-	-	0.5	0.7	0.1	-	-	-	( <sup>2</sup> )	0.2	-	-	-	-	-
\$2.10 and under \$2.20.....	.3	-	2.0	1.1	-	.3	-	-	-	1.2	-	-	-	-	-	.5	-	-	-	-	-
\$2.20 and under \$2.30.....	1.3	1.4	3.8	.8	1.1	.7	2.1	-	-	5.8	-	-	-	-	-	.2	-	-	( <sup>2</sup> )	-	-
\$2.30 and under \$2.40.....	7.8	1.3	3.8	1.5	.5	1.3	2.6	-	-	10.8	1.3	0.2	-	-	( <sup>2</sup> )	.9	0.6	0.6	.1	-	-
\$2.40 and under \$2.50.....	7.9	1.7	5.8	2.4	4.2	.7	7.9	0.1	1.3	11.1	1.1	.3	0.3	0.3	0.9	4.9	-	.3	.1	-	-
\$2.50 and under \$2.60.....	14.8	4.8	9.7	3.9	9.3	.4	7.2	1.0	6.3	14.9	1.7	.9	.5	.5	1.4	8.6	.8	10.1	1.1	-	-
\$2.60 and under \$2.70.....	10.3	7.8	10.4	10.5	6.9	9.1	6.3	5.6	8.7	25.1	4.1	7.9	1.9	3.5	2.0	10.4	2.1	8.1	2.2	-	-
\$2.70 and under \$2.80.....	14.9	11.5	24.8	11.5	9.1	6.9	6.8	13.2	27.3	14.9	22.7	7.1	11.7	2.0	5.4	24.7	1.1	2.0	5.0	0.5	-
\$2.80 and under \$2.90.....	10.8	8.1	9.6	10.1	5.0	14.4	34.8	8.8	17.3	10.9	23.9	9.2	18.6	3.2	10.2	12.4	1.7	29.1	11.7	.6	-
\$2.90 and under \$3.00.....	5.9	13.5	10.3	17.3	5.9	13.7	7.5	12.7	15.7	1.8	10.0	4.8	15.8	3.5	10.9	23.0	4.6	5.6	13.4	1.6	-
\$3.00 and under \$3.10.....	4.6	14.5	5.8	21.4	9.4	14.2	6.4	15.1	.9	2.4	25.8	10.1	17.2	8.9	7.9	5.1	4.5	15.1	10.5	1.9	-
\$3.10 and under \$3.20.....	4.2	9.8	2.9	14.3	8.2	19.0	4.2	12.7	4.0	-	6.7	7.7	6.1	9.8	7.8	3.1	10.2	3.1	28.9	71.9	3.6
\$3.20 and under \$3.30.....	5.0	4.7	3.1	2.5	33.8	7.2	5.1	2.6	2.3	-	1.6	12.5	7.9	7.8	7.6	1.3	6.0	2.8	10.8	18.2	24.0
\$3.30 and under \$3.40.....	1.6	7.7	1.2	.7	2.2	4.7	3.2	7.6	1.5	.6	.3	14.7	3.1	10.5	12.2	1.5	15.8	3.1	6.6	5.3	4.1
\$3.40 and under \$3.50.....	1.7	3.3	.9	.1	1.8	4.1	.7	4.4	1.0	-	.4	14.9	2.8	10.5	16.9	1.7	6.1	1.7	3.7	-	52.8
\$3.50 and under \$3.60.....	1.8	2.4	.7	.1	1.2	1.0	1.1	6.0	2.1	-	.3	3.1	3.1	9.8	5.1	1.6	5.4	2.5	3.5	-	8.4
\$3.60 and under \$3.70.....	1.0	1.4	.6	-	.3	.6	1.3	2.4	1.3	-	-	1.0	2.6	11.5	2.8	.1	12.8	2.8	1.1	-	5.6
\$3.70 and under \$3.80.....	1.3	.9	.7	.3	.9	.2	.9	1.4	2.0	-	-	2.2	1.9	7.2	2.4	-	8.5	2.5	.5	-	.4
\$3.80 and under \$3.90.....	.9	1.0	.2	.1	.1	.2	.8	4.2	1.6	-	-	1.0	1.9	3.9	1.7	-	5.4	3.6	( <sup>2</sup> )	-	.3
\$3.90 and under \$4.00.....	1.2	.6	.1	.1	.1	.8	.5	1.4	1.4	-	-	1.2	1.3	2.1	1.1	-	2.0	1.1	.1	-	.8
\$4.00 and over.....	2.4	3.3	1.1	-	-	( <sup>2</sup> )	.7	.6	4.0	-	-	1.1	3.2	4.9	3.4	-	12.4	5.9	.5	-	-
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers.....	1,579	1,388	815	721	1,705	2,490	2,751	1,813	794	678	1,403	8,252	4,733	5,249	2,294	1,755	717	357	4,952	622	1,448
Average hourly earnings <sup>1</sup> .....	\$2.83	\$3.02	\$2.76	\$2.88	\$2.99	\$2.99	\$2.87	\$3.11	\$2.96	\$2.59	\$2.89	\$3.16	\$3.09	\$3.38	\$3.23	\$2.81	\$3.50	\$3.06	\$3.08	\$3.20	\$3.39

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.<sup>2</sup> Less than 0.05 percent.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 7. Earnings Distribution: Machine-Tool Operators, Production, Class B

(Percent distribution of men by straight-time hourly earnings,<sup>1</sup> in machinery manufacturing, 21 selected areas, March-May 1964)

Average hourly earnings <sup>1</sup>	New England			Middle Atlantic					South			Middle West					Far West				
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	Portland	San Francisco-Oakland
Under \$1.70	0.1	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
\$1.70 and under \$1.80	.3	-	-	0.3	-	1.1	2.3	-	0.3	2.5	-	-	-	-	-	-	-	-	-	-	-
\$1.80 and under \$1.90	1.2	0.3	-	.3	0.4	.5	.8	-	2.5	12.7	-	0.1	-	-	-	-	-	-	0.2	-	-
\$1.90 and under \$2.00	3.5	1.9	1.5	-	.2	2.1	1.6	-	.3	8.5	1.0	.3	-	-	-	0.9	-	2.5	2.3	-	-
\$2.00 and under \$2.10	6.6	1.0	3.6	2.6	1.4	3.7	2.6	-	.3	20.8	-	.6	0.2	0.2	-	2.8	0.2	.8	5.0	-	-
\$2.10 and under \$2.20	13.7	2.4	3.2	.3	.5	2.8	2.6	0.8	2.2	23.0	.2	.8	-	.2	-	3.3	1.6	8.3	15.0	-	-
\$2.20 and under \$2.30	12.9	4.3	8.3	-	2.5	5.1	3.3	.2	1.9	15.2	4.2	2.8	.6	2.1	-	7.2	1.9	7.4	8.3	-	-
\$2.30 and under \$2.40	13.4	5.5	19.2	.7	.8	5.3	4.4	9.6	5.0	8.1	7.7	5.7	1.1	4.2	3.7	5.9	1.9	9.9	10.8	-	-
\$2.40 and under \$2.50	15.6	10.1	18.2	15.2	3.8	10.1	6.5	4.4	13.4	4.9	8.8	5.0	7.6	1.9	9.3	3.8	6.2	5.0	8.9	1.1	2.2
\$2.50 and under \$2.60	11.2	15.1	14.7	16.2	4.0	15.8	9.9	10.7	33.5	3.5	12.5	11.8	5.8	6.1	7.5	28.3	11.7	31.4	12.7	6.4	2.2
\$2.60 and under \$2.70	9.5	9.5	8.5	22.2	4.6	8.1	12.7	18.9	9.6	.7	24.4	8.8	19.2	7.2	12.4	21.7	21.2	4.1	13.8	11.7	.8
\$2.70 and under \$2.80	5.0	9.4	8.6	6.3	8.3	20.4	6.7	21.8	11.2	-	21.1	15.7	18.5	3.1	8.5	10.9	14.8	18.2	13.1	5.3	-
\$2.80 and under \$2.90	-	8.8	2.4	23.9	5.1	3.9	11.6	11.9	4.0	-	14.4	11.6	11.9	16.3	12.1	8.6	7.2	4.1	6.2	43.6	37.4
\$2.90 and under \$3.00	.8	10.4	2.8	5.3	9.5	6.9	3.9	4.4	4.3	-	3.5	8.1	6.8	21.7	8.9	4.4	7.6	2.5	2.2	29.8	48.8
\$3.00 and under \$3.10	.4	9.2	1.9	3.2	23.0	9.9	12.2	2.5	2.2	-	.8	8.5	5.0	13.3	4.3	.8	3.7	2.5	.7	2.1	8.1
\$3.10 and under \$3.20	.3	5.3	1.3	1.9	17.0	.2	1.6	2.7	4.3	-	.6	3.7	3.3	9.7	7.0	.7	4.1	.8	-	-	-
\$3.20 and under \$3.30	3.8	4.1	1.7	.5	18.2	.3	1.4	.4	.6	-	.6	4.9	2.2	8.5	5.1	.4	6.0	-	.8	-	-
\$3.30 and under \$3.40	.1	1.4	.9	.3	.4	-	1.3	4.0	.6	-	2.4	2.5	.3	8.5	-	-	.4	-	-	-	-
\$3.40 and under \$3.50	.5	.7	1.1	-	-	2.1	1.3	.8	1.6	-	.4	1.9	2.3	4.3	4.5	.1	4.1	1.7	-	-	.4
\$3.50 and under \$3.60	.3	.4	.6	.3	.1	1.5	1.3	2.9	.6	-	-	1.1	2.2	.5	3.3	-	-	-	-	-	-
\$3.60 and under \$3.70	-	.1	.4	.2	.1	.2	2.1	.2	.6	-	-	.9	2.2	-	1.8	-	3.3	-	-	-	-
\$3.70 and under \$3.80	.3	.1	.8	-	-	-	2.0	1.9	.9	-	-	.9	1.6	.5	.7	-	1.4	-	-	-	-
\$3.80 and under \$3.90	.1	-	.2	-	-	-	1.6	1.7	-	-	-	1.1	2.0	-	.5	-	.6	-	-	-	-
\$3.90 and under \$4.00	.1	.1	-	-	-	-	1.2	-	-	-	-	1.1	2.0	-	.6	-	.6	-	-	-	-
\$4.00 and over	.3	.1	.2	-	-	-	3.9	-	-	-	-	2.0	3.0	-	1.1	-	1.4	.8	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	739	1,799	532	585	1,658	1,655	1,893	477	322	283	521	3,933	1,711	4,807	1,498	952	486	121	1,690	94	492
Average hourly earnings <sup>1</sup>	\$2.41	\$2.71	\$2.54	\$2.66	\$2.94	\$2.61	\$2.79	\$2.79	\$2.63	\$2.11	\$2.64	\$2.84	\$2.92	\$2.91	\$2.93	\$2.57	\$2.85	\$2.55	\$2.46	\$2.85	\$2.90

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 8. Earnings Distribution: Machine-Tool Operators, Production, Class C

(Percent distribution of men by straight-time hourly earnings, <sup>1</sup> in machinery manufacturing, 21 selected areas, March-May 1964)

Average hourly earnings <sup>1</sup>	New England			Middle Atlantic				South			Middle West						Far West				
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	Portland	San Francisco-Oakland
\$ 1.30 and under \$ 1.40.....	-	-	-	-	-	1.2	-	-	-	4.8	-	-	-	-	-	-	-	-	-	-	-
\$ 1.40 and under \$ 1.50.....	-	-	-	-	-	1.4	-	-	-	4.8	-	-	-	-	-	-	-	-	-	-	-
\$ 1.50 and under \$ 1.60.....	-	-	-	-	0.7	7.1	0.5	-	-	4.1	-	0.2	-	-	-	-	-	-	0.5	-	-
\$ 1.60 and under \$ 1.70.....	5.9	-	5.0	-	.4	3.6	4.8	-	-	9.7	-	2.0	-	-	-	-	-	-	2.7	-	-
\$ 1.70 and under \$ 1.80.....	11.2	-	-	-	9.9	14.9	6.7	-	-	30.3	-	6.7	-	-	-	17.4	-	-	5.8	-	-
\$ 1.80 and under \$ 1.90.....	12.3	0.7	3.3	-	8.1	6.0	4.5	-	19.8	22.1	3.0	8.7	-	0.6	-	.6	-	-	38.2	-	-
\$ 1.90 and under \$ 2.00.....	26.0	1.9	7.4	10.8	3.5	18.3	3.3	-	17.6	12.4	3.0	9.7	5.2	.7	2.3	12.0	-	5.9	5.5	-	-
\$ 2.00 and under \$ 2.10.....	14.1	2.4	8.3	-	11.9	5.8	7.3	-	10.4	7.6	10.8	14.7	4.5	1.3	12.7	7.2	3.1	17.6	1.4	-	-
\$ 2.10 and under \$ 2.20.....	21.9	7.2	26.4	2.7	5.7	3.9	5.3	8.0	13.7	4.1	6.9	15.4	5.2	3.0	10.7	5.4	11.7	11.8	7.2	-	19.0
\$ 2.20 and under \$ 2.30.....	4.1	3.0	24.0	17.6	7.5	9.2	7.8	2.3	12.9	-	21.2	11.3	7.0	4.9	16.9	7.8	14.8	17.6	16.1	-	19.0
\$ 2.30 and under \$ 2.40.....	1.1	6.4	12.4	1.4	7.3	5.8	6.7	5.7	13.7	-	18.7	6.7	8.4	12.1	5.6	13.2	15.4	-	5.3	-	-
\$ 2.40 and under \$ 2.50.....	2.6	2.2	5.8	8.1	6.8	5.9	9.2	27.3	2.9	-	18.7	8.1	12.4	11.6	13.8	8.4	26.5	-	10.6	-	12.1
\$ 2.50 and under \$ 2.60.....	-	3.2	3.3	16.2	4.0	7.8	2.0	4.5	2.9	-	9.4	5.3	39.2	7.5	2.0	25.1	10.5	11.8	6.3	7.7	-
\$ 2.60 and under \$ 2.70.....	-	5.2	1.7	13.5	13.2	1.1	41.1	10.2	3.6	-	2.0	4.1	7.4	6.7	5.9	1.2	2.5	23.5	.2	7.7	-
\$ 2.70 and under \$ 2.80.....	-	27.2	.8	10.8	3.5	7.1	.5	21.6	1.1	-	1.5	2.6	3.0	11.9	.8	1.2	1.9	11.8	.2	46.2	50.0
\$ 2.80 and under \$ 2.90.....	-	18.9	-	4.1	8.1	.7	-	-	1.1	-	-	1.0	6.4	9.1	6.5	-	1.2	-	-	38.5	-
\$ 2.90 and under \$ 3.00.....	-	4.4	.8	14.9	6.6	.1	-	-	.4	-	1.5	1.2	.2	4.8	3.9	.6	.6	-	-	-	-
\$ 3.00 and under \$ 3.10.....	-	3.5	-	-	1.8	-	-	19.3	-	-	1.0	.4	.3	21.8	1.1	-	.6	-	-	-	-
\$ 3.10 and under \$ 3.20.....	-	3.4	.8	-	.2	-	.3	-	-	-	.5	.5	.2	4.0	5.6	-	1.9	-	-	-	-
\$ 3.20 and under \$ 3.30.....	-	4.0	-	-	.4	.1	-	1.1	-	-	1.0	1.0	.2	-	4.5	-	2.5	-	-	-	-
\$ 3.30 and under \$ 3.40.....	.4	3.5	-	-	.2	.1	.2	-	-	-	.5	.1	-	-	2.5	-	-	-	-	-	-
\$ 3.40 and under \$ 3.50.....	.4	1.8	-	-	.2	-	-	-	-	-	.5	.1	-	-	2.3	-	1.9	-	-	-	-
\$ 3.50 and over.....	-	1.1	-	-	-	-	-	-	-	-	-	.3	.5	-	2.8	-	4.9	-	-	-	-
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers.....	269	1,057	121	74	455	1,104	643	88	278	145	203	1,883	597	1,296	355	167	162	17	584	26	232
Average hourly earnings <sup>1</sup> .....	\$ 1.97	\$ 2.71	\$ 2.19	\$ 2.49	\$ 2.32	\$ 2.06	\$ 2.34	\$ 2.62	\$ 2.13	\$ 1.76	\$ 2.32	\$ 2.18	\$ 2.46	\$ 2.67	\$ 2.52	\$ 2.21	\$ 2.49	\$ 2.36	\$ 2.06	\$ 2.78	\$ 2.47

