

MANAGEMENT TRAINING COURSE CONFERENCE OUTLINE

NO. 11

GETTING READY TO INSTRUCT

OBJECTIVES

1. To develop ability in isolating on-the-job needs and to set up a training timetable.
2. To distinguish between specialized training and cross-training.
3. To develop a basic four-step procedure in planning and preparing for instruction.
4. To study the procedure used in breaking down a job for instruction.

AIDS AND MATERIALS

1. Worksheets 40--51.
2. Chart Nos. 9, 17, 18 and 19.
3. Film Strip:
"Spotting Immediate Training Needs, SFS 80--3."
(15 min)

- - - - - TIME SCHEDULE - - - - -

<u>Minutes</u>	<u>Topics</u>
5	I. Review
60	II. Isolating Training Needs
35	III. Work Area Analysis and Breaking Down the Job for Instruction
<u>10</u> 110	IV. Steps 3 and 4 in the Preparation

I. Review (5 min.)

Make a quick but thorough review of the overall training problem: Why is training necessary? What are the results of inadequate training? What is the supervisor's responsibility in the face of this important problem? Etc.

Conferees should review worksheets often.

Ask the conferees to review and study their worksheets on training outside of conference time.

In Conference 10, important overall principles of teaching were covered in the first survey of the four steps in instructing; however, today's conference takes up the preparations for instruction. The principles in the 4-step instruction will, together with material covered today, be given a complete review in Conference 12, and thus cover the main part of the Instruction Phase. Later on in this course, in other phases, training problems will come up from time to time. Reference will be made back to the discussions in the Instruction Phase.

(10 min. to here)

II. Isolating Training Needs (65 min.)

Announce that the first problem to be taken up in today's conference is how a supervisor can scientifically isolate on-the-job training needs in his own unit.

A. Use of the Duty Analysis (15 min.)

Have the conferees refer to their copies of Worksheets 9 to 13 in Conference 4. Simultaneously, turn to Chart 9, "Homogeneous Assignment." Use the chart in a discussion on the use of the duty analysis and position description as a means of isolating training needs.

Worksheets 9--13

Chart 9

Ask the conferees whether the position description which they prepared for Conference 4 has been helpful to them in any way in isolating training needs in their respective units.

Have the group contribute their ideas on how the duty analysis, or position description, can serve a very useful function to the supervisor in carrying out his responsibility of important training.

Worksheet 40	Distribute Worksheet 4C, "Training List of the Jobs on an Air Base Operations Clerk."
Assignment No. 1	Assignment 1 will cover training list. Announce to the conferees that they will be required, except for those giving demonstrations, to submit by the beginning of the next conference, a training list for any one of their subordinates on the pattern of Worksheet 4C. However, this training list will be entered in Column 1 on Worksheet 4I, which is a translated form of the first page of FEAF Form No. 60, "Skills Profile and Training Requirements." Column 2, 3, or 4 will be checked for each item. In Column 7 on "Remarks" the following items will be added:
Worksheet 4I	1. The percentage of skill which the subordinate has in each job at present. (To determine this percentage the conferee should refer back to Conference 7 on controlling.) 2. The expected date of completion of training on items needing it, plus the percentage of skill expected to be attained in this training. (This need not be 100% in all times.)
B. Use of Standard Operating Procedures (10 min.)	First, make sure that the group understands exactly what standard operating procedures (SOP) are. (A good working definition is given at the top of Worksheet 42.) Distribute Worksheets 42 and 43, "A Standard Operating Procedure" and "A Sample Standard Operating Procedure." Have the conferees cite examples from their own units.
Worksheets 42 and 43	Ask the conferees why an SOP often is a good guide in isolating training needs. Explain that an SOP usually gives enough details so that any person can learn the procedure from it. Nevertheless, it still remains the supervisor's responsibility to see that an SOP is thoroughly understood by all those having anything to do with it.

C. Training Time-
table (20 min.)
Worksheet 44

To take up the third method of isolating training needs, distribute Worksheet 44, "A Sample Training Timetable."

Chart No. 17

Simultaneously, refer to Chart No. 17, "Steps in Making a Training Timetable."

Since the steps in making the timetable can be easily understood from this chart, have the conferees note the entries on the sample timetable Worksheet 44.

Explain that in listing the operations in Step 1, the operations must be entered in the order of their difficulty of teaching or in some other logical teaching sequence.

Ask the group for questions on any points that they don't understand in making up the timetable; assure that every one has a complete understanding.

Specialized
Training and
Cross-training

There is a trend today for increased division and specialization of jobs in accordance with the principle of homogeneous assignment. However, it is also recognized that in addition to one specialty of a worker, knowledge and skill in other jobs are essential in meeting unexpected emergencies and in insuring maximum efficiency in operations of the unit as a whole. This additional training in another skill is known as cross-training.

