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ABSTRACT

The United States Training and Employment Service General Aptitude Test Battery (GATB), first published in 1947, has been included in a continuing program of research to validate the tests against success in many different occupations. The GATB consists of 12 tests which measure nine aptitudes: General Learning Ability; Verbal Aptitude; Numerical Aptitude; Spatial Aptitude; Form Perception; Clerical Perception; Motor Coordination; Finger Dexterity; and Manual Dexterity. The aptitude scores are standard scores with 100 as the average for the general working population, and a standard deviation of 20. Occupational norms are established in terms of minimum qualifying scores for each of the significant aptitude measures which, when combined, predict job performance. Cutting scores are set only for those aptitudes which aid in predicting the performance of the job duties of the experimental sample. The GATB norms described are appropriate only for jobs with content similar to that shown in the job description presented in this report. A description of the validation sample and a personnel evaluation form are also included. (AG)

September 1970

U.S. Training and
Employment Service
Technical Report
S-267 R

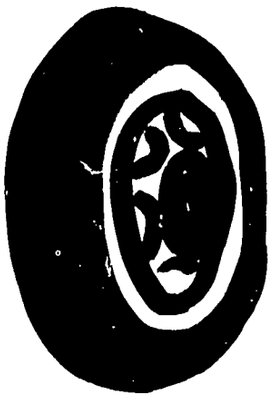
Development of USTES

APTITUDE TEST
BATTERY FOR

TIRE BUILDER, AUTOMOBILE

(rubber tire & tube)
750.884

U.S DEPARTMENT OF LABOR
Manpower Administration



Technical Report on Development of USTES Aptitude Test Battery

For . . . .

Tire Builder, Automobile (rubber tire & tube) 750.884

S-267R

(Developed in Cooperation with the
Ohio State Employment Service)

U.S. Department of Labor
Manpower Administration

September 1970

FOREWORD

The United States Training and Employment Service General Aptitude Test Battery (GATB) was first published in 1947. Since that time the GATB has been included in a continuing program of research to validate the tests against success in many different occupations. Because of its extensive research base the GATB has come to be recognized as the best validated multiple aptitude test battery in existence for use in vocational guidance.

The GATB consists of 12 tests which measure 9 aptitudes: General Learning Ability, Verbal Aptitude, Numerical Aptitude, Spatial Aptitude, Form Perception, Clerical Perception, Motor Coordination, Finger Dexterity, and Manual Dexterity. The aptitude scores are standard scores with 100 as the average for the general working population, with a standard deviation of 20.

Occupational norms are established in terms of minimum qualifying scores for each of the significant aptitude measures which, in combination, predict job performance. For any given occupation, cutting scores are set only for those aptitudes which contribute to the prediction of performance of the job duties of the experimental sample. It is important to recognize that another job might have the same job title but the job content might not be similar. The GATB norms described in this report are appropriate for use only for jobs with content similar to that shown in the job description included in this report.

GATB Study #2454
#2791

Development of USTES Aptitude Test Battery

For

Tire Builder, Automobile (rubber tire & tube) 750.884-034

S-267R

This report describes research undertaken for the purpose of developing General Aptitude Test Battery (GATB) norms for the occupation of Tire Builder, Automobile (rubber tire & tube) 750.884-034. The following norms were established:

GATB Aptitudes	Minimum Acceptable GATB Scores
S-Spatial Aptitude	95
P-Form Perception	80
M-Manual Dexterity	80

Research Summary

Sample:

The final sample consisted of 127 male workers employed as Tire Builders in various plants in Ohio. The final sample was obtained by combining two separate studies conducted in Ohio. The first sample of 50 Tire Builders was obtained prior to the requirement of providing minority group status. Therefore, minority group status is unknown. In the second sample of 77 Tire Builders, 4 Negroes composed the minority group.

Criterion:

Supervisor's ratings.

Design:

Concurrent (test and criterion data were collected at approximately the same time).