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 9. Earnings Distribution: Assemblers, Class B

(Percent distribution of men by straight-time hourly earnings, <sup>1</sup> in machinery manufacturing, 20 selected areas, March-May 1964)

Average hourly earnings <sup>1</sup>	New England			Middle Atlantic					South			Middle West						Far West		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	San Francisco-Oakland
\$1.40 and under \$1.50-----	-	-	-	-	-	-	-	-	-	6.0	-	-	-	-	-	-	-	-	-	-
\$1.50 and under \$1.60-----	-	-	-	-	-	2.6	1.1	-	-	4.8	-	-	-	-	-	-	-	-	-	-
\$1.60 and under \$1.70-----	-	-	-	-	0.3	2.6	3.4	-	-	3.0	-	-	-	-	-	-	-	-	-	-
\$1.70 and under \$1.80-----	0.5	-	-	-	-	3.0	2.8	-	-	15.6	6.0	0.2	-	-	-	-	2.3	-	-	-
\$1.80 and under \$1.90-----	-	0.4	-	-	-	3.6	.9	-	-	9.0	3.0	.3	-	-	-	0.2	-	-	0.1	-
\$1.90 and under \$2.00-----	-	.3	-	-	-	4.4	.3	-	2.6	5.4	-	2.4	-	-	-	5.2	-	-	.2	-
\$2.00 and under \$2.10-----	3.8	2.8	-	-	.6	4.0	4.1	2.5	.6	9.6	.6	5.0	-	-	-	3.3	.5	-	9.6	-
\$2.10 and under \$2.20-----	4.3	15.5	4.7	-	.6	8.2	5.3	-	3.9	15.6	7.1	3.2	-	-	-	3.4	6.7	6.0	22.0	-
\$2.20 and under \$2.30-----	2.4	5.1	8.9	-	1.5	5.0	12.8	-	7.1	10.8	5.4	7.4	-	-	0.8	18.3	4.4	14.0	11.9	-
\$2.30 and under \$2.40-----	24.9	28.5	19.4	6.6	25.7	8.7	5.5	2.5	10.4	16.2	15.5	5.2	1.1	5.0	3.1	4.2	5.1	26.0	21.3	-
\$2.40 and under \$2.50-----	24.9	9.7	15.2	8.2	4.0	11.1	9.4	3.0	7.1	4.2	20.2	4.4	4.3	1.4	11.6	10.2	24.8	10.0	11.8	-
\$2.50 and under \$2.60-----	13.3	12.3	12.6	1.6	4.6	7.4	4.2	4.5	14.9	-	7.1	9.3	14.6	5.9	11.9	22.4	3.7	18.0	5.2	-
\$2.60 and under \$2.70-----	7.9	9.6	12.6	35.2	6.2	13.4	17.4	10.4	32.5	-	16.7	7.4	15.3	2.4	5.9	8.1	13.5	18.0	7.3	-
\$2.70 and under \$2.80-----	4.6	5.7	19.9	10.7	4.9	11.5	30.3	9.0	7.8	-	17.9	13.0	22.6	1.9	11.2	4.3	8.8	4.0	2.8	-
\$2.80 and under \$2.90-----	1.6	2.2	2.6	25.4	21.5	1.2	.8	18.9	2.6	-	-	15.2	10.5	34.0	8.3	8.0	-	4.0	1.3	38.7
\$2.90 and under \$3.00-----	2.4	3.4	1.0	9.8	9.4	10.3	.4	11.4	1.3	-	-	7.3	4.3	22.6	7.2	4.9	1.2	-	.7	37.7
\$3.00 and under \$3.10-----	1.6	1.7	.5	.8	9.4	-	.4	7.5	2.6	-	.6	6.7	3.5	6.5	3.1	2.2	5.1	-	5.2	22.6
\$3.10 and under \$3.20-----	1.9	1.2	1.0	-	4.9	.1	-	1.0	1.9	-	-	1.9	4.1	17.1	4.1	1.0	.7	-	.4	1.0
\$3.20 and under \$3.30-----	-	.7	.5	.8	5.9	.3	.3	2.0	1.9	-	-	4.0	2.4	3.0	4.4	1.6	4.6	-	-	-
\$3.30 and under \$3.40-----	.3	.3	.5	-	.5	-	.3	9.5	.6	-	-	.6	1.7	-	21.7	.9	1.9	-	-	-
\$3.40 and under \$3.50-----	.5	.5	.5	-	-	2.4	-	5.5	-	-	-	.5	1.4	-	1.9	-	2.3	-	-	-
\$3.50 and under \$3.60-----	.5	-	-	-	-	-	.3	1.5	.6	-	-	.3	1.2	-	.3	.3	3.2	-	-	-
\$3.60 and under \$3.70-----	.8	-	-	-	-	-	.3	.5	.6	-	-	.3	4.3	-	1.0	.5	3.5	-	-	-
\$3.70 and under \$3.80-----	.5	.1	-	-	-	-	-	.6	-	-	-	.7	1.2	-	.7	.2	1.4	-	-	-
\$3.80 and under \$3.90-----	1.1	-	-	.8	-	-	-	9.5	-	-	-	.3	1.3	-	.3	-	3.7	-	-	-
\$3.90 and under \$4.00-----	1.4	-	-	-	-	-	-	1.0	-	-	-	.7	2.6	-	1.0	.8	1.4	-	-	-
\$4.00 and over-----	.5	-	-	-	-	-	-	-	-	-	-	3.9	3.8	-	1.2	.1	1.2	-	-	-
Total-----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers-----	369	759	191	122	657	755	759	201	154	167	168	2,593	952	1,290	1,248	1,051	431	50	1,162	310
Average hourly earnings <sup>1</sup> -----	\$2.54	\$2.46	\$2.53	\$2.71	\$2.70	\$2.42	\$2.47	\$3.00	\$2.60	\$1.99	\$2.44	\$2.73	\$2.92	\$2.90	\$2.93	\$2.53	\$2.76	\$2.45	\$1.36	\$2.93

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 10. Earnings Distribution: Laborers, Material Handling

(Percent distribution of men by straight-time hourly earnings,<sup>1</sup> in machinery manufacturing, 19 selected areas, March-May 1964)

Average hourly earnings <sup>1</sup>	New England			Middle Atlantic					South		Middle West					Far West			
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Dallas	Houston	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Los Angeles-Long Beach	Portland	San Francisco-Oakland
\$ 1.30 and under \$ 1.40-----	-	-	-	-	1.0	4.5	-	-	16.8	-	-	-	-	-	-	-	-	-	-
\$ 1.40 and under \$ 1.50-----	-	-	-	-	-	5.7	2.1	-	9.3	9.7	-	-	-	-	-	-	-	-	-
\$ 1.50 and under \$ 1.60-----	0.4	-	-	-	-	10.8	1.7	-	9.3	14.3	-	-	-	-	-	-	-	-	-
\$ 1.60 and under \$ 1.70-----	.4	-	-	-	1.0	9.2	11.0	-	14.0	1.6	0.1	-	-	-	-	-	-	-	-
\$ 1.70 and under \$ 1.80-----	22.7	3.0	-	-	1.0	3.7	1.4	-	7.5	17.1	2.5	-	-	-	-	-	5.3	-	-
\$ 1.80 and under \$ 1.90-----	2.1	11.3	7.8	-	11.5	2.7	2.7	-	33.6	10.5	10.4	5.7	-	-	-	-	-	-	-
\$ 1.90 and under \$ 2.00-----	1.3	14.6	26.0	-	29.0	5.5	.3	-	5.6	.8	11.5	-	-	4.3	7.3	1.6	-	-	-
\$ 2.00 and under \$ 2.10-----	24.0	23.2	15.6	-	1.8	6.3	-	9.2	2.8	10.5	3.8	.2	0.6	.3	13.2	7.5	-	-	-
\$ 2.10 and under \$ 2.20-----	3.0	13.9	14.3	-	14.6	3.9	10.3	-	.9	12.4	7.1	5.7	7.5	10.3	4.1	12.1	-	-	-
\$ 2.20 and under \$ 2.30-----	11.6	7.9	13.0	6.4	14.9	5.3	4.8	5.8	-	.8	14.2	12.2	0.5	6.7	27.2	36.3	24.3	-	-
\$ 2.30 and under \$ 2.40-----	12.4	10.9	10.4	39.7	5.2	15.7	13.0	38.7	-	14.7	1.8	13.2	3.3	9.0	34.1	14.6	4.7	-	-
\$ 2.40 and under \$ 2.50-----	21.9	4.0	6.5	53.8	2.3	3.3	28.1	24.3	-	1.2	10.7	36.4	1.1	35.3	12.9	5.0	4.7	4.9	-
\$ 2.50 and under \$ 2.60-----	-	4.0	1.3	-	1.6	11.7	.7	11.6	-	2.7	12.8	8.2	16.9	8.5	2.0	15.8	5.6	14.6	-
\$ 2.60 and under \$ 2.70-----	-	7.0	-	-	7.3	2.5	-	-	-	-	24.6	4.7	37.0	5.4	2.0	5.9	64.6	18.8	-
\$ 2.70 and under \$ 2.80-----	-	.3	-	-	.5	3.9	.3	-	-	3.5	.1	8.5	13.9	26.3	8.9	1.8	5.3	21.9	-
\$ 2.80 and under \$ 2.90-----	-	-	-	-	7.3	.2	.3	8.1	-	.4	.4	1.7	15.5	.7	-	23.1	6.1	18.8	-
\$ 2.90 and under \$ 3.00-----	-	-	-	-	.8	.2	-	2.3	-	-	.2	.5	10.7	-	-	-	9.8	40.6	-
\$ 3.00 and under \$ 3.10-----	-	-	-	-	-	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-
\$ 3.10 and under \$ 3.20-----	-	-	-	-	-	.8	23.3	-	-	-	-	1.7	-	-	-	-	-	-	-
\$ 3.20 and under \$ 3.30-----	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
\$ 3.30 and over-----	-	-	5.2	-	-	4.1	-	-	-	-	1.0	-	-	-	-	-	-	-	-
Total-----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers-----	233	302	77	78	383	489	292	173	107	258	1,965	401	663	719	302	342	321	82	32
Average hourly earnings <sup>1</sup> -----	\$ 2.12	\$ 2.15	\$ 2.18	\$ 2.39	\$ 2.15	\$ 2.10	\$ 2.40	\$ 2.41	\$ 1.66	\$ 1.93	\$ 2.29	\$ 2.43	\$ 2.71	\$ 2.50	\$ 2.34	\$ 2.27	\$ 2.40	\$ 2.66	\$ 2.82

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 11. Method of Wage Payment: Plant Workers

(Percent of production workers in machinery manufacturing, 21 selected areas, March-May 1964)

Method of Wage Payment	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
All workers.....	100	100	100	100	100	100	100	100	100	100	100
Time-rated workers <sup>1</sup> .....	85	66	74	80	79	86	83	74	78	100	95
Formal plan.....	47	53	65	66	50	37	57	65	68	69	70
Single rate.....	15	16	5	16	23	11	13	34	6	4	6
Range of rates.....	31	37	60	50	27	27	43	31	61	65	64
Individual rates.....	38	13	9	14	29	49	27	9	10	31	25
Incentive workers.....	15	34	26	20	21	14	17	26	22	-	5
Individual piecework.....	1	18	9	-	2	6	-	2	-	-	-
Group piecework.....	-	-	-	-	-	2	-	-	-	-	-
Individual bonus.....	13	10	15	18	14	3	9	10	17	-	5
Group bonus.....	1	6	3	2	5	3	7	14	5	-	( <sup>2</sup> )
	Middle West					Far West					
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	Portland	San Francisco-Oakland	
All workers.....	100	100	100	100	100	100	100	100	100	100	
Time-rated workers <sup>1</sup> .....	82	80	96	59	93	81	90	98	100	100	
Formal plan.....	62	62	71	55	83	81	66	78	100	100	
Single rate.....	11	21	27	7	35	36	60	7	81	86	
Range of rates.....	51	42	44	48	48	44	6	71	19	14	
Individual rates.....	20	18	25	4	11	1	23	20	-	-	
Incentive workers.....	18	20	4	41	7	19	10	2	-	-	
Individual piecework.....	9	6	( <sup>2</sup> )	19	4	6	10	( <sup>2</sup> )	-	-	
Group piecework.....	( <sup>2</sup> )	2	( <sup>2</sup> )	3	2	5	-	( <sup>2</sup> )	-	-	
Individual bonus.....	8	9	3	15	-	9	-	1	-	-	
Group bonus.....	1	3	1	4	1	-	-	( <sup>2</sup> )	-	-	

<sup>1</sup> For definitions of the 3 basic types of rate structures for time-rated workers (single rate, range of rates, and individual rates), see appendix B.