Minimum aptitude requirements were determined on the basis of a job analysis, and statistical analyses of aptitude mean scores, standard deviations, aptitude-criterion correlations, and selective efficiencies.

Concurrent Validity:

Phi Coefficient = .25 ($P/2 < .005$)

Effectiveness of Norms:

Only 64% of the nontest-selected workers used for this study were good workers; if the workers had been test-selected with the above norms, 73% would have been good workers. Thirty-six percent of the nontest-selected workers used for this study were poor workers; if the workers had been test-selected with the above norms, only 27% would have been poor workers. The effectiveness of the norms is shown graphically in Table 1:

TABLE 1

Effectiveness of Norms

	Without Tests	With Tests
Good Workers	64%	73%
Poor Workers	36%	27%

SAMPLE DESCRIPTION

Size:

N=127

Occupational Status:

Employed Workers

Work Setting:

Workers were employed at various tire and rubber plants in Ohio.

Selection Requirements:

Age: 18 years or over

Education: Must have completed eighth grade - prefer high school graduate (sample contained a seventh grader).

Previous Experience: None required.

Tests: Minnesota Rate of Manipulation Test (second sample of 77 only)

Other: Minimum height 5'6" with minimum weight of 150 pounds.

Principal Activities:

The job duties for each worker are comparable to those shown in the job description on the Fact Sheet in the Appendix.

Minimum Experience:

The minimum experience for the final sample is 4 months.

TABLE 2

Means, Standard Deviations (SD), Ranges, and Pearson Product-Moment Correlations with the Criterion (r) for Age, Education and Experience

	Mean	SD	Range	r
Age (years)	36.5	9.3	19-61	.166
Education (years)	11.4	1.6	7-16	.036
Experience (months)	122.8	107.4	4-400	.180

EXPERIMENTAL TEST BATTERY

All twelve tests of the GATB, B-1002B, were administered to the first sample during February 1963 and to the second sample during the period February 1969 through December 1969.

CRITERION

The criterion data consisted of supervisor's ratings of job proficiency made at approximately the same time as the test data was collected.

Rating Scales:

Two sets of ratings were obtained on the first sample (N = 50) using the standard SP-21 containing 9 items with 5 different levels of performance. A reliability coefficient of .94 was obtained between the two sets of ratings. Therefore, the ratings were combined as the criteria for this sample.

Two sets of ratings were obtained on the second sample (N = 77) using a special rating scale containing 7 items with 5 different levels of performance and a standard SP-21 containing 7 items with five levels of performance. A reliability coefficient of .94 was obtained between the two sets of ratings. Therefore, the ratings were combined as the criteria for this sample.

The final criterion score for the total sample was obtained by combining the final criterion for each sample. In order to do this an adjustment was made to the criterion scores for the second sample (based on a 7 item rating scale) to make it comparable to the 9 item rating scale used in sample one.

Criterion Score Distribution:

Possible Range:	18-90
Actual Range:	29-90
Mean:	65.4
Standard Deviation:	11.9

Criterion Dichotomy:

The criterion distribution was dichotomized into high and low groups by placing 36% of the sample in the low criterion group to correspond with the percentage of workers considered marginal or unsatisfactory. Workers in the high criterion group were designated as "good workers" and those in the low criterion group as "poor workers." The critical criterion score is 60.

APTITUDES CONSIDERED FOR INCLUSION IN THE NORMS

Aptitudes were selected for tryout on the basis of a qualitative analysis of job duties involved and a statistical analysis of test and criterion data. Aptitudes P, Q and M were considered for inclusion in the trial norms because the qualitative analysis indicated that they were important to the job duties and the sample had relatively high mean scores on these aptitudes. With employed workers, a relatively high mean score may indicate some sample preselection. **Tables 3,4 and 5 show the results of the qualitative and statistical analyses.**

TABLE 3

Qualitative Analysis
(Based on the job description and observation of the job, the aptitudes indicated appear to be important to the work performed)

P - Form Perception	Required to apply cement and position "plies" together; also required to recognize and correct defective spots on tires.
Q - Clerical Perception	Required to visually inspect tires for splices, wrinkles, and other defects.
K - Motor Coordination	Required to cut or tear "ply" to length and to place "plies" around drum and to hammer tread edges with mallet. Performance indicates importance of eye-hand coordination.
M - Manual Dexterity	Required to place "plies," rotate drum, and use hand tools to "stitch" plies; hammer tread edges, and trim tread edges with knife.