<sup>2</sup> Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 12. Scheduled Weekly Hours: Plant Workers

(Percent of production workers in machinery manufacturing, 21 selected areas, March-May 1964)

Weekly hours <sup>1</sup>	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
All workers.....	100	100	100	100	100	100	100	100	100	100	100
Under 37½ hours.....	-	-	-	-	-	( <sup>2</sup> )	-	-	-	-	-
37½ hours.....	-	-	-	-	-	-	-	-	30	-	-
Over 37½ and under 40 hours.....	-	-	-	-	-	1	-	-	-	-	-
40 hours.....	80	82	77	77	89	88	71	87	63	44	91
Over 40 and under 45 hours.....	3	3	-	-	1	1	20	-	-	9	-
45 hours.....	8	2	12	11	3	3	3	-	-	13	7
Over 45 and under 48 hours.....	3	2	-	-	-	-	-	-	-	-	-
48 hours.....	-	-	8	4	-	( <sup>2</sup> )	( <sup>2</sup> )	9	-	9	2
Over 48 and under 50 hours.....	-	-	-	-	-	-	1	-	-	-	-
50 hours.....	3	8	3	-	2	2	-	2	2	21	-
Over 50 and under 58 hours.....	4	3	-	7	3	2	2	-	5	4	-
58 hours and over.....	-	( <sup>2</sup> )	-	-	1	3	4	2	-	-	-
	Middle West						Far West				
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	Portland	San Francisco-Oakland	
All workers.....	100	100	100	100	100	100	100	100	100	100	
Under 37½ hours.....	-	-	-	-	-	-	-	-	-	-	
37½ hours.....	-	8	-	4	-	-	-	-	-	-	
Over 37½ and under 40 hours.....	-	-	-	-	-	-	-	-	-	-	
40 hours.....	79	49	50	73	85	93	89	78	100	95	
Over 40 and under 45 hours.....	( <sup>2</sup> )	1	1	11	-	-	-	8	-	-	
45 hours.....	6	16	2	7	3	4	11	2	-	5	
Over 45 and under 48 hours.....	( <sup>2</sup> )	3	1	-	-	-	-	-	-	-	
48 hours.....	4	4	14	-	-	2	-	3	-	-	
Over 48 and under 50 hours.....	1	-	-	-	-	-	-	-	-	-	
50 hours.....	4	4	3	3	12	-	-	1	-	-	
Over 50 and under 58 hours.....	5	10	12	2	-	2	-	2	-	-	
58 hours and over.....	( <sup>2</sup> )	5	<sup>3</sup> 16	( <sup>2</sup> )	-	-	-	1	-	-	

<sup>1</sup> Data relate to the predominant work schedule for full-time day-shift workers in each establishment.<sup>2</sup> Less than 0.5 percent.<sup>3</sup> Virtually all were in plants with a 58-hour schedule.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 13. Scheduled Weekly Hours: Office Workers

(Percent of office workers in machinery manufacturing, 21 selected areas, March-May 1964)

Weekly hours <sup>1</sup>	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
All workers.....	100	100	100	100	100	100	100	100	100	100	100
Under 35 hours.....	-	-	-	-	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	-	-	-	-
35 hours.....	3	( <sup>2</sup> )	-	-	10	22	5	4	-	-	-
Over 35 and under 37½ hours.....	6	-	-	-	-	3	1	-	-	-	-
37½ hours.....	11	2	-	-	3	35	24	5	40	-	-
Over 37½ and under 40 hours.....	2	3	-	-	5	18	12	-	-	-	-
40 hours.....	76	94	100	100	81	21	56	92	60	86	96
Over 40 hours.....	1	( <sup>2</sup> )	-	-	( <sup>2</sup> )	( <sup>2</sup> )	2	-	-	14	4
	Middle West					Far West					
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	Portland	San Francisco-Oakland	
All workers.....	100	100	100	100	100	100	100	100	100	100	
Under 35 hours.....	-	( <sup>2</sup> )	( <sup>2</sup> )	-	-	-	-	-	-	-	-
35 hours.....	-	-	( <sup>2</sup> )	1	-	-	-	-	-	-	-
Over 35 and under 37½ hours.....	2	-	-	-	-	-	-	-	-	-	-
37½ hours.....	6	-	2	5	-	-	-	-	-	-	-
Over 37½ and under 40 hours.....	6	-	1	1	2	24	-	-	-	-	5
40 hours.....	86	98	88	93	98	76	98	98	100	-	95
Over 40 hours.....	-	2	8	-	-	-	2	2	-	-	-

<sup>1</sup> Data relate to the predominant work schedule for full-time day-shift workers in each establishment.

<sup>2</sup> Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 14. Overtime Premium Pay: Plant Workers

(Percent of production workers in machinery manufacturing establishments with provisions for daily or weekly overtime by rate of pay and hours after which effective, 21 selected areas, March-May 1964)

Item	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
<u>Daily overtime</u>											
Time and one-half effective after:											
8 hours	<sup>1</sup> 92	<sup>2</sup> 93	82	89	89	85	93	95	<sup>2</sup> 97	78	61
Other	1	-	-	-	5	5	2	-	-	-	-
No premium pay	-	7	13	8	5	3	5	4	3	5	39
No formal policy	8	-	5	3	( <sup>3</sup> )	6	-	1	-	18	-
<u>Weekly overtime</u>											
Time and one-half effective after:											
40 hours	<sup>1</sup> 100	100	100	100	99	93	98	100	100	100	100
Other	-	-	-	-	1	6	2	-	-	-	-
No premium pay	-	-	-	-	-	-	-	-	-	-	-
No formal policy	-	-	-	-	-	-	-	-	-	-	-
<u>Middle West</u>						<u>Far West</u>					
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	Portland	San Francisco-Oakland	
<u>Daily overtime</u>											
Time and one-half effective after:											
8 hours	81	95	95	<sup>4</sup> 95	99	<sup>2</sup> 95	88	97	<sup>5</sup> 78	<sup>5</sup> 53	
Other	3	-	-	4	-	2	-	( <sup>3</sup> )	<sup>6</sup> 22	<sup>6</sup> 42	
No premium pay	13	4	2	1	( <sup>3</sup> )	2	-	1	-	-	
No formal policy	3	1	3	-	-	-	12	1	-	5	
<u>Weekly overtime</u>											
Time and one-half effective after:											
40 hours	98	98	100	96	100	49	100	100	<sup>7</sup> 78	<sup>8</sup> 45	
Other	2	2	-	4	-	5	-	-	<sup>9</sup> 22	<sup>9</sup> 55	
No premium pay	-	-	-	-	-	-	-	-	-	-	
No formal policy	-	-	-	-	-	<sup>10</sup> 46	-	-	-	-	

<sup>1</sup> Includes workers in some establishments which also provide double time after 12 hours a day, and in other establishments which also provide time and one-half for work outside an employee's regular work schedule.

<sup>2</sup> Includes workers in some establishments which also provide double time after 12 hours a day.

<sup>3</sup> Less than 0.5 percent.

<sup>4</sup> Includes workers in some establishments which also provide double time after 10 hours and in other establishments which also provide double time after 12 hours.

<sup>5</sup> Includes workers in some establishments which also provide double time after 10 hours a day.

<sup>6</sup> Workers in establishments which provide double time after 8 hours a day.

<sup>7</sup> Includes workers in some establishments which also provide double time after 44 hours.

<sup>8</sup> Includes workers in some establishments which provide double time if fewer than one-half of the journeymen are working and time and one-half if one-half or more of the journeymen are working.

<sup>9</sup> Workers in establishments which provide double time after 40 hours a week.

<sup>10</sup> Workers in establishments nearly all of which provide time and one-half for the first 4 hours on Saturday and double time thereafter on Saturday and on Sunday.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 15. Shift Differential Provisions: Plant Workers

(Percent of production workers in machinery manufacturing, 21 selected areas, March-May 1964)

Shift differential <sup>1</sup>	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
<u>Second shift</u>											
Workers in establishments having second-shift provisions	76.5	89.6	89.3	90.9	77.5	58.2	89.8	98.2	95.2	75.8	91.6
With shift differential	76.5	89.6	89.3	89.1	77.5	58.2	89.8	96.5	95.2	67.8	87.6
Uniform cents per hour	17.7	37.3	56.0	72.1	22.7	9.0	18.1	78.8	7.8	65.4	86.7
5 cents	-	-	19.0	2.6	3.4	2.6	1.7	1.6	-	-	1.9
Over 5 and under 10 cents	-	-	-	-	-	-	1.9	68.7	.8	23.3	74.8
10 cents	6.9	4.7	32.3	43.0	16.5	2.3	6.7	8.5	7.0	31.3	10.1
Over 10 and under 15 cents	3.4	17.7	4.6	8.8	.4	2.4	6.3	-	-	5.6	-
15 cents	5.2	12.7	-	14.5	-	1.8	1.2	-	-	2.5	-
Over 15 and under 20 cents	-	2.1	-	-	-	-	-	-	-	-	-
20 cents	2.3	-	-	3.2	-	-	1.3	-	-	2.8	-
Over 20 cents	-	-	-	-	2.4	-	-	-	-	-	-
Uniform percentage	54.3	51.6	33.4	17.0	54.1	49.2	71.6	11.8	81.3	2.5	-
Under 5 percent	-	-	-	-	-	-	-	-	-	-	-
5 percent	-	21.0	5.7	-	15.7	.2	.5	2.0	30.4	-	-
Over 5 and under 10 percent	-	19.9	-	11.3	2.3	2.0	5.7	-	17.5	-	-
10 percent	48.3	10.7	27.7	5.7	34.3	24.9	64.2	9.8	33.4	2.5	-
Over 10 and under 15 percent	5.5	-	-	-	-	5.7	-	-	-	-	-
15 percent	.5	-	-	-	1.7	16.4	1.2	-	-	-	-
Full day's pay for reduced hours	4.6	-	-	-	-	-	-	2.5	-	-	-
Other formal pay differential <sup>2</sup>	-	.7	-	-	.7	-	-	3.3	6.0	-	1.0
With no shift differential	-	-	-	1.8	-	-	-	1.8	-	7.9	3.9
<u>Third or other late shift</u>											
Workers in establishments having third- or other late-shift provisions	65.5	80.7	81.6	71.8	72.7	46.6	72.5	88.0	89.7	40.0	71.5
With shift differential	65.5	80.7	81.6	71.8	72.7	46.6	72.5	88.0	89.7	40.0	71.5
Uniform cents per hour	10.5	31.2	48.2	54.8	22.7	6.4	8.7	75.0	5.8	40.0	69.0
5 cents	-	-	-	-	3.4	-	-	-	-	-	-
Over 5 and under 10 cents	-	-	-	2.6	-	-	-	1.6	-	-	-
10 cents	3.2	-	16.1	3.8	4.5	2.3	.1	1.3	2.5	13.7	1.7
Over 10 and under 15 cents	5.0	13.2	-	6.0	-	2.4	4.4	72.1	.8	20.9	45.4
15 cents	-	18.0	17.4	39.1	12.0	-	4.2	-	-	-	-
Over 15 and under 20 cents	-	-	-	-	.4	-	-	-	-	-	21.9
20 cents	2.3	-	14.6	3.2	-	-	-	-	2.5	5.4	-
Over 20 cents	-	-	-	-	2.4	1.8	-	-	-	-	-
Uniform percentage	50.4	49.6	33.4	17.0	49.2	40.2	62.1	11.8	77.8	-	-
5 percent	-	4.4	-	-	-	-	-	2.0	-	-	-
Over 5 and under 10 percent	-	2.0	-	1.2	2.3	-	6.2	-	11.4	-	-
10 percent	31.6	43.1	33.4	15.8	45.2	17.8	45.9	9.8	66.5	-	-
Over 10 and under 15 percent	-	-	-	-	-	4.7	4.9	-	-	-	-
15 percent	18.0	-	-	-	1.7	16.9	5.1	-	-	-	-
20 percent	.9	-	-	-	-	.8	-	-	-	-	-
Full day's pay for reduced hours	4.6	-	-	-	-	-	-	-	-	-	-
Other formal pay differential <sup>2</sup>	-	-	-	-	.7	-	1.7	1.2	6.0	-	2.5

See footnotes at end of table.

Table 15. Shift Differential Provisions: Plant Workers—Continued

(Percent of production workers in machinery manufacturing, 21 selected areas, March–May 1964)

Shift differential <sup>1</sup>	Middle West						Far West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis– St. Paul	St. Louis	Denver	Los Angeles– Long Beach	Portland	San Francisco– Oakland
<u>Second shift</u>										
Workers in establishments having										
second-shift provisions .....	91.3	93.8	92.3	94.5	90.0	88.7	84.0	84.9	95.7	90.6
With shift differential .....	89.8	91.8	90.9	94.2	90.0	88.7	84.0	84.9	95.7	90.6
Uniform cents per hour .....	35.0	65.0	58.7	77.4	77.9	26.9	81.2	56.3	6.0	2.5
5 cents .....	-	-	1.7	1.0	2.1	5.8	-	.3	-	-
Over 5 and under 10 cents .....	3.4	11.6	4.1	21.5	3.2	4.1	4.4	4.0	-	-
10 cents .....	11.2	23.7	10.4	12.9	44.6	12.7	73.7	24.4	-	-
Over 10 and under 15 cents .....	13.0	15.2	4.8	21.7	10.6	.6	-	11.5	-	-
15 cents .....	5.7	14.6	30.3	15.1	4.7	-	-	10.4	-	-
Over 15 and under 20 cents .....	-	-	-	-	-	-	-	-	-	-
20 cents .....	1.1	-	6.7	-	12.6	1.4	3.1	4.4	-	-
Over 20 cents .....	.6	-	.6	5.2	-	2.3	-	1.2	6.0	2.5
Uniform percentage .....	43.0	22.0	30.1	15.2	12.2	53.6	-	6.3	-	8.1
Under 5 percent .....	-	-	-	-	-	-	-	1.3	-	-
5 percent .....	-	2.5	19.3	10.5	-	20.2	-	3.5	-	-
Over 5 and under 10 percent .....	2.5	3.8	-	4.4	-	-	-	.6	-	-
10 percent .....	38.8	15.6	10.8	.3	12.2	33.4	-	-	-	8.1
Over 10 and under 15 percent .....	-	-	-	-	-	-	-	.9	-	-
15 percent .....	1.8	-	-	-	-	-	-	-	-	-
Full day's pay for reduced hours .....	.8	-	-	-	-	-	-	.8	-	-
Other formal pay differential <sup>2</sup> .....	11.1	4.8	2.1	1.6	-	8.3	2.8	21.5	89.7	80.0
With no shift differential .....	1.5	2.0	1.5	.3	-	-	-	-	-	-
<u>Third or other late shift</u>										
Workers in establishments having third-										
or other late-shift provisions .....	64.9	74.8	76.8	89.0	62.0	71.9	55.0	60.0	93.0	86.0
With shift differential .....	64.9	74.8	76.8	89.0	62.0	71.9	55.0	60.0	93.0	86.0
Uniform cents per hour .....	24.0	47.2	44.7	56.1	58.8	10.3	28.1	13.7	-	2.5
5 cents .....	-	-	-	-	-	-	-	-	-	-
Over 5 and under 10 cents .....	1.5	5.7	2.2	2.1	-	-	-	-	-	-
10 cents .....	.4	11.0	2.5	13.6	3.2	2.6	4.4	.3	-	-
Over 10 and under 15 cents .....	9.8	9.5	2.8	7.8	13.8	2.1	-	-	-	-
15 cents .....	8.3	14.5	8.2	12.1	30.0	1.9	23.7	8.2	-	-
Over 15 and under 20 cents .....	.7	6.5	3.9	2.5	-	-	-	.4	-	-
20 cents .....	2.6	-	18.9	12.8	5.1	-	-	.7	-	-
Over 20 cents .....	.6	-	6.2	5.2	6.7	3.7	-	4.1	-	2.5
Uniform percentage .....	27.5	18.9	27.9	14.2	3.2	47.5	-	-	-	3.5
5 percent .....	-	-	-	.5	-	1.4	-	-	-	-
Over 5 and under 10 percent .....	-	1.4	-	3.8	-	-	-	-	-	-
10 percent .....	23.4	16.2	27.9	9.9	3.2	46.2	-	-	-	-
Over 10 and under 15 percent .....	1.2	-	-	-	-	-	-	-	-	-
15 percent .....	2.9	1.2	-	-	-	-	-	-	-	3.5
20 percent .....	-	-	-	-	-	-	-	-	-	-
Full day's pay for reduced hours .....	-	-	.9	-	-	-	-	.5	-	-
Other formal pay differential <sup>2</sup> .....	13.4	8.7	3.2	18.7	-	14.1	26.9	45.9	93.0	80.0

<sup>1</sup> Refers to policies of establishments either currently operating late shifts or having provisions covering late shifts.<sup>2</sup> Includes combination plans such as full day's pay for reduced hours, plus "cents" or "percent" differential.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 16. Shift Differential Practices: Plant Workers

(Percent of production workers in machinery manufacturing, 21 selected areas, March-May 1964)

Shift differential	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
<u>Second shift</u>											
Workers employed on second shift.....	7.1	12.0	14.4	15.0	11.1	5.6	16.4	21.4	18.5	15.2	23.2
Receiving shift differential.....	7.1	12.0	14.4	14.8	11.1	5.6	16.4	20.9	18.5	14.9	22.6
Uniform cents per hour.....	2.3	5.7	8.2	10.8	2.0	1.1	3.1	17.5	.2	14.3	22.6
5 cents.....	-	-	.8	.5	.2	.2	.1	-	-	-	.3
Over 5 and under 10 cents.....	-	-	-	-	-	-	.1	15.1	-	4.4	20.9
10 cents.....	.4	.7	5.6	5.6	1.6	-	.5	2.5	.2	7.1	1.4
Over 10 and under 15 cents.....	.9	2.7	1.8	.9	.1	.4	2.1	-	-	2.2	-
15 cents.....	.7	1.6	-	3.0	-	.5	.1	-	-	.6	-
Over 15 and under 20 cents.....	-	.6	-	-	-	-	-	-	-	-	-
20 cents.....	.3	-	-	.9	-	-	.2	-	-	-	-
Over 20 cents.....	-	-	-	.2	-	-	-	-	-	-	-
Uniform percentage.....	4.8	6.2	6.2	3.9	8.8	4.4	13.3	2.0	17.1	.7	-
Under 5 percent.....	-	-	-	-	-	-	-	-	-	-	-
5 percent.....	-	1.3	.9	-	3.6	-	-	.3	9.5	-	-
Over 5 and under 10 percent.....	-	4.7	-	2.7	.6	.2	-	-	2.6	-	-
10 percent.....	3.3	.2	5.3	1.3	4.4	1.9	13.3	1.8	5.1	.7	-
Over 10 and under 15 percent.....	1.5	-	-	-	.3	2.1	-	-	-	-	-
15 percent.....	-	-	-	-	-	-	-	-	-	-	-
Full day's pay for reduced hours.....	-	-	-	-	.3	2.1	-	-	-	-	-
Other formal pay differential <sup>1</sup> .....	-	.1	-	-	.2	-	-	1.3	1.1	-	-
Receiving no shift differential.....	-	-	-	.3	-	-	-	.5	-	.3	.6
<u>Third or other late shift</u>											
Workers employed on third or other late shift.....	.2	1.5	.8	1.4	.5	.2	5.0	7.7	10.1	1.6	4.9
Receiving shift differential.....	.2	1.5	.8	1.4	.5	.2	5.0	7.7	10.1	1.6	4.9
Uniform cents per hour.....	-	.4	.5	.5	.2	.1	-	6.3	-	1.6	4.9
10 cents.....	-	-	-	-	-	-	-	.1	-	.1	-
Over 10 and under 15 cents.....	-	.3	-	-	-	-	-	6.2	-	1.5	3.6
15 cents.....	-	.2	.5	.5	( <sup>2</sup> )	-	-	-	-	-	-
Over 15 and under 20 cents.....	-	-	-	-	-	-	-	-	-	-	1.3
20 cents.....	-	-	-	-	-	-	-	-	-	-	-
Over 20 cents.....	-	-	-	-	-	.1	-	-	-	-	-
Uniform percentage.....	.2	1.0	.3	.9	.3	.1	4.9	1.3	9.7	-	-
5 percent.....	-	.2	-	-	-	-	-	.3	-	-	-
Over 5 and under 10 percent.....	-	-	-	-	-	-	-	-	.8	-	-
10 percent.....	( <sup>2</sup> )	.8	.3	.9	.2	.1	4.4	1.1	8.9	-	-
Over 10 and under 15 percent.....	-	-	-	-	-	-	.2	-	-	-	-
15 percent.....	.1	-	-	-	.1	( <sup>2</sup> )	.3	-	-	-	-
20 percent.....	-	-	-	-	-	( <sup>2</sup> )	-	-	-	-	-
Full day's pay for reduced hours.....	-	-	-	-	-	-	-	-	-	-	-
Other formal pay differential <sup>1</sup> .....	-	-	-	-	( <sup>2</sup> )	-	.1	.1	.4	-	-

See footnotes at end of table.

Table 16. Shift Differential Practices: Plant Workers—Continued

(Percent of production workers in machinery manufacturing, 21 selected areas, March–May 1964)

Shift differential	Middle West						Far West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis— St. Paul	St. Louis	Denver	Los Angeles— Long Beach	Portland	San Francisco— Oakland
<u>Second shift</u>										
Workers employed on second shift.....	15.8	18.9	18.3	20.4	14.5	12.0	14.7	14.7	21.0	10.2
Receiving shift differential.....	15.7	18.0	17.9	20.3	14.5	12.0	14.7	14.7	21.0	10.2
Uniform cents per hour.....	6.1	11.8	11.4	16.5	12.7	4.9	14.7	9.7	1.1	.3
5 cents.....	-	-	.1	-	-	1.5	-	.1	-	-
Over 5 and under 10 cents.....	.3	2.2	.7	4.3	.7	-	-	.6	-	-
10 cents.....	1.4	4.3	1.7	2.1	6.7	2.5	14.2	3.2	-	-
Over 10 and under 15 cents.....	3.1	3.4	1.1	5.3	2.4	-	-	2.9	-	-
15 cents.....	1.0	1.9	6.4	3.1	.4	-	-	2.0	-	-
Over 15 and under 20 cents.....	-	-	-	-	-	-	-	-	-	-
20 cents.....	.2	-	1.3	-	2.5	.5	.5	.5	-	-
Over 20 cents.....	.1	-	.1	1.7	.4	-	.4	.4	1.1	.3
Uniform percentage.....	6.7	5.1	6.3	3.1	1.8	6.5	-	.8	-	.8
Under 5 percent.....	-	-	-	-	-	-	-	.3	-	-
5 percent.....	-	.7	4.4	1.9	-	4.9	-	.4	-	-
Over 5 and under 10 percent.....	.7	1.3	-	1.3	-	-	-	.1	-	-
10 percent.....	5.7	3.1	1.9	-	1.8	1.7	-	-	-	.8
Over 10 and under 15 percent.....	-	-	-	-	-	-	-	( <sup>2</sup> )	-	-
15 percent.....	.3	-	-	-	-	-	-	-	-	-
Full day's pay for reduced hours.....	.1	-	-	-	-	-	-	.1	-	-
Other formal pay differential <sup>1</sup> .....	2.9	1.1	.2	.7	-	.5	-	4.1	19.9	9.1
Receiving no shift differential.....	.1	.8	.5	.1	-	-	-	-	-	-
<u>Third or other late shift</u>										
Workers employed on third or other late shift.....	3.9	2.3	1.6	5.4	1.2	1.4	1.7	1.2	6.0	.3
Receiving shift differential.....	3.9	2.3	1.6	5.4	1.2	1.4	1.7	1.2	6.0	.3
Uniform cents per hour.....	1.7	1.8	.2	3.4	1.2	.1	.8	( <sup>2</sup> )	-	-
10 cents.....	-	( <sup>2</sup> )	( <sup>2</sup> )	.3	-	-	-	-	-	-
Over 10 and under 15 cents.....	1.2	1.7	.1	1.0	.1	-	-	-	-	-
15 cents.....	.3	.1	( <sup>2</sup> )	.3	.4	-	.8	( <sup>2</sup> )	-	-
Over 15 and under 20 cents.....	-	-	( <sup>2</sup> )	.1	-	-	-	( <sup>2</sup> )	-	-
20 cents.....	1	-	( <sup>2</sup> )	1.1	-	-	-	-	-	-
Over 20 cents.....	( <sup>2</sup> )	-	( <sup>2</sup> )	.5	.7	.1	-	-	-	-
Uniform percentage.....	1.0	.4	1.3	.6	.1	.9	-	-	-	-
5 percent.....	-	-	-	-	-	-	-	-	-	-
Over 5 and under 10 percent.....	-	-	-	.4	-	-	-	-	-	-
10 percent.....	1.0	.4	1.3	.2	.1	.9	-	-	-	-
Over 10 and under 15 percent.....	( <sup>2</sup> )	-	-	-	-	-	-	-	-	-
15 percent.....	( <sup>2</sup> )	-	-	-	-	-	-	-	-	-
20 percent.....	-	-	-	-	-	-	-	-	-	-
Full day's pay for reduced hours.....	-	-	-	-	-	-	-	( <sup>2</sup> )	-	-
Other formal pay differential <sup>1</sup> .....	1.1	.1	( <sup>2</sup> )	1.4	-	.4	.8	1.1	6.0	.3

<sup>1</sup> Includes combination plans such as full day's pay for reduced hours, plus "cents" or "percent" differential.<sup>2</sup> Less than 0.05 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 17. Paid Holidays: Plant Workers

(Percent of production workers in machinery manufacturing establishments with formal provisions for paid holidays, 21 selected areas, March-May 1964)

Number of paid holidays	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
All workers.....	100	100	100	100	100	100	100	100	100	100	100
Workers in establishments providing paid holidays.....	100	100	100	100	100	100	100	98	100	98	97
Less than 5 days.....	-	-	-	-	-	-	-	-	-	3	-
5 days.....	-	-	-	2	-	-	-	-	-	42	4
5 days plus 1 half day.....	-	-	-	-	-	-	-	-	-	-	1
6 days.....	7	3	5	6	6	( <sup>1</sup> )	6	5	3	15	13
6 days plus 1 half day.....	1	-	-	1	1	1	4	-	5	-	-
6 days plus 2 half days.....	-	16	-	9	17	2	4	22	-	-	3
6 days plus 3 half days.....	-	-	-	-	3	-	-	-	-	-	-
6 days plus 4 half days.....	-	-	-	-	-	-	-	-	3	-	-
7 days.....	4	12	15	38	8	9	14	51	36	32	55
7 days plus 1 half day.....	-	( <sup>1</sup> )	-	2	2	1	11	1	10	-	1
7 days plus 2 half days.....	-	31	5	2	8	2	1	-	-	-	-
7 days plus 3 half days.....	-	-	-	3	-	2	-	-	-	-	-
8 days.....	17	10	19	25	16	14	34	18	43	7	20
8 days plus 1 half day.....	12	4	38	6	1	2	1	-	-	-	-
8 days plus 2 half days.....	2	3	10	6	4	7	15	-	-	-	-
8 days plus 3 half days.....	-	-	-	-	( <sup>1</sup> )	1	-	-	-	-	-
9 days.....	11	20	4	-	15	25	8	-	-	-	-
9 days plus 1 half day.....	7	-	4	-	2	3	-	-	-	-	-
9 days plus 2 half days.....	3	-	-	-	12	7	-	-	-	-	-
10 days.....	17	-	-	-	3	8	1	-	-	-	-
10 days plus 1 half day.....	5	-	-	-	-	1	-	-	-	-	-
10 days plus 2 half days.....	10	-	-	-	3	-	-	-	-	-	-
11 days or more.....	4	-	-	-	-	14	-	-	-	-	-
Workers in establishments providing no paid holidays.....	-	-	-	-	-	-	-	2	-	2	3
	Middle West					Far West					
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis--St. Paul	St. Louis	Denver	Los Angeles--Long Beach	Portland	San Francisco--Oakland	
All workers.....	100	100	100	100	100	100	100	100	100	100	
Workers in establishments providing paid holidays.....	99	99	96	100	100	100	100	100	100	100	
Less than 5 days.....	( <sup>1</sup> )	-	1	-	-	-	-	-	-	-	
5 days.....	-	-	-	-	-	-	-	( <sup>1</sup> )	-	-	
5 days plus 1 half day.....	-	-	-	-	-	-	-	-	-	-	
6 days.....	15	13	34	6	22	4	20	24	3	5	
6 days plus 1 half day.....	3	1	1	-	8	2	-	7	-	-	
6 days plus 2 half days.....	15	37	49	21	20	2	24	6	-	-	
6 days plus 3 half days.....	-	3	-	2	-	-	-	-	-	-	
6 days plus 4 half days.....	-	-	-	-	-	-	-	-	-	-	
7 days.....	35	15	4	37	11	68	56	21	97	5	
7 days plus 1 half day.....	3	1	-	2	16	3	-	8	-	-	
7 days plus 2 half days.....	7	11	3	6	-	3	-	6	-	30	
7 days plus 3 half days.....	-	-	-	-	-	-	-	-	-	5	
8 days.....	17	11	4	21	22	19	-	26	-	56	
8 days plus 1 half day.....	1	-	-	-	-	-	-	1	-	-	
8 days plus 2 half days.....	1	-	-	-	-	-	-	-	-	-	
8 days plus 3 half days.....	-	-	-	-	-	-	-	-	-	-	
9 days.....	3	7	-	6	-	-	-	-	-	-	
Over 9 days.....	-	-	-	-	-	-	-	-	-	-	
Workers in establishments providing no paid holidays.....	( <sup>1</sup> )	( <sup>1</sup> )	4	-	-	-	-	-	-	-	

<sup>1</sup> Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 18. Paid Holidays: Office Workers

(Percent of office workers in machinery manufacturing establishments with formal provisions for paid holidays, 21 selected areas, March-May 1964)

Number of paid holidays	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
All workers.....	100	100	100	100	100	100	100	100	100	100	100
Workers in establishments providing paid holidays.....	100	100	100	100	100	100	100	99	100	98	99
Less than 5 days.....	-	-	-	-	-	-	-	-	-	2	-
5 days.....	-	-	-	2	-	-	-	-	-	30	4
5 days plus 1 half day.....	-	-	-	-	-	-	-	-	-	-	2
6 days.....	2	2	2	2	2	(1)	7	4	2	14	8
6 days plus 1 half day.....	(1)	-	-	-	(1)	-	3	-	1	-	-
6 days plus 2 half days.....	-	16	-	11	10	1	4	7	-	-	3
6 days plus 3 half days.....	-	-	-	-	-	-	-	-	-	-	-
6 days plus 4 half days.....	-	-	-	-	-	-	-	-	4	-	-
7 days.....	1	8	6	33	3	6	13	44	46	41	52
7 days plus 1 half day.....	-	-	-	2	1	1	13	1	7	-	1
7 days plus 2 half days.....	-	32	3	3	4	(1)	(1)	-	-	-	-
7 days plus 3 half days.....	-	-	-	5	2	2	-	-	-	-	-
8 days.....	22	17	20	29	38	11	34	43	40	10	30
8 days plus 1 half day.....	13	6	44	10	(1)	1	1	-	-	-	-
8 days plus 2 half days.....	(1)	5	8	3	3	3	13	-	-	-	-
8 days plus 3 half days.....	-	-	-	-	(1)	(1)	-	-	-	-	-
9 days.....	8	14	4	-	12	8	28	11	-	-	-
9 days plus 1 half day.....	5	-	-	-	2	5	-	-	-	-	-
9 days plus 2 half days.....	4	-	-	-	10	8	-	-	-	-	-
10 days.....	16	-	-	-	8	4	1	-	-	-	-
10 days plus 1 half day.....	7	-	-	-	-	3	-	-	-	-	-
10 days plus 2 half days.....	14	-	-	-	4	6	-	-	-	-	-
11 days or more.....	7	-	13	-	-	22	-	-	-	-	-
Workers in establishments providing no paid holidays.....	-	-	-	-	-	-	-	1	-	2	1
	Middle West					Far West					
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	Portland	San Francisco-Oakland	
All workers.....	100	100	100	100	100	100	100	100	100	100	
Workers in establishments providing paid holidays.....	100	100	98	100	100	100	100	100	100	100	
Less than 5 days.....	-	-	-	-	-	-	-	-	-	-	
5 days.....	-	-	-	-	-	-	-	(1)	-	-	
5 days plus 1 half day.....	-	-	-	-	-	-	-	-	-	-	
6 days.....	14	7	20	4	9	7	33	15	7	2	
6 days plus 1 half day.....	3	(1)	(1)	-	33	2	-	6	-	-	
6 days plus 2 half days.....	13	36	63	22	11	1	8	7	3	-	
6 days plus 3 half days.....	-	2	-	3	-	-	-	-	-	-	
6 days plus 4 half days.....	-	-	-	-	-	-	-	-	-	-	
7 days.....	38	16	4	45	10	73	59	27	90	7	
7 days plus 1 half day.....	2	1	-	2	22	2	-	5	-	-	
7 days plus 2 half days.....	8	12	2	6	-	1	-	11	-	43	
7 days plus 3 half days.....	-	-	-	-	-	-	-	-	-	3	
8 days.....	16	13	10	10	15	14	-	27	-	44	
8 days plus 1 half day.....	3	-	-	-	-	-	-	2	-	-	
8 days plus 2 half days.....	2	-	-	-	-	-	-	-	-	-	
8 days plus 3 half days.....	-	-	-	-	-	-	-	-	-	-	
9 days.....	1	13	-	8	-	-	-	-	-	-	
Over 9 days.....	-	-	-	-	-	-	-	-	-	-	
Workers in establishments providing no paid holidays.....	-	-	2	-	-	-	-	-	-	-	