TABLE 4

Means, Standard Deviations (SD), Ranges, and Pearson Product-Moment Correlations with the Criterion (r) for the Aptitudes of the GATB. N = 127

Aptitude	Mean	SD	Range	r
G - General Learning Ability	103.9	16.4	52-149	.154
V - Verbal Aptitude	99.2	15.0	65-147	.102
N - Numerical Aptitude	102.2	16.9	42-139	.113
S - Spatial Aptitude	106.4	19.3	58-150	.185*
P - Form Perception	104.8	20.8	53-165	.134
Q - Clerical Perception	106.0	15.9	65-146	.053
K - Motor Coordination	100.1	17.3	53-132	.046
F - Finger Dexterity	90.5	20.9	27-143	.121
M - Manual Dexterity	105.6	20.0	59-155	.135

*Significant at the .05 level

TABLE 5

Summary of Qualitative and Quantitative Data

Type of Evidence	Aptitudes								
	G	V	N	S	P	Q	K	F	M
Job Analysis Data: Important					X	X	X		X
Irrelevant									
Relatively High Mean				X	X	X			X
Relatively Low Standard Deviation									
Significant Correlation with Criterion				X					
Aptitudes to be Considered for Trial Norms				S	P	Q			M

DERIVATION AND VALIDITY OF NORMS

Final norms were derived on the basis of a comparison of the degree to which trial norms consisting of various combinations of Aptitudes S, P, Q, and M at trial cutting scores were able to differentiate between the 64% of the sample considered good workers and the 36% considered poor workers. Trial cutting scores at the five-point interval nearest to one standard deviation below the mean for each aptitude are tried because this will eliminate about one-third of the sample with three-aptitude norms. For two-aptitude norms, minimum cutting scores slightly higher than one standard deviation below the mean will eliminate about one-third of the sample; for four-aptitude trial norms, cutting scores of slightly lower than one standard deviation below the mean will eliminate about one-third of the sample. The phi coefficient was used as a basis for comparing trial norms. Norms of S-95, P-80, and M-80 provided optimum differentiation for the occupation of Tire Builder, Automobile (rubber tire & tube) 750.884-034. The validity of the norms is shown in Table 6 and is indicated by a phi coefficient of .25 (statistically significant at the .005 level).

TABLE 6

Concurrent Validity of Test Norms, S-95, P-80, and M-80

	Nonqualifying Test Scores	Qualifying Test Scores	Total
Good Workers	19	62	81
Poor Workers	23	23	46
Total	42	85	127

Phi Coefficient (ϕ) = .25 Chi Square (X^2_y) = 8.2

Significance Level = $P/2 < .005$

DETERMINATION OF OCCUPATIONAL APTITUDE PATTERN

The data for this study met the requirements for incorporating this occupation into OAP-42 in the 1970 edition of Section II of the Manual for the General Aptitude Test Battery. A phi coefficient of .21 is obtained with the OAP-42 norms of S-90, P-85, and M-85.

Used with Sample 1

SP-21
Rev. 2/61

A-P-P-E-N-D-I-X

DESCRIPTIVE RATING SCALE
(For Aptitude Test Development Studies)

Score____

RATING SCALE FOR _____
D. O. T. Title and Code

Directions: Please read Form SP-20, "Suggestions to Raters", and then fill in the items listed below. In making your ratings, only one box should be checked for each question.

Name of Worker (print) _____
(Last) (First)

Sex: Male_____ Female_____

Company Job Title: _____

How often do you see this worker in a work situation?