<sup>1</sup> Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 19. Paid Vacations: Plant Workers

(Percent of production workers in machinery manufacturing establishments with formal provisions for paid vacations, 21 selected areas, March-May 1964)

Vacation policy	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
All workers	100	100	100	100	100	100	100	100	100	100	100
<u>Method of payment</u>											
Workers in establishments providing paid vacations	100	100	100	100	100	100	100	100	100	99	100
Length-of-time payment	100	94	79	65	89	94	88	74	100	93	88
Percentage payment	-	6	21	35	11	4	12	26	-	6	12
Other	-	-	-	-	-	1	-	-	-	-	-
Workers in establishments providing no paid vacations	-	-	-	-	-	-	-	-	-	1	-
<u>Amount of vacation pay<sup>1</sup></u>											
<u>After 1 year of service</u>											
Under 1 week	-	-	-	-	2	1	-	3	-	-	-
1 week	77	87	83	87	91	84	85	96	99	86	93
Over 1 and under 2 weeks	1	2	-	-	-	3	4	-	-	1	-
2 weeks	22	11	17	13	5	13	11	( <sup>2</sup> )	1	12	7
Over 2 weeks	-	-	-	-	( <sup>2</sup> )	-	-	-	-	-	-
<u>After 2 years of service</u>											
Under 1 week	-	-	-	-	( <sup>2</sup> )	-	-	3	-	-	-
1 week	38	50	72	74	49	20	42	84	28	45	21
Over 1 and under 2 weeks	34	38	-	6	33	22	41	5	62	1	-
2 weeks	28	12	28	20	18	57	18	7	11	52	79
Over 2 weeks	-	-	-	-	( <sup>2</sup> )	1	-	-	-	-	-
<u>After 3 years of service</u>											
1 week	12	7	16	43	16	10	16	25	24	36	3
Over 1 and under 2 weeks	32	80	-	17	40	10	60	19	62	1	1
2 weeks	56	12	84	40	44	75	24	56	14	62	95
Over 2 weeks	-	-	-	-	( <sup>2</sup> )	5	-	-	-	-	-
<u>After 5 years of service</u>											
Under 2 weeks	-	2	3	-	9	8	2	-	-	-	-
2 weeks	94	98	97	100	89	84	96	100	100	98	100
Over 2 and under 3 weeks	4	-	-	-	2	3	2	-	-	1	-
3 weeks	2	-	-	-	-	4	-	-	-	-	-
<u>After 10 years of service</u>											
Under 2 weeks	-	-	3	-	1	-	2	-	-	-	-
2 weeks	45	44	97	18	41	62	30	20	53	95	69
Over 2 and under 3 weeks	14	53	-	18	26	3	22	21	-	1	-
3 weeks	41	2	-	64	32	31	45	58	47	2	31
Over 3 weeks	-	-	-	-	-	4	-	-	-	-	-
<u>After 12 years of service</u>											
Under 2 weeks	-	-	3	-	1	-	2	-	-	-	-
2 weeks	33	17	81	16	31	40	23	20	53	84	20
Over 2 and under 3 weeks	17	80	-	20	35	25	21	21	-	1	-
3 weeks	49	2	16	61	33	32	54	58	47	14	80
Over 3 weeks	-	-	-	3	-	4	( <sup>2</sup> )	-	-	-	-
<u>After 15 years of service</u>											
Under 2 weeks	-	-	3	-	1	-	2	-	-	-	-
2 weeks	15	6	5	9	16	32	14	8	15	59	18
Over 2 and under 3 weeks	-	1	-	-	( <sup>2</sup> )	-	8	-	-	1	-
3 weeks	85	93	92	54	69	64	75	88	85	38	82
Over 3 weeks	-	-	-	37	13	4	1	4	-	-	-

See footnotes at end of table.

Table 19. Paid Vacations: Plant Workers—Continued

(Percent of production workers in machinery manufacturing establishments with formal provisions for paid vacations, 21 selected areas, March-May 1964)

Vacation policy	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
<u>Amount of vacation pay<sup>1</sup>—Continued</u>											
<u>After 20 years of service</u>											
Under 2 weeks	-	-	3	-	1	-	2	-	-	-	-
2 weeks	15	6	2	9	16	29	13	8	15	59	18
Over 2 and under 3 weeks	-	-	-	-	( <sup>2</sup> )	-	7	-	-	1	-
3 weeks	66	91	93	28	53	64	29	80	78	35	29
Over 3 and under 4 weeks	-	-	-	4	2	( <sup>2</sup> )	8	4	-	-	1
4 weeks	19	2	2	59	27	6	40	8	6	4	51
<u>After 25 years of service</u>											
Under 2 weeks	-	-	3	-	1	-	2	-	-	-	-
2 weeks	15	6	2	9	15	29	13	8	15	59	18
Over 2 and under 3 weeks	-	-	-	-	( <sup>2</sup> )	-	7	-	-	1	-
3 weeks	40	90	46	22	53	58	22	25	43	35	24
Over 3 and under 4 weeks	-	-	-	2	-	( <sup>2</sup> )	5	12	-	-	-
4 weeks	45	4	49	67	28	13	50	55	42	4	58
Over 4 weeks	-	-	-	-	2	-	-	-	-	-	-
<u>Middle West</u>						<u>Far West</u>					
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis—St. Paul	St. Louis	Denver	Los Angeles—Long Beach	Portland	San Francisco—Oakland	
All workers	100	100	100	100	100	100	100	100	100	100	
<u>Method of payment</u>											
Workers in establishments providing paid vacations	100	100	98	99	100	100	100	100	100	100	100
Length-of-time payment	85	96	63	90	91	95	92	98	81	80	80
Percentage payment	15	4	34	10	9	5	8	2	19	20	20
Other	1	-	1	-	-	-	-	-	-	-	-
Workers in establishments providing no paid vacations	-	-	2	( <sup>2</sup> )	-	-	-	-	-	-	-
<u>Amount of vacation pay<sup>1</sup></u>											
<u>After 1 year of service</u>											
Under 1 week	1	( <sup>2</sup> )	1	-	-	-	-	-	-	-	-
1 week	79	80	74	97	80	94	94	86	83	35	35
Over 1 and under 2 weeks	3	8	10	1	3	4	-	7	17	60	60
2 weeks	17	12	9	2	17	2	6	6	-	5	5
Over 2 weeks	-	-	6	-	-	-	-	1	-	-	-
<u>After 2 years of service</u>											
Under 1 week	-	-	-	-	-	-	-	-	-	-	-
1 week	66	50	32	70	39	82	57	31	83	10	10
Over 1 and under 2 weeks	7	28	18	24	13	4	18	12	-	15	15
2 weeks	27	22	40	5	48	14	25	50	-	75	75
Over 2 weeks	-	-	8	-	-	-	-	7	17	-	-

See footnotes at end of table.

Table 19. Paid Vacations: Plant Workers—Continued

(Percent of production workers in machinery manufacturing establishments with formal provisions for paid vacations, 21 selected areas, March–May 1964)

Vacation policy	Middle West						Far West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis– St. Paul	St. Louis	Denver	Los Angeles– Long Beach	Portland	San Francisco– Oakland
<u>Amount of vacation pay<sup>1</sup>—Continued</u>										
<u>After 3 years of service</u>										
1 week.....	16	13	7	30	5	35	-	13	4	5
Over 1 and under 2 weeks.....	21	41	33	47	12	4	18	12	-	-
2 weeks.....	63	42	47	24	83	62	82	69	79	95
Over 2 weeks.....	( <sup>2</sup> )	4	11	-	-	-	-	7	17	-
<u>After 5 years of service</u>										
Under 2 weeks.....	1	4	3	2	( <sup>2</sup> )	-	-	15	-	-
2 weeks.....	97	92	76	91	96	96	100	77	83	95
Over 2 and under 3 weeks.....	2	3	12	7	4	4	-	8	17	-
3 weeks.....	-	2	8	( <sup>2</sup> )	-	-	-	-	-	5
<u>After 10 years of service</u>										
Under 2 weeks.....	( <sup>2</sup> )	1	1	-	( <sup>2</sup> )	-	-	5	-	-
2 weeks.....	36	36	44	22	49	31	63	53	79	26
Over 2 and under 3 weeks.....	22	34	35	37	12	19	-	10	17	-
3 weeks.....	42	28	16	40	38	50	37	25	4	74
Over 3 weeks.....	-	-	2	1	-	-	-	7	-	-
<u>After 12 years of service</u>										
Under 2 weeks.....	( <sup>2</sup> )	1	1	-	( <sup>2</sup> )	-	-	2	-	-
2 weeks.....	21	29	43	7	26	20	42	36	9	5
Over 2 and under 3 weeks.....	24	40	35	43	12	19	-	5	-	-
3 weeks.....	55	30	17	49	61	62	58	48	74	95
Over 3 weeks.....	-	-	2	1	-	-	-	8	17	-
<u>After 15 years of service</u>										
Under 2 weeks.....	( <sup>2</sup> )	1	1	-	( <sup>2</sup> )	-	-	2	-	-
2 weeks.....	6	12	33	3	14	2	18	28	-	5
Over 2 and under 3 weeks.....	-	-	4	-	-	-	-	2	-	-
3 weeks.....	88	76	56	81	82	96	73	59	83	95
Over 3 weeks.....	6	11	5	15	3	2	9	9	17	-
<u>After 20 years of service</u>										
Under 2 weeks.....	( <sup>2</sup> )	1	1	-	( <sup>2</sup> )	-	-	2	-	-
2 weeks.....	6	12	33	3	14	2	18	27	-	5
Over 2 and under 3 weeks.....	-	-	2	-	-	-	-	2	-	-
3 weeks.....	76	57	55	52	66	55	73	56	77	95
Over 3 and under 4 weeks.....	6	15	5	9	10	-	-	11	17	-
4 weeks.....	12	15	3	36	9	43	9	1	6	-
<u>After 25 years of service</u>										
Under 2 weeks.....	( <sup>2</sup> )	1	1	-	( <sup>2</sup> )	-	-	2	-	-
2 weeks.....	6	12	33	3	14	2	18	27	-	5
Over 2 and under 3 weeks.....	-	-	2	-	-	-	-	2	-	-
3 weeks.....	53	37	53	8	58	54	73	50	77	91
Over 3 and under 4 weeks.....	3	1	5	1	1	-	-	11	17	-
4 weeks.....	38	48	5	71	26	44	2	8	6	4
Over 4 weeks.....	-	-	-	17	-	-	6	-	-	-

<sup>1</sup> Vacation payments such as percent of annual earnings were converted to an equivalent time basis. Periods of service were arbitrarily chosen and do not necessarily reflect individual establishment provisions for progression. For example, the changes in proportions indicated at 5 years may include changes which occurred after 4 years.

<sup>2</sup> Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 20. Paid Vacations: Office Workers

(Percent of office workers in machinery manufacturing establishments with formal provisions for paid vacations, 21 selected areas, March-May 1964)

Vacation policy	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
All workers .....	100	100	100	100	100	100	100	100	100	100	100
<u>Method of payment</u>											
Workers in establishments providing paid vacations .....	100	100	100	100	100	100	100	100	100	99	100
Length-of-time payment .....	100	100	74	100	100	100	99	100	100	99	98
Percentage payment .....	-	-	26	-	-	-	( <sup>2</sup> )	-	-	-	2
Workers in establishments providing no paid vacations .....	-	-	-	-	-	-	-	-	-	1	-
<u>Amount of vacation pay<sup>1</sup></u>											
<u>After 1 year of service</u>											
Under 1 week .....	-	-	-	-	( <sup>2</sup> )	( <sup>2</sup> )	-	-	-	-	-
1 week .....	6	8	5	24	13	22	36	11	57	51	55
Over 1 and under 2 weeks .....	-	( <sup>2</sup> )	-	-	-	-	-	-	-	-	-
2 weeks .....	94	92	95	76	87	78	64	89	43	47	45
Over 2 weeks .....	-	-	-	-	-	-	-	-	-	1	-
<u>After 2 years of service</u>											
Under 1 week .....	-	-	-	-	( <sup>2</sup> )	-	-	-	-	-	-
1 week .....	2	2	4	13	5	3	19	2	10	15	( <sup>2</sup> )
Over 1 and under 2 weeks .....	3	1	-	-	6	2	8	-	43	-	-
2 weeks .....	95	97	96	87	89	86	73	98	47	84	99
Over 2 weeks .....	-	-	-	-	( <sup>2</sup> )	9	-	-	-	1	-
<u>After 3 years of service</u>											
1 week .....	2	2	1	2	3	2	4	1	5	11	-
Over 1 and under 2 weeks .....	3	1	-	9	6	( <sup>2</sup> )	19	-	43	-	-
2 weeks .....	95	97	99	89	90	88	77	99	52	88	100
Over 2 weeks .....	-	-	-	-	( <sup>2</sup> )	9	-	-	-	1	-
<u>After 5 years of service</u>											
Under 2 weeks .....	-	-	1	-	2	1	1	-	-	-	-
2 weeks .....	93	97	99	98	98	89	97	92	100	98	100
Over 2 and under 3 weeks .....	2	3	-	2	( <sup>2</sup> )	1	1	8	-	1	-
3 weeks .....	5	-	-	-	-	9	( <sup>2</sup> )	-	-	-	-
<u>After 10 years of service</u>											
Under 2 weeks .....	-	-	1	-	2	-	1	-	-	-	-
2 weeks .....	41	42	97	51	28	63	32	34	46	97	65
Over 2 and under 3 weeks .....	7	28	-	9	18	2	9	13	-	1	-
3 weeks .....	52	29	2	40	51	26	58	54	54	1	35
Over 3 weeks .....	-	-	-	-	-	9	-	-	-	-	-
<u>After 12 years of service</u>											
Under 2 weeks .....	-	-	1	-	2	-	1	-	-	-	-
2 weeks .....	32	35	87	49	20	34	29	21	46	83	15
Over 2 and under 3 weeks .....	8	34	-	9	26	31	8	4	-	1	-
3 weeks .....	60	31	12	42	52	26	62	76	54	16	85
Over 3 weeks .....	-	-	-	-	-	9	-	-	-	-	-
<u>After 15 years of service</u>											
Under 2 weeks .....	-	-	1	-	2	-	1	-	-	-	-
2 weeks .....	11	5	3	8	6	29	16	10	7	59	13
Over 2 and under 3 weeks .....	-	-	-	-	-	-	1	-	-	1	-
3 weeks .....	89	95	96	83	76	62	80	83	93	39	87
Over 3 weeks .....	-	-	-	10	16	9	1	7	-	-	-

See footnotes at end of table.