☐ See him at work all the time.

☐ See him at work several times a day.

☐ See him at work several times a week.

☐ Seldom see him in work situation.

How long have you worked with him?

☐ Under one month.

☐ One to two months.

☐ Three to five months.

☐ Six months or more.

A. How much work can he get done? (Worker's ability to make efficient use of his time and to work at high speed.)

☐ 1. Capable of very low work output. Can perform only at an unsatisfactory pace.

☐ 2. Capable of low work output. Can perform at a slow pace.

☐ 3. Capable of fair work output. Can perform at an acceptable but not a fast pace.

☐ 4. Capable of high work output. Can perform at a fast pace.

☐ 5. Capable of very high work output. Can perform at an unusually fast pace.

B. How good is the quality of his work? (Worker's ability to do high-grade work which meets quality standards.)

☐ 1. Performance is inferior and almost never meets minimum quality standards.

☐ 2. The grade of his work could stand improvement. Performance is usually acceptable but somewhat inferior in quality.

☐ 3. Performance is acceptable but usually not superior in quality.

☐ 4. Performance is usually superior in quality.

☐ 5. Performance is almost always of the highest quality.

C. How accurate is he in his work? (Worker's ability to avoid making mistakes.)

☐ 1. Makes very many mistakes. Work needs constant checking.

☐ 2. Makes frequent mistakes. Work needs more checking than is desirable.

☐ 3. Makes mistakes occasionally. Work needs only normal checking.

☐ 4. Makes few mistakes. Work seldom needs checking.

☐ 5. Rarely makes a mistake. Work almost never needs checking.

D. How much does he know about his job? (Worker's understanding of the principles, equipment, materials and methods that have to do directly or indirectly with his work.)

☐ 1. Has very limited knowledge. Does not know enough to do his job adequately.

☐ 2. Has little knowledge. Knows enough to "get by."

☐ 3. Has moderate amount of knowledge. Knows enough to do fair work.

☐ 4. Has broad knowledge. Knows enough to do good work.

☐ 5. Has complete knowledge. Knows his job thoroughly.

E. How much aptitude or facility does he have for this kind of work? (Worker's adeptness or knack for performing his job easily and well.)

☐ 1. Has great difficulty doing his job. Not at all suited to this kind of work.

☐ 2. Usually has some difficulty doing his job. Not too well suited to this kind of work.

☐ 3. Does his job without too much difficulty. Fairly well suited to this kind of work.

☐ 4. Usually does his job without difficulty. Well suited to this kind of work.

☐ 5. Does his job with great ease. Exceptionally well suited for this kind of work.

F. How large a variety of job duties can he perform efficiently? (Worker's ability to handle several different operations in his work.)

☐ 1. Cannot perform different operations adequately.

☐ 2. Can perform a limited number of different operations efficiently.

☐ 3. Can perform several different operations with reasonable efficiency.

☐ 4. Can perform many different operations efficiently.

☐ 5. Can perform an unusually large variety of different operations efficiently.

G. How resourceful is he when something different comes up or something out of the ordinary occurs? (Worker's ability to apply what he already knows to a new situation.)

☐ 1. Almost never is able to figure out what to do. Needs help on even minor problems.

☐ 2. Often has difficulty handling new situations. Needs help on all but simple problems.

☐ 3. Sometimes knows what to do, sometimes doesn't. Can deal with problems that are not too complex.

☐ 4. Usually able to handle new situations. Needs help on only complex problems.

☐ 5. Practically always figures out what to do himself. Rarely needs help, even on complex problems.

H. How many practical suggestions does he make for doing things in better ways? (Worker's ability to improve work methods.)

☐ 1. Sticks strictly with the routine. Contributes nothing in the way of practical suggestions.

☐ 2. Slow to see new ways to improve methods. Contributes few practical suggestions.

☐ 3. Neither quick nor slow to see new ways to improve methods. Contributes some practical suggestions.

☐ 4. Quick to see new ways to improve methods. Contributes more than his share of practical suggestions.

☐ 5. Extremely alert to see new ways to improve methods. Contributes an unusually large number of practical suggestions.

I. Considering all the factors already rated, and only these factors, how acceptable is his work? (Worker's "all-around" ability to do his job.)

☐ 1. Would be better off without him. Performance usually not acceptable.

☐ 2. Of limited value to the organization. Performance somewhat inferior.

☐ 3. A fairly proficient worker. Performance generally acceptable.

☐ 4. A valuable worker. Performance usually superior.

☐ 5. An unusually competent worker. Performance almost always top notch.

Used with Sample 2

SP-21
Rev. 5/67

UNITED STATES EMPLOYMENT SERVICE

DESCRIPTIVE RATING SCALE
(For Aptitude Test Development Studies)

SCORE_____

RATING SCALE FOR Tire Builder, Automobile 750.884
D.O.T. Title and Code

Directions: Please read the sheet "Suggestions to Raters" and then fill in the items listed below. In making your ratings, only one box should be checked for each question.

Name of worker (print) _____
(Last) (First)

Sex: Male _____ Female _____

Company Job Title: Passenger Tire Builder

How often do you see this worker in a work situation?

___ See him at work all the time.

___ See him at work several times a day.

___ See him at work several times a week.

___ Seldom see him in work situation.

How long have you worked with him?

___ Under one month.

___ One to two months.

___ Three to five months.

___ Six months or more.

A. How much work can he get done? (Worker's ability to make efficient use of his time and to work at high speed.)

1.____ Capable of very low work output. Can perform only at an unsatisfactory pace.

2.____ Capable of low work output. Can perform at a slow pace.

3.____ Capable of fair work output. Can perform at an acceptable but not fast pace.

4.____ Capable of high work output. Can perform at a fast pace.

5.____ Capable of very high work output. Can perform at an unusually fast pace.

B. How good is the quality of his work? (Worker's ability to do high-grade work which meets quality standards.)

1.____ Performance is inferior and almost never meets minimum quality standards.

2.____ The grade of his work could stand improvement. Performance is usually acceptable but somewhat inferior in quality.

3.____ Performance is acceptable but usually not superior in quality.

4.____ Performance is usually superior in quality.

5.____ Performance is almost always of the highest quality.

C. How accurate is he in his work? (Worker's ability to avoid making mistakes.)

1.____ Makes very many mistakes. Work needs constant checking.

2.____ Makes frequent mistakes. Work needs more checking than is desirable.

3.____ Makes mistakes occasionally. Work needs only normal checking.

4.____ Makes few mistakes. Work seldom needs checking.

5.____ Rarely makes a mistake. Work almost never needs checking.

D. How much does he know about his job? (Worker's understanding of the principles, equipment, materials and methods that have to do directly or indirectly with his work.)

1.____ Has very limited knowledge. Does not know enough to do his job adequately.

2.____ Has little knowledge. Knows enough to "get by."

3.____ Has moderate amount of knowledge. Knows enough to do fair work.

4.____ Has broad knowledge. Knows enough to do good work.

5.____ Has complete knowledge. Knows his job thoroughly.

E. How much aptitude or facility does he have for this kind of work? (Worker's adeptness or knack for performing his job easily and well.)

1.____ Has great difficulty doing his job. Not at all suited to this kind of work.

2.____ Usually has some difficulty doing his job. Not too well suited to this kind of work.

3.____ Does his job without too much difficulty. Fairly well suited to this kind of work.

4.____ Usually does his job without difficulty. Well suited to this kind of work.

5.____ Does his job with great ease. Exceptionally well suited for this kind of work.

F. How large a variety of job duties can he perform efficiently? (Worker's ability to handle several different operations in his work.)

1.____ Cannot perform different operations adequately.

2.____ Can perform a limited number of different operations efficiently.

3.____ Can perform several different operations with reasonable efficiency.

4.____ Can perform many different operations efficiently.