Table 20. Paid Vacations: Office Workers—Continued

(Percent of office workers in machinery manufacturing establishments with formal provisions for paid vacations, 21 selected areas, March–May 1964)

Vacation policy	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
<u>Amount of vacation pay<sup>1</sup>—Continued</u>											
<u>After 20 years of service</u>											
Under 2 weeks	-	-	1	-	2	-	1	-	-	-	-
2 weeks	11	5	1	8	6	24	16	10	7	59	13
Over 2 and under 3 weeks	-	-	-	-	-	-	1	-	-	1	-
3 weeks	71	94	96	55	54	65	38	35	91	27	52
Over 3 and under 4 weeks	-	-	-	2	-	-	4	1	-	-	-
4 weeks	18	1	2	35	38	11	39	55	3	12	35
<u>After 25 years of service</u>											
Under 2 weeks	-	-	1	-	2	-	1	-	-	-	-
2 weeks	11	5	1	8	6	24	16	10	7	59	13
Over 2 and under 3 weeks	-	-	-	-	-	-	1	-	-	1	-
3 weeks	38	80	51	50	40	47	23	16	67	27	45
Over 3 and under 4 weeks	-	2	-	2	-	-	2	14	-	-	-
4 weeks	51	13	47	40	52	28	56	61	27	12	42
Over 4 weeks	-	-	-	-	-	-	-	-	-	-	-
<u>Middle West</u>						<u>Far West</u>					
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis—St. Paul	St. Louis	Denver	Los Angeles—Long Beach	Portland	San Francisco—Oakland	
All workers	100	100	100	100	100	100	100	100	100	100	
<u>Method of payment</u>											
Workers in establishments providing paid vacations	100	100	99	100	100	100	100	100	100	100	100
Length-of-time payment	96	100	98	99	94	100	100	100	100	98	98
Percentage payment	4	-	1	1	6	-	-	-	-	-	2
Workers in establishments providing no paid vacations	-	-	( <sup>2</sup> )	-	-	-	-	-	-	-	-
<u>Amount of vacation pay<sup>1</sup></u>											
<u>After 1 year of service</u>											
Under 1 week	( <sup>2</sup> )	-	-	-	-	-	-	-	-	-	-
1 week	19	7	14	61	22	36	39	44	79	14	14
Over 1 and under 2 weeks	1	6	1	( <sup>2</sup> )	-	-	-	4	-	8	8
2 weeks	80	87	83	38	78	64	61	52	21	78	78
Over 2 weeks	-	-	2	-	-	-	-	-	-	-	-
<u>After 2 years of service</u>											
Under 1 week	-	-	-	-	-	-	-	-	-	-	-
1 week	5	3	6	14	4	21	13	13	13	-	-
Over 1 and under 2 weeks	1	2	2	8	( <sup>2</sup> )	-	-	10	5	-	-
2 weeks	94	95	90	78	95	79	87	73	82	100	100
Over 2 weeks	-	-	2	-	1	-	-	4	-	-	-

See footnotes at end of table.

Table 20. Paid Vacations: Office Workers—Continued

(Percent of office workers in machinery manufacturing establishments with formal provisions for paid vacations, 21 selected areas, March–May 1964)

Vacation policy	Middle West						Far West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis– St. Paul	St. Louis	Denver	Los Angeles– Long Beach	Portland	San Francisco– Oakland
<b>Amount of vacation pay<sup>1</sup>—Continued</b>										
<b>After 3 years of service</b>										
1 week.....	3	1	3	8	( <sup>2</sup> )	1	-	5	1	-
Over 1 and under 2 weeks.....	( <sup>2</sup> )	3	3	8	( <sup>2</sup> )	-	-	10	5	-
2 weeks.....	97	93	91	84	99	99	100	82	94	100
Over 2 weeks.....	-	3	2	-	1	-	-	4	-	-
<b>After 5 years of service</b>										
Under 2 weeks.....	-	( <sup>2</sup> )	( <sup>2</sup> )	1	-	-	-	12	-	-
2 weeks.....	100	96	95	92	97	100	100	83	100	92
Over 2 and under 3 weeks.....	-	1	2	7	-	-	-	5	-	1
3 weeks.....	-	2	3	( <sup>2</sup> )	3	-	-	-	-	6
<b>After 10 years of service</b>										
Under 2 weeks.....	-	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	-	-	-	3	-	-
2 weeks.....	34	40	38	25	50	37	52	52	99	19
Over 2 and under 3 weeks.....	7	19	20	43	-	-	-	9	-	-
3 weeks.....	59	41	41	32	50	63	48	30	1	81
Over 3 weeks.....	-	-	-	( <sup>2</sup> )	-	-	-	5	-	-
<b>After 12 years of service</b>										
Under 2 weeks.....	-	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	-	-	-	2	-	-
2 weeks.....	22	30	35	11	42	31	45	25	40	5
Over 2 and under 3 weeks.....	10	29	21	43	2	-	-	8	-	-
3 weeks.....	68	41	42	46	56	69	55	59	60	95
Over 3 weeks.....	-	-	1	( <sup>2</sup> )	-	-	-	7	-	-
<b>After 15 years of service</b>										
Under 2 weeks.....	-	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	-	-	-	2	-	-
2 weeks.....	3	10	15	2	36	6	30	18	31	5
Over 2 and under 3 weeks.....	-	-	1	-	-	-	-	5	-	-
3 weeks.....	95	84	81	83	61	90	47	67	69	95
Over 3 weeks.....	2	6	3	14	3	4	23	8	-	-
<b>After 20 years of service</b>										
Under 2 weeks.....	-	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	-	-	-	2	-	-
2 weeks.....	3	7	15	2	36	6	30	16	31	5
Over 2 and under 3 weeks.....	-	-	-	-	-	-	-	1	-	-
3 weeks.....	82	57	73	60	48	50	47	68	65	93
Over 3 and under 4 weeks.....	4	14	2	9	6	-	-	9	-	-
4 weeks.....	11	23	10	28	10	44	23	4	3	2
<b>After 25 years of service</b>										
Under 2 weeks.....	-	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	-	-	-	2	-	-
2 weeks.....	3	5	15	2	36	6	30	16	31	5
Over 2 and under 3 weeks.....	-	-	-	-	-	-	-	1	-	-
3 weeks.....	46	43	66	4	42	42	47	61	65	93
Over 3 and under 4 weeks.....	( <sup>2</sup> )	-	1	( <sup>2</sup> )	-	-	-	9	-	-
4 weeks.....	51	53	17	74	22	53	7	9	3	2
Over 4 weeks.....	-	-	-	19	-	-	17	2	-	-

<sup>1</sup> Vacation payments such as percent of annual earnings were converted to an equivalent time basis. Periods of service were arbitrarily chosen and do not necessarily reflect individual establishment provisions for progression. For example, the changes in proportions indicated at 5 years may include changes which occurred after 4 years.

<sup>2</sup> Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 21. Health, Insurance, and Pension Plans: Plant Workers

(Percent of production workers in machinery manufacturing establishments with specified health, insurance, and pension plans, 21 selected areas, March-May 1964)

Type of plan <sup>1</sup>	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
All workers.....	100	100	100	100	100	100	100	100	100	100	100
Workers in establishments providing:											
Life insurance.....	97	93	98	97	92	86	94	97	95	82	97
Accidental death and dismemberment insurance.....	84	70	93	41	63	46	76	49	59	55	80
Sickness and accident insurance or sick leave or both <sup>2</sup> .....	96	88	98	74	68	65	91	94	100	52	82
Sickness and accident insurance	92	85	98	74	62	41	90	94	100	48	75
Sick leave (full pay, no waiting period).....	10	2	2	-	10	37	1	-	-	4	6
Sick leave (partial pay or waiting period).....	-	1	4	10	-	1	1	-	-	-	22
Hospitalization insurance.....	95	94	100	97	98	91	98	96	93	83	98
Surgical insurance.....	95	93	100	97	92	90	97	96	89	83	98
Medical insurance.....	87	85	100	31	64	51	62	51	76	63	63
Catastrophe insurance.....	62	32	65	15	19	14	34	43	38	47	68
Retirement pension.....	80	89	95	78	67	51	77	85	93	51	82
No plans.....	1	1	-	3	2	1	1	2	-	12	-
	Middle West					Far West					
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	Portland	San Francisco-Oakland	
All workers.....	100	100	100	100	100	100	100	100	100	100	
Workers in establishments providing:											
Life insurance.....	93	94	98	99	93	94	91	90	96	100	
Accidental death and dismemberment insurance.....	63	65	83	76	68	77	57	72	96	96	
Sickness and accident insurance or sick leave or both <sup>2</sup> .....	93	87	90	99	87	98	86	56	81	67	
Sickness and accident insurance	90	87	90	99	69	94	83	31	81	4	
Sick leave (full pay, no waiting period).....	2	-	12	-	23	2	9	38	6	1	
Sick leave (partial pay or waiting period).....	4	-	-	-	-	2	-	4	-	62	
Hospitalization insurance.....	94	90	98	100	96	98	95	98	100	100	
Surgical insurance.....	92	86	98	100	96	94	95	98	100	100	
Medical insurance.....	75	68	96	86	95	90	95	94	100	100	
Catastrophe insurance.....	25	22	10	19	26	17	48	65	84	50	
Retirement pension.....	63	62	74	84	31	78	54	32	68	77	
No plans.....	1	2	1	-	( <sup>3</sup> )	-	-	1	-	-	

<sup>1</sup> Includes only those plans for which at least part of the cost is borne by the employer. Legally required plans such as workmen's compensation and social security were excluded; however, plans required by State temporary disability insurance laws were included if the employer contributed more than is legally required or the employees received benefits in excess of legal requirements.

<sup>2</sup> Unduplicated total of workers receiving sick leave or sickness and accident insurance shown separately.

<sup>3</sup> Less than 0.5 percent.

Table 22. Health, Insurance, and Pension Plans: Office Workers

(Percent of office workers in machinery manufacturing establishments with specified health, insurance, and pension plans, 21 selected areas, March-May 1964)

Type of plan <sup>1</sup>	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
All workers.....	100	100	100	100	100	100	100	100	100	100	100
Workers in establishments providing:											
Life insurance.....	95	96	99	99	94	89	86	99	97	95	97
Accidental death and dismemberment insurance.....	86	64	85	41	48	36	59	74	66	68	74
Sickness and accident insurance or sick leave or both <sup>2</sup> .....	93	85	99	83	89	80	91	99	100	69	94
Sickness and accident insurance.....	83	54	97	80	67	52	71	88	76	56	54
Sick leave (full pay, no waiting period).....	46	66	62	63	69	58	76	61	44	33	89
Sick leave (partial pay or waiting period).....	-	-	4	16	-	-	3	-	-	-	2
Hospitalization insurance.....	96	96	100	95	98	91	97	99	97	91	99
Surgical insurance.....	96	96	100	95	96	90	95	99	97	91	99
Medical insurance.....	90	84	100	53	53	45	55	72	86	78	74
Catastrophe insurance.....	74	65	81	34	48	32	35	55	71	71	85
Retirement pension.....	82	90	98	87	82	60	85	84	95	63	88
No plans.....	-	( <sup>3</sup> )	-	-	2	1	2	-	-	2	-
				Middle West				Far West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	Portland	San Francisco-Oakland	
All workers.....	100	100	100	100	100	100	100	100	100	100	
Workers in establishments providing:											
Life insurance.....	96	95	96	99	97	88	96	93	94	100	
Accidental death and dismemberment insurance.....	63	59	82	74	45	78	91	76	91	98	
Sickness and accident insurance or sick leave or both <sup>2</sup> .....	91	79	92	96	89	72	87	74	87	66	
Sickness and accident insurance.....	77	65	87	95	36	56	86	29	87	2	
Sick leave (full pay, no waiting period).....	47	32	66	24	67	35	43	64	4	61	
Sick leave (partial pay or waiting period).....	2	-	-	-	2	1	-	8	-	5	
Hospitalization insurance.....	96	95	96	100	94	90	93	98	95	100	
Surgical insurance.....	95	91	96	100	94	86	93	98	95	100	
Medical insurance.....	76	76	93	88	94	85	93	94	95	100	
Catastrophe insurance.....	38	30	43	39	42	46	61	65	74	44	
Retirement pension.....	62	81	75	86	37	72	44	37	64	73	
No plans.....	( <sup>3</sup> )	3	3	-	-	1	-	1	5	-	

<sup>1</sup> Includes only those plans for which at least part of the cost is borne by the employer. Legally required plans such as workmen's compensation and social security were excluded; however, plans required by State temporary disability insurance laws were included if the employer contributed more than is legally required or the employees received benefits in excess of legal requirements.

<sup>2</sup> Unduplicated total of workers receiving sick leave or sickness and accident insurance shown separately.

<sup>3</sup> Less than 0.5 percent.

**Appendix A. Occupational Averages—Chicago, New York, and Philadelphia Standard Metropolitan Statistical Areas and the Parts of These Areas Covered in Previous Surveys**

(Number and average straight-time hourly earnings<sup>1</sup> of men in selected occupations, April–May 1964<sup>2</sup>)

Occupation	Chicago				New York				Philadelphia			
	Entire SMSA		Cook County		Entire SMSA		The 5 Boroughs		Entire SMSA		Philadelphia and Delaware Counties, Pa., and Camden County, N. J.	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings								
Assemblers, class A-----	2,954	\$ 3.05	2,533	\$ 3.10	936	\$ 2.95	674	\$ 2.92	740	\$ 2.83	503	\$ 2.86
Assemblers, class B-----	2,593	2.73	2,058	2.72	755	2.42	518	2.39	759	2.47	559	2.48
Assemblers, class C-----	881	2.34	832	2.34	1,152	2.02	1,022	2.06	673	1.83	616	1.80
Electricians, maintenance-----	366	3.41	284	3.46	78	3.10	43	3.01	154	3.05	96	3.17
Inspectors, class A-----	849	3.06	594	3.09	229	3.06	140	3.04	418	2.89	352	2.91
Inspectors, class B-----	668	2.78	546	2.77	181	2.71	95	2.72	269	2.94	229	3.04
Inspectors, class C-----	352	2.58	289	2.53	99	1.98	72	1.85	41	2.28	30	2.47
Janitors, porters, and cleaners-----	1,114	2.18	926	2.16	280	1.99	154	1.93	343	1.98	195	2.03
Laborers, material handling-----	1,965	2.29	1,451	2.26	489	2.10	340	2.06	292	2.40	198	2.56
Machine-tool operators, production, class A-----	8,252	3.16	7,126	3.20	2,490	2.99	1,777	2.96	2,751	2.87	2,111	2.92
Machine-tool operators, production, class B-----	3,933	2.84	2,790	2.82	1,655	2.61	1,144	2.56	1,893	2.79	1,614	2.85
Machine-tool operators, production, class C-----	1,883	2.18	1,548	2.16	1,104	2.06	702	2.13	643	2.34	433	2.42
Machine-tool operators, toolroom-----	1,487	3.40	1,305	3.43	241	3.05	150	2.87	380	3.11	356	3.16
Machinists, production	117	3.40	103	3.47	241	3.18	146	3.16	281	2.91	158	2.97
Tool and die makers (jobbing)-----	1,646	3.80	1,486	3.82	397	3.27	232	3.19	1,232	3.30	893	3.32
Tool and die makers (other than jobbing)-----	790	3.53	607	3.56	284	3.29	168	3.22	310	3.36	259	3.41
Welders, hand, class A-----	2,370	3.07	1,474	3.20	202	3.24	89	3.13	498	2.96	375	3.01
Welders, hand, class B-----	742	3.08	729	3.09	237	2.53	218	2.51	323	2.78	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> An April payroll period was studied in New York and a May period in the other 2 areas.