5.____ Can perform an unusually large variety of different operations efficiently.

Considering all the factors already rated, and only these factors, how acceptable is his work? (Worker's "all-around ability" to do his job.)

1.____ Would be better off without him. Performance usually not acceptable.

2.____ Of limited value to the organization. Performance somewhat inferior.

3.____ A fairly proficient worker. Performance generally acceptable.

4.____ A valuable worker. Performance is usually superior.

5.____ An unusually competent worker. Performance almost always top notch.

Used with Sample 2

SPECIAL RATING SCALE

G. How well adapted is he for inside work? (Worker's ability to work indoors.)

1.____ Has very great difficulty working indoors.
Not adapted for inside work. Definitely does not like working inside.

2.____ Has considerable difficulty working indoors.
Somewhat dislikes inside work.

3.____ Can work fairly well inside. Is satisfied working indoors.

4.____ Performs well indoors. Likes working inside.

5.____ Works best indoors. Definitely prefers inside work.

H. How well adapted is he for doing repetitive work? (Worker's ability to do the same operation or a very small number of tasks over and over again.)

1.____ Is not suited for doing repetitive work.
Cannot adapt himself to doing the same job over and over again.

2.____ Has considerable difficulty performing on a repetitive job.
Poorly suited for repetitive work.

3.____ Can perform adequately on a repetitive job.
Adapts fairly well to repetitive work.

4.____ Has no difficulty performing on a repetitive job.
Well adapted for repetitive work.

5.____ Is exceptionally well adapted for repetitive work.
Can very readilly repeat the same operation all day.

I. How well does he remember directions? (Worker's ability to remember work routine and instructions.)

1.____ Has very great difficulty remembering directions. Very often forgets.
Must be continually reminded and corrected.

2.____ Has considerable difficulty remembering directions.
Often needs straightening out.

3.____ Can remember directions fairly well.
Occasionally forgets or needs correcting.

4.____ Has no difficulty remembering directions.
Seldom forgets or needs correcting.

5.____ Remembers directions exceptionally well.
Almost never forgets or needs correcting.

J. How well can he coordinate hand or foot movements with what his eye sees? (Worker's ability to make a hand or foot motion at the same time his eye sees something.)

1.____ Is almost unable to do this. Coordination of such movements is extremely poor and erratic.

2.____ Has considerable difficulty doing this. Coordination of such movements is not smooth.

3.____ Can do this fairly well. Sometimes is a little awkward.

4.____ Has no difficulty doing this. Coordination of such movements is generally smooth.

5.____ Can do this with exceptional ease. Coordination of such movements is always very smooth.

K. How well does he coordinate the movements of his hands? (Worker's ability to perform the same or different manipulations with both hands at the same time.)

1.____ Has very great difficulty using both hands at the same time. Very awkward and clumsy.

2.____ Has considerable difficulty using both hands at the same time. Sometimes awkward and clumsy.

3.____ Can perform manipulations with both hands at the same time adequately. Hand movements are fairly well coordinated.

4.____ Has no difficulty using both hands at the same time. Movements are generally smooth.

5.____ Uses both hands at the same time with exceptional ease and dexterity. Hand movements are extremely well coordinated.

L. How well can this worker estimate the quality of an object? (Worker's ability to judge how good or how bad a piece of work is and to decide how much work is needed to bring it up to standard.)

1.____ Is a very poor judge of quality. Cannot tell a good piece of work from a bad one.

2.____ Has considerable difficulty telling whether a piece of work is adequate. Often makes incorrect judgments.

3.____ Can usually tell whether a piece of work is adequate. Fair judge of quality.

4.____ Has no difficulty estimating the quality of an object. Can identify bad products readily. Good judge of quality.

5.____ Almost never makes an error in judging the quality of a piece of work. Is an excellent judge of quality.

M. How well does he learn new procedures and methods? (Worker's ability to "catch on" and follow instructions.)

1.____ Has to be shown more often than most. Requires an extreme amount of patience by supervisor.

2.____ May have to be shown once or twice after the rest have caught on.

3.____ Catches on as quickly as the next fellow.

4.____ Is usually ahead of the rest in this regard.

5.____ Needs to be told or shown once. Needs a minimum of the supervisor's time in this regard.

September 1970 FACT SHEET S-267R

Job Title:

Tire Builder, Automobile 750.884

Job Summary:

Builds pneumatic tires on semiautomatic sequence controlled unit or by hand on mechanically rotated drum-type tire building machine.

Work Performed:

Apply rubber cement to edges of metal drum surface to make it adhesive and wind plies of rubberized fabric or wire around drum. Plies may be applied as single plies, "fishtails", or pre-assembled bands. Apply single ply by pulling down ply from ply tray or from ply rolls; cut or tear to length, or unwind pre-cut plies from letoff racks. Apply "fishtail" or pre-formed double ply by unrolling from cloth liner with assistance of one or more Tire Builders. Apply band by holding skid bar against or underneath and "skidding" band into place while rotating drum; subsequent bands applied over cloth sleeve temporarily placed around drum to permit each band to be skidded over previous one without adhering. Lap splice ends of single plies and "fishtails" to insure adhesion.

Build up tire carcass with desired number of plies, one or more beads being set on each edge of fabric or wire plies by placing manually, pressing button, turning handcrank, or automatically in sequence. Distribute buckles at ply edges; form plies over edges and around beads and "stitch" plies together manually with hand tools, in automatic sequence, or by button or pedal-controlled mechanical stitching rollers. Obtain tread from skid tray, start on from pan or by hand and wrap tread around drum; splice ends and hammer tread edges down on drum as necessary with mallet or paddle. Obtain from letoff or pin racks, wind on, splice, and roll down chafer strips at locations of rim contact, cap ply on center drum, sidewalls, tread parts, or gum strips over splices and defective spots.

Use solvent and rubber cement to improve adhesive qualities of fabric and rubber during construction, and press entire surface of tire with mechanical and/or hand stitching tools to stitch all parts together. Trim excess fabric at beads and shape tread edges with knife. Visually inspect tire and remove trapped air with awl and any surface wrinkles with wrinkle pick. Collapse drum, remove tire, attach builder's identification tab, and place tire on conveyor or lay aside to go to Curing Room. Remove drum support ring segments before pulling lever to collapse drum, as necessary, and reinstall in reverse order.

Service self with large and small stock rolls to meet building needs or in making tire size changes using hand truck or power walkalong truck and skids to move materials between machine and stock storage areas. Remove stock identification tag from rolls and hang on pin on rack. Manually change small rolls or reels of chafer, tread ply, reinforce, gum strip, sidewall, top cushion, etc. in letoff racks. Change fabric and liner rolls, backing out partial rolls as required, using overhead hoist; tread stock through machine rolls and guides, adjusting guides as necessary. Staple tags back on partial rolls before returning to storage. Tear or cut out defective stock sections and gum repair defective spots. Service treads from tray skid to tread pan or directly to tire. Obtain cements and solvents from Tire Room storage area as necessary. Perform other typical duties consistent with job factors as required or that may be requested by Foreman.

Effectiveness of Norms:

Only 64% of the nontest-selected workers used for this study were good workers; if the workers had been test-selected with the S-267R norms, 73% would have been good workers. 36% of the nontest-selected workers used for this study were poor workers; if the workers had been test-selected with the S-267R norms, only 27% would have been poor workers.

Applicability of S-267R Norms:

The aptitude test battery is applicable to jobs which include a majority of the job duties described above.

GPO 901.849

U.S. DEPARTMENT OF LABOR
MANPOWER ADMINISTRATION
WASHINGTON, D.C. 20210

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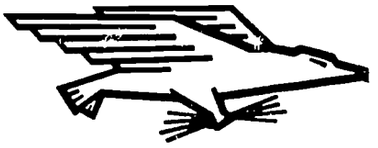

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