## Appendix B. Scope and Method of Survey

### Scope of Survey

The survey included establishments primarily engaged in manufacturing machinery, except electrical (major group 35 as defined in the 1957 edition of the Standard Industrial Classification Manual, prepared by the U.S. Bureau of the Budget). This major group includes establishments engaged in manufacturing machinery and equipment, other than electrical equipment (major group 36) and transportation equipment (major group 37). Machines powered by built-in or detachable motors ordinarily are included in major group 35, with the exception of electrical household appliances (major group 36). Portable tools, both electric and pneumatic powered, are included in major group 35, but handtools are classified in major group 34. Separate auxiliary units such as central offices of the firms studied were excluded.

The study covered establishments with 20 workers or more at the time of reference of the data used in compiling the universe lists. Also included were establishments which employed 8 to 19 workers and primarily manufactured special dies and tools, die sets, jigs and fixtures, or machine-tool accessories and measuring devices (industries 3544 and 3545).

The number of establishments and workers actually studied by the Bureau, as well as the number estimated to be in the industries during the payroll period studied, are shown in the table on the following page.

### Method of Study

Data were obtained by personal visits of Bureau field economists under the direction of the Bureau's Assistant Regional Directors for Wages and Industrial Relations. The survey was conducted on a sample basis. To obtain appropriate accuracy at minimum cost, a greater proportion of large than of small establishments was studied. In combining the data, however, all establishments were given their appropriate weights. All estimates are presented, therefore, as relating to all establishments in the industry group in the areas, excluding only those below the minimum size at the time of reference of the universe data.

### Establishment Definition

An establishment, for purposes of this study, is defined as a single physical location where industrial operations are performed. An establishment is not necessarily identical with the company, which may consist of one establishment or more.

### Employment

The estimates of the number of workers within the scope of the study are intended as a general guide to the size and composition of the labor force included in the survey. The advance planning necessary to make a wage survey requires the use of lists of establishments assembled considerably in advance of the payroll period studied.

### Production Workers

The term "production workers," as used in this bulletin, includes working foremen and all nonsupervisory workers engaged in nonoffice functions. Administrative, executive, professional, and technical personnel, and force-account construction employees utilized as a separate work force on the firm's own properties, were excluded.

### Office Workers

The term "office workers," as used in this bulletin, includes all nonsupervisory office employees and excludes administrative, executive, professional, and technical personnel.

Estimated Number of Establishments and Workers Within Scope of Survey and Number Studied,  
Machinery Industries, 21 Areas, March-May 1964

Area <sup>1</sup>	Payroll period	Number of establishments <sup>2</sup>		Workers in establishments			
		Within scope of study	Studied	Within scope of study			Studied
				Total <sup>3</sup>	Production workers	Office workers	
Total, 21 areas-----		5, 113	966	605, 831	420, 513	79, 133	379, 166
New England:							
Boston-----	March	181	44	21, 248	13, 212	3, 032	13, 861
Hartford-----	May	172	40	30, 521	23, 681	3, 083	25, 290
Worcester-----	April	50	19	8, 873	5, 991	1, 142	7, 414
Middle Atlantic:							
Buffalo-----	April	82	24	11, 078	7, 706	1, 463	6, 834
Newark and Jersey City-----	April	286	56	31, 091	20, 570	4, 828	19, 104
New York-----	April	447	86	32, 054	22, 971	4, 206	17, 319
The 5 boroughs <sup>4</sup> -----	April	301	58	22, 205	16, 213	2, 360	11, 933
Philadelphia-----	May	308	58	40, 982	28, 711	4, 791	24, 564
Philadelphia and Delaware Counties, Pa., and Camden County, N. J. <sup>4</sup> -----	May	188	38	30, 548	21, 655	3, 507	20, 936
Pittsburgh-----	April	107	30	14, 529	9, 950	1, 940	10, 794
South:							
Baltimore-----	May	52	18	9, 537	7, 146	1, 096	7, 748
Dallas-----	March	72	27	9, 075	6, 933	806	6, 021
Houston-----	March	94	29	15, 922	11, 032	2, 150	12, 024
Middle West:							
Chicago-----	May	788	119	102, 886	73, 529	13, 715	59, 292
Cook County <sup>4</sup> -----	May	692	96	79, 693	56, 422	10, 890	42, 426
Cleveland-----	April	313	62	38, 989	26, 584	5, 159	22, 542
Detroit-----	May	853	101	69, 365	50, 512	6, 446	37, 903
Milwaukee-----	May	179	46	48, 287	31, 457	8, 823	41, 713
Minneapolis-St. Paul-----	May	169	36	28, 850	16, 018	4, 764	19, 830
St. Louis-----	April	126	34	15, 845	11, 414	2, 266	12, 132
Far West:							
Denver-----	April	30	14	3, 255	2, 398	381	2, 554
Los Angeles-Long Beach-----	May	622	80	55, 154	37, 700	6, 716	22, 566
Portland-----	May	45	17	4, 271	2, 949	527	3, 078
San Francisco-Oakland-----	May	137	26	14, 019	10, 049	1, 799	6, 583

<sup>1</sup> Standard Metropolitan Statistical Areas, as defined by the U.S. Bureau of the Budget in 1961 except Hartford (Hartford and New Britain SMSA and Bristol, Conn., Newark and Jersey City (a combination of the 2 SMSA's); and Worcester (Worcester SMSA, except Northbridge).

<sup>2</sup> Includes only establishments manufacturing special dies and tools, die sets, jigs and fixtures, or machine-tool accessories and measuring devices which employed 8 workers or more, and other machinery establishments with 20 workers or more at the time of reference of the universe data.

<sup>3</sup> Includes executive, professional, and other workers excluded from the separate production and office worker categories.

<sup>4</sup> The part of the SMSA included in the machinery surveys prior to this year.

### Occupations Selected for Study

Occupational classification was based on a uniform set of job descriptions designed to take account of interestablishment and interarea variations in duties within the same job. (See appendix C for these job descriptions.) The occupations were chosen for their numerical importance, their usefulness in collective bargaining, or their representativeness of the entire job scale in the industry.

### Occupational Earnings

Earnings data for the selected jobs (tables 1-10) are shown for full-time workers, i.e., those hired to work a full-time schedule for the given occupational classification. Working supervisors, apprentices, learners, beginners, trainees, handicapped, temporary, and probationary workers were not included.

The wage information relates to average straight-time hourly earnings, excluding premium pay for overtime and for work on weekends, holidays, and late shifts. Incentive payments, such as those resulting from piecework or production bonus systems and cost-of-

living bonuses were included as part of the workers' regular pay; but nonproduction bonus payments such as Christmas or yearend bonuses were excluded. The estimated average hourly earnings for each occupation were obtained by weighting each rate (or hourly earning) by the number of workers receiving the rate.

Occupational employment estimates refer to the total for all establishments within the scope of the study and not to the number actually surveyed. Because of the variation in occupational structure among establishments, estimates of occupational employment are subject to considerable fluctuation attributable to sampling. Hence, they serve only to indicate the relative numerical importance of the jobs studied. The fluctuations in employment do not materially affect the accuracy of the earnings data.

#### Wage Trends

The machinery index series has been developed from data obtained in the Bureau's program of occupational wage surveys and is based on straight-time hourly earnings of men production workers in the following occupations: Assemblers (classes A, B, and C); electricians, maintenance; inspectors (classes A, B, and C); janitors, porters, and cleaners; laborers, material handling; machine-tool operators, production (classes A, B, and C); machinists, production; tool and die makers (other than jobbing); and welders, hand, class A. Data for these and other occupations are shown in table 1.

The area indexes are constructed to reflect changes in average hourly earnings but not changes in the proportion of workers in the separate occupations. For each area, an aggregate of earnings was obtained by weighting the average straight-time hourly earnings for the respective occupations by a set of weights, based on average employments in the occupations in that area for the years 1960 and 1961. The percent of change was determined by comparing this aggregate with the aggregate for the previous year; the current index was computed by applying this percent of change to the previous index (in this case, 1963) for the area.

The composite index for all areas combined is constructed so as not to reflect changes induced by changes in the relative importance of the industries among the areas studied. The composite index was obtained by following techniques similar to those used in determining area indexes. An aggregate of earnings was obtained by weighting the average straight-time hourly earnings for the selected occupations in the areas by a set of weights, based on average employments in the machinery industries in these areas for the years 1960 and 1961. The percent of change was determined by comparing this aggregate with the aggregate for the previous year and the current index computed by applying this percent of change to the previous index (1963) for all areas combined.

From time to time, the index procedure is revised to bring the weighting pattern up to date by changing the set of occupational weights and the area weights. The new indexes are linked to the existing ones to form a continuous series.

For a more detailed description of the procedures used and information regarding the 1945-62 indexes, see appendixes B and C of BLS Bulletin 1352.

#### Establishment Practices and Supplementary Wage Provisions

Supplementary benefits and practices were treated statistically on the basis that formal provisions for supplementary benefits and practices applicable to half or more of the production (or office) workers in an establishment were considered applicable to all such workers. Similarly, if fewer than half of the workers were covered, the practice or benefit was considered nonexistent in the establishment. Because of length-of-service and other eligibility requirements, the proportion of workers receiving the benefits may be smaller than estimated. Because of rounding, sums of individual items may not equal totals.

Method of Wage Payment. Formal rate structures for time-rated workers provide single rates or a range of rates for each job category in the establishment. In the absence of a formal rate structure, pay rates are determined primarily with reference to the qualifications of the individual worker. A single rate structure is one in which the same rate is paid to all experienced workers in the same job classification. Learners, apprentices, or probationary workers may be paid according to rate schedules which start below the single rate and permit the worker to achieve the full job rate over a period of time. Individual experienced workers may occasionally be paid above or below the single rate for special reasons, but such payments are regarded as exceptions. Range-of-rate plans are

those in which the minimum and/or maximum rates paid experienced workers for the same job are specified. Specific rates of individual workers within the range may be determined by merit, length of service, or a combination of various concepts of merit and length of service.

Incentive workers are classified under piecework or bonus plans. Piecework is work for which a predetermined rate is paid for each unit of output. Production bonuses are based on production in excess of a quota or for completion of a job in less than standard time.

Weekly Hours. Data refer to the predominant work schedule for full-time production and office workers employed on the day shift.

Overtime Premium Pay. Weekly overtime refers to work in excess of a specified number of hours per week regardless of the day on which it is performed, the number of hours per day, or number of days worked. Daily overtime refers to work in excess of a specified number of hours a day regardless of the number of hours worked on previous days of the pay period.

Shift Provisions and Practices. Data relate to the provisions in establishments having formal provisions for late-shift operations and to the practices in those establishments operating extra shifts during the payroll period studied.

Paid Holidays. Paid holiday provisions relate to full-day and half-day holidays provided annually.

Paid Vacations. The summary of vacation plans is limited to formal arrangements, excluding informal plans where time off with pay is granted at the discretion of the employer or the supervisor. Payments not on a time basis were converted; for example, a payment of 2 percent of annual earnings was considered the equivalent of 1 week's pay. The periods of service for which data are presented were selected as representative of the most common practices, but they do not necessarily reflect individual establishment provisions for progression. For example, the changes in proportions indicated at 5 years of service may include changes which occurred after 4 years.

Health, Insurance, and Pension Plans. Data are presented for all health, insurance, and pension plans for which all or a part of the cost is borne by the employer, excluding only programs required by law, such as workmen's compensation and social security. Among the plans included are those underwritten by a commercial insurance company and those paid directly by the employer from his current operating funds or from a fund set aside for this purpose.

Death benefits are included as a form of life insurance. Sickness and accident insurance is limited to that type of insurance under which predetermined cash payments are made directly to the insured on a weekly or monthly basis during illness or accident disability. Information is presented for all such plans to which the employer contributes at least part of the cost. However, in areas in New York and New Jersey, where temporary disability insurance laws require employer contributions,<sup>13</sup> plans are included only if the employer (1) contributes more than is legally required, or (2) provides the employees with benefits which exceed the requirements of the law.

Tabulations of paid sick leave plans are limited to formal plans which provide full pay or a proportion of the worker's pay during absence from work because of illness; informal arrangements have been omitted. Separate tabulations are provided according to (1) plans which provide full pay and no waiting period, and (2) plans providing either partial pay or a waiting period.

Medical insurance refers to plans providing for complete or partial payment of doctors' fees. Such plans may be underwritten by a commercial insurance company or a nonprofit organization, or they may be self-insured.

Catastrophe insurance, sometimes referred to as extended medical insurance, includes plans designed to cover employees in case of sickness or injury involving an expense which goes beyond the normal coverage of hospitalization, medical, and surgical plans.

Tabulations of retirement pensions are limited to plans which provide, on retirement, regular payments for the remainder of the worker's life.

<sup>13</sup> The temporary disability insurance laws in California and Rhode Island do not require employer contributions.

## Appendix C. Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field staff in classifying into appropriate occupations workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits the grouping of occupational wage rates representing comparable job content. Because of this emphasis on interestablishment and interarea comparability of occupational content, the Bureau's job descriptions may differ significantly from those in use in individual establishments or those prepared for other purposes. In applying these job descriptions, the Bureau's field economists are instructed to exclude working supervisors, apprentices, learners, beginners, trainees, handicapped, part-time, temporary, and probationary workers.

### ASSEMBLER

(Bench assembler; floor assembler; jig assembler; line assembler; subassembler)

Assembles and/or fits together parts to form complete units or subassemblies at a bench, conveyor line, or on the floor, depending upon the size of the units and the organization of the production process. Work may include processing operations requiring the use of handtools in scraping, chipping, and filing of parts to obtain a desired fit as well as power tools and special equipment when punching, riveting, soldering, or welding of parts is necessary. Workers who perform any of these processing operations exclusively as part of specialized assembling operations are excluded.

Class A. Assembles parts into complete units or subassemblies that require fitting of parts and decisions regarding proper performance of any component part or the assembled unit. Work involves any combination of the following: Assembling from drawings, blueprints or other written specifications; assembling units composed of a variety of parts and/or subassemblies; assembling large units requiring careful fitting and adjusting of parts to obtain specified clearances; and using a variety of hand and powered tools and precision measuring instruments.

Class B. Assembles parts into units or subassemblies in accordance with standard and prescribed procedures. Work involves any combination of the following: Assembling a limited range of standard and familiar products composed of a number of small- or medium-size parts requiring some fitting or adjusting; assembling large units that require little or no fitting of component parts; working under conditions where accurate performance and completion of work within set time limits are essential for subsequent assembling operations; and using a limited variety of hand or powered tools.

Class C. Performs short-cycle, repetitive assembling operations. Work does not involve any fitting or making decisions regarding proper performance of the component parts or assembling procedures.

### AUTOMATIC-LATHE OPERATOR

(Automatic-between-centers-lathe operator; automatic-chucking-machine operator; automatic-turret-lathe operator)

Operates one or more lathes equipped with automatic feed mechanisms for actuating the cutting tools over the complete work cycle. Automatic lathes may differ as to type of construction (horizontal or vertical); number of spindles (single or multiple); method of feed (hand-feed, automatic-chucking, or hopper-feed); method of holding the work (in chucks or between centers); and method of presenting the tools to the stock in sequence (turrets, slide, revolving work stations). (For description of class of work, see machine-tool operator, production.)

DRILL-PRESS OPERATOR, RADIAL

Operates one or more types of radial-drilling machines designed primarily for the purpose of drilling, reaming, countersinking, counterboring, spot-facing, or tapping holes in large or heavy metal parts. Several types of radial drills are in use, the most common type being designed so that the tool head and saddle are movable along a projecting arm which can be rotated about a vertical column and adjusted vertically on that column. (For description of class of work, see machine-tool operator, production.)

DRILL-PRESS OPERATOR, SINGLE- OR MULTIPLE-SPINDLE

Operates one or more types of single- or multiple-spindle drill-presses, to perform such operations as drilling, reaming, countersinking, counterboring, spot-facing, and tapping. Drill-press operators, radial, and operators of portable drilling equipment are excluded. (For description of class of work, see machine-tool operator, production.)

ELECTRICIAN, MAINTENANCE

Performs a variety of electrical trade functions such as the installation, maintenance, or repair of equipment for the generating, distribution, or utilization of electric energy in an establishment. Work involves most of the following: Installing or repairing any of a variety of electrical equipment such as generators, transformers, switchboards, controllers, circuit breakers, motors, heating units, conduit systems, or other transmission equipment; working from blueprints, drawings, layout or other specifications; locating and diagnosing trouble in the electrical system or equipment; working standard computations relating to load requirements of wiring or electrical equipment; and using a variety of electrician's hand-tools and measuring and testing instruments. In general, the work of the maintenance electrician requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

ENGINE-LATHE OPERATOR

Operates an engine lathe for shaping external and internal cylindrical surfaces of metal objects. The engine lathe, basically characterized by a headstock, tailstock, and power-fed tool carriage, is a general-purpose machine tool used primarily for turning. It is also commonly used in performing such operations as facing, boring, drilling and threading, and equipped with appropriate attachments, may be used for a very wide variety of special machining operations. The stock may be held in position by the lathe "centers" or by various types of chucks and fixtures. Bench-lathe operators, automatic-lathe operators, screw-machine operators, automatic, and turret-lathe operators, hand (including hand screw machine) are excluded. (For description of class of work, see machine-tool operator, production.)

GRINDING-MACHINE OPERATOR

(Centerless-grinder operator; cylindrical-grinder operator; external-grinder operator; internal-grinder operator; surface-grinder operator; Universal-grinder operator)

Operates one of several types of precision grinding machines to grind internal and external surfaces of metal parts to a smooth and even finish and to required dimensions. Precision grinding is used primarily as a finishing operation on previously machined parts, and consists of applying abrasive wheels, rotating at high speeds to the surfaces to be ground. In addition to the types of grinding machines indicated above, this classification includes operators of other production grinding machines such as: Single-purpose grinders (drill grinders, broach grinders, saw grinders, gear-cutter grinders, thread grinders, etc.) and automatic and semiautomatic general purpose grinding machines. Operators of portable grinders are excluded. (For description of class of work, see machine-tool operator, production.)

INSPECTOR

Inspects parts, products, and/or processes. Performs such operations as examining parts or products for flaws and defects, checking their dimensions and appearance to determine whether they meet the required standards and specifications.

INSPECTOR—Continued

Class A. Responsible for decisions regarding the quality of the product and/or operations. Work involves any combination of the following: Thorough knowledge of the processing operations in the branch of work to which he is assigned, including the use of a variety of precision measuring instruments; interpreting drawings and specifications in inspection work on units composed of a large number of component parts; examining a variety of products or processing operations; determining causes of flaws in products and/or processes and suggesting necessary changes to correct work methods; and devising inspection procedures for new products.

Class B. Work involves any combination of the following: Knowledge of processing operations in the branch of work to which he is assigned, limited to familiar products and processes or where performance is dependent on past experience; performing inspection operations on products and/or processes having rigid specifications, but where the inspection procedures involve a sequence of inspection operations, including decisions regarding proper fit or performance of some parts; and using precision measuring instruments.

Class C. Work involves any combination of the following: Short-cycle, repetitive inspection operations; using a standardized, special-purpose measuring instrument repetitively; and visual examination of parts or products, rejecting units having obvious deformities or flaws.

JANITOR, PORTER, OR CLEANER

(Sweeper; charwoman; janitress)

Cleans and keeps in an orderly condition factory working areas and washrooms, or premises of an office, apartment house, or commercial or other establishment. Duties involve a combination of the following: Sweeping, mopping, or scrubbing, polishing floors; removing chips, trash, and other refuse; dusting equipment, furniture, or fixtures; polishing metal fixtures or trimmings; and providing supplies and minor maintenance services; cleaning lavatories, showers, and restrooms. Workers who specialize in window washing are excluded.

LABORER, MATERIAL HANDLING

(Loader and unloader; handler and stacker; shelver; trucker; stockman or stock helper; warehouseman or warehouse helper)

A worker employed in a warehouse, manufacturing plant, store, or other establishment whose duties involve one or more of the following: Loading and unloading various materials and merchandise on or from freight cars, trucks, or other transporting devices; unpacking, shelving, or placing materials or merchandise in proper storage location; and transporting materials or merchandise by handtruck, car, or wheelbarrow. Longshoremen, who load and unload ships, are excluded.

MACHINE-TOOL OPERATOR, PRODUCTION

Operates one or more nonportable, power-driven machine tools in order to shape metal by progressively removing portion of the stock in the form of chips or shavings, or by abrasion. For wage study purposes, this classification is limited to operators of the following types of machine tools:

Automatic lathes	Machine tools, miscellaneous <sup>14</sup>
Boring machines	Milling machines
Drill presses, radial	Planers
Drill presses, single- or multiple-spindle	Screw machines, automatic
Engine lathes	Screw machines, hand
Gear-cutting machines	Shapers
Gear-finishing machines	Turret lathes, automatic
Grinding machines	Turret lathes, hand

<sup>14</sup> Operators required alternately to operate more than one type of machine tools as listed above are to be classified as machine-tool operator, miscellaneous.

MACHINE-TOOL OPERATOR, PRODUCTION—Continued

Class A. Sets up machines by determining proper feeds, speeds, tooling and operation sequence or by selecting those prescribed in drawings, blueprints, or layouts; makes necessary adjustments during operation where changes in work and setup are relatively frequent and where care is essential to achieve requisite dimensions of very close tolerances.

Class B. Sets up machines on standard or roughing operations where feeds, speeds, tooling, and operation sequence are prescribed or maintains operation setup made by others; and makes all necessary adjustments during operation where care is essential to achieve very close tolerances or where changes in product are relatively frequent.

Class C. Operates machines on routine and repetitive operations; makes only minor adjustments during operations; and when trouble occurs stops machine and calls foreman, leadman, or setup man to correct the operation.

MACHINE-TOOL OPERATOR, TOOLROOM

Specializes in the operation of one or more types of machine tools such as jig borers, cylindrical or surface grinders, engine lathes, or milling machines in the construction of machine-shop tools, gages, jigs, fixtures, or dies. Work involves most of the following: Planning and performing difficult machining operations; processing items requiring complicated setups or a high degree of accuracy; using a variety of precision measuring instruments; selecting feeds, speeds, tooling and operation sequence; and making necessary adjustments during operation to achieve requisite tolerances or dimensions. May be required to recognize when tools need dressing, to dress tools, and to select proper coolants and cutting and lubricating oils.

MACHINIST, PRODUCTION

Fabricates metal parts involving a series of progressive operations. Work involves most of the following: Interpreting written instructions and specifications; planning and laying out work; using a variety of machinist's handtools and precision measuring instruments; setting up and operating standard machine tools; shaping metal parts to close tolerances; making standard shop computations relating to dimensions of work, tooling, feeds and speeds of machining; knowledge of the working properties of the common metals; selecting standard materials, parts and equipment needed for his work; fitting and assembling parts. In general, the machinist's work normally requires a rounded training in machine-shop practice usually acquired through a formal apprenticeship or equivalent training and experience.

MILLING-MACHINE OPERATOR

(Milling-machine operator, automatic; milling-machine operator, hand)

Performs a variety of work such as grooving, planing, and shaping metal objects on a milling machine, which removes material from metal surfaces by the cutting action of multitoothed rotating cutters of various sizes and shapes. Milling-machine types vary from the manually controlled machines employed in unit production to fully automatic (conveyor-fed) machines found in plants engaged in mass production. For wage study purposes, operators of single-purpose millers such as thread millers, duplicators, diesinkers, pantograph millers, and engraving millers are excluded. (For description of class of work, see machine-tool operator, production.)

SCREW-MACHINE OPERATOR, AUTOMATIC

Operates one or more multiple- or single-spindle automatic screw machines. Automatic screw machines are production turning machines with automatic-feed cycle designed to produce parts from bar or tube stock fed automatically through spindles or the head stock. These machines, equipped with from one to eight spindles or a turret, automatically perform and repeat a cycle of operations on each length of stock fed into the machine. (For description of class of work, see machine-tool operator, production.)

TOOL AND DIE MAKER

(Die maker; jig maker; toolmaker; fixture maker; gage maker)

Constructs and repairs machine-shop tools, gages, jigs, fixtures or dies for forgings, punching, and other metal-forming work. Work involves most of the following: Planning and laying out of work from models, blueprints, drawings, or other oral and written specifications; using a variety of tool and die maker's handtools and precision measuring instruments; understanding of the working properties of common metals and alloys; setting up and operating of machine tools and related equipment; making necessary shop computations relating to dimensions of work, speeds, feeds, and tooling of machines; heat-treating of metal parts during fabrication as well as of finished tools and dies to achieve required qualities; working to close tolerances; fitting and assembling of parts to prescribed tolerances and allowances; and selecting appropriate materials, tools, and processes. In general, the tool and die maker's work requires a rounded training in machine-shop and toolroom practice usually acquired through a formal apprenticeship or equivalent training and experience.

For wage study purposes, tool and die makers are classified as follows:

Tool and die maker (jobbing)

Worker making dies and tools, die sets, jigs and fixtures, etc., as the end product of an establishment.

Tool and die maker (other than jobbing)

Worker making and/or maintaining dies and tools, die sets, jigs and fixtures, etc., for use within an establishment.

TURRET-LATHE OPERATOR, HAND (INCLUDING HAND-SCREW MACHINE)

Operates a lathe equipped with a turret used to present a number of cutting tools, required for a cycle of machining operations, to the work in sequence. Operations commonly performed on a turret lathe include turning, facing, boring, drilling, and threading. The operator rotates or indexes the turret to bring the tools toward the work for each operation. Individual workpieces, such as forgings and castings, are held in a chuck or the lathe may be equipped with a bar stock feeding device to present the correct length of stock to the tools at the beginning of each cycle of operations. (For description of class of work, see machine-tool operator, production.)

WELDER, HAND

Fuses (welds) metal objects by means of an oxyacetylene torch or arc welding apparatus in the fabrication of metal shapes and in repairing broken or cracked metal objects. In addition to performing hand welding or brazing operation, the welder may also lay out guide lines or marks on metal parts and may cut metal with a cutting torch.

Class A. Performs welding operations requiring most of the following: Planning and laying out of work from drawings, blueprints, or other written specifications; knowledge of welding properties of a variety of metals and alloys, setting up work and determining operation sequence; welding high pressure vessels or other objects involving critical safety and load requirements; working from a variety of positions.

Class B. Performs welding operations on repetitive work, where no critical safety and load requirements are involved; where the work calls mainly for one-position welding; and where the layout and planning of the work are performed by others.



# Industry Wage Studies

The most recent reports for industries included in the Bureau's program of industry wage surveys since January 1950 are listed below. Those for which a price is shown are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C., 20402, or any of its regional sales offices. Those for which a price is not shown may be obtained free as long as a supply is available, from the Bureau of Labor Statistics, Washington, D.C., 20212, or from any of the regional offices shown on the inside back cover.

## I. Occupational Wage Studies

### Manufacturing

- Basic Iron and Steel, 1962. BLS Bulletin 1358 (30 cents).
- Candy and Other Confectionery Products, 1960. BLS Report 195.
- \*Canning and Freezing, 1957. BLS Report 136.
- Cigar Manufacturing, 1961. BLS Bulletin 1317 (30 cents).
- Cigarette Manufacturing, 1960. BLS Report 167.
- Cotton Textiles, 1963. BLS Bulletin 1410 (40 cents).
- Distilled Liquors, 1952. Series 2, No. 88.
- Fabricated Structural Steel, 1957. BLS Report 123.
- Fertilizer Manufacturing, 1962. BLS Bulletin 1362 (40 cents).
- Flour and Other Grain Mill Products, 1961. BLS Bulletin 1337 (30 cents).
- Fluid Milk Industry, 1960. BLS Report 174.
- Footwear, 1962. BLS Bulletin 1360 (45 cents).
- Hosiery, 1962. BLS Bulletin 1349 (45 cents).
- Industrial Chemicals, 1955. BLS Report 103.
- Iron and Steel Foundries, 1962. BLS Bulletin 1386 (40 cents).
- Leather Tanning and Finishing, 1963. BLS Bulletin 1378 (40 cents).
- Machinery Manufacturing, 1963. BLS Bulletin 1388 (25 cents).
- Meat Products, 1963. BLS Bulletin 1415 (75 cents).
- Men's and Boys' Shirts (Except Work Shirts) and Nightwear, 1961.  
BLS Bulletin 1323 (40 cents).
- Men's and Boys' Suits and Coats, 1963. BLS Bulletin 1424 (65 cents).
- Miscellaneous Plastics Products, 1960. BLS Report 168.
- Miscellaneous Textiles, 1953. BLS Report 56.
- Motor Vehicles and Motor Vehicle Parts, 1963. BLS Bulletin 1393 (45 cents).
- Nonferrous Foundries, 1960. BLS Report 180.
- Paints and Varnishes, 1961. BLS Bulletin 1318 (30 cents).
- Petroleum Refining, 1959. BLS Report 158.
- Pressed or Blown Glass and Glassware, 1964. BLS Bulletin 1423 (30 cents).
- \*Processed Waste, 1957. BLS Report 124.
- Pulp, Paper, and Paperboard Mills, 1962. BLS Bulletin 1341 (40 cents).
- Radio, Television, and Related Products, 1951. Series 2, No. 84.
- Railroad Cars, 1952. Series 2, No. 86.
- \*Raw Sugar, 1957. BLS Report 136.
- Southern Sawmills and Planing Mills, 1962. BLS Bulletin 1361 (30 cents).
- Structural Clay Products, 1960. BLS Report 172.
- Synthetic Fibers, 1958. BLS Report 143.
- Synthetic Textiles, 1963. BLS Bulletin 1414 (35 cents).
- Textile Dyeing and Finishing, 1961. BLS Bulletin 1311 (35 cents).
- \*Tobacco Stemming and Redrying, 1957. BLS Report 136.

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\* Studies of the effects of the \$1 minimum wage.

## I. Occupational Wage Studies—Continued

### Manufacturing—Continued

- West Coast Sawmilling, 1959. BLS Report 156.  
Women's and Misses' Coats and Suits, 1962. BLS Bulletin 1371 (25 cents).  
Women's and Misses' Dresses, 1963. BLS Bulletin 1391 (30 cents).  
Wood Household Furniture, Except Upholstered, 1962. BLS Bulletin 1369 (40 cents).  
\*Wooden Containers, 1957. BLS Report 126.  
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\* Studies of the effects of the \$1 minimum wage.

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