In establishing training needs by use of duty analysis or position description, a person's specialty is stressed; however, in the utilization of a unit job training timetable, cross-training is emphasized.

Cross-training is just as important as training in a specialty as far as the supervisor's responsibilities are concerned.

The conferees should discuss this point though the essential points have already been pointed out. Ask them whether cross-training is in conflict with the homogeneous assignment principle.

- D. Film Strip: "Spotting Immediate Training Needs" (15 min.) Present the film strip, "Spotting Immediate Training Needs," which takes about 15 minutes to run. Explain that this film shows an actual case in which making a training timetable helps a supervisor out of a very difficult situation. It clearly brings out the effectiveness of these simple control devices. (Refer to Conference 7 on Controlling and the Management of Time.)
- Worksheet 45 (It might be well to have the group refer to Worksheet 45, "Preparation for Instruction," in the interval required to get settled down for seeing the film.)
- After the showing of the film, have the group discuss the advantages of a supervisor making use of a training timetable.
- Assignment No. 2 Training Time-table (65 min. to here) Give out the second assignment--a timetable actually meeting the present training needs in the unit of each supervisor. This is to be submitted on the blank timetable on Worksheet 46 by the beginning of the next conference session. Explain that these timetables will be returned to the conferees a few days later and that in a follow-up during the next month, discussion will be devoted to bringing out how successful each conferee has been in carrying out his training program.
- III. Work Area Analysis and Breaking Down the Job (35 min.) Turn to Chart No. 18, "Preparation for Instruction," and explain that the first step, the making of a training timetable or, more broadly, isolating training needs, has been covered and that the second step, "breaking down the job," will be discussed.
- Chart No. 18
- Worksheets 47 and 48 In order to make clear what level of work should be used in making the job breakdown, distribute Worksheet 47, "Work Area Analysis" and explain. Also refer to the example on Worksheet 48.
- Worksheets 49 and 50 In order to clarify the correct method of arriving at a job breakdown, distribute Worksheets 49 and 50, and have the group examine them carefully. At the same time turn to Chart No. 19, "A Job Breakdown."
- Chart No. 19

Make use of the chart while pointing over the sample job breakdown on Worksheet 50, step by step.

Point out the advantages gained in terms of effort expended when the instructor goes to the trouble of carefully making a detailed job breakdown of all the important steps of a job to be taught and of writing down the "critical points," that is, anything in a step which could make or break the job, which calls for safety precautions on the part of the worker, or makes the work easier to do.

Haste Makes Waste

Emphasize that the breakdown is not an instruction sheet for the learner but merely an aid for the instructor.

As another example of a breakdown, demonstrate the tying of the fire underwriter's knot and write the breakdown on the board as follows:

<u>Steps</u>	<u>Critical Points</u>
1. Untwist and straighten cord	a. About 6 inches
2. Make right-hand loop	a. In front of main strand
3. Make left-hand loop	a. Pull toward you b. Go under stub c. Then behind main strand
4. Put end through loop	
5. Pull taut	a. Ends even b. Knot snug at base of V

Ask for any questions on making a job breakdown. Give further illustrations by taking simple operations like building a fire, cooking rice, etc.

Worksheet 51

Then distribute Worksheet 51, which is a blank job breakdown sheet.

Assignment No. 3

Then announce that each conferee must submit by the beginning of Conference 12, a

Training Job
Breakdown

(100 min. to here)

breakdown of a simple operation which he as a supervisor is required to teach to others in his unit. (The two giving demonstrations need not submit.)

IV. Steps 3 and 4 in
the Preparation
(10 min.)

Very likely, little time will remain for a thorough discussion on the third and fourth steps in the preparation for instructing. At any rate, refer the group back to Worksheet 45, have them quickly read over Steps 3 and 4, and point out that these two steps of the preparation are as important as the first two although they appear to be self-evident, and do not seem to require explanation.

Conclude today's conference by announcing that in the next conference there will be an overall review of the problems involved in instructing, and that in addition demonstrations are to be given by two of the members, and two film strips will be shown for review purposes

(110 min. to here)

After the conference is over, see the two conferees who are to give the demonstrations, and check to see that their instruction job is simple and appropriate and that all necessary preparations have been made.

TRAINING LIST OF THE JOBS OF AN AIR BASE OPERATIONS CLERK

DUTY ANALYSIS

1. Responsible for the accurate check of all outgoing clearances.
2. Responsible for the reporting of all departing aircraft to the agencies concerned.
3. Responsible for administration, accuracy and safekeeping of all records on all flights, incoming, outgoing and local.
4. Responsible for ascertaining whether VIP's are aboard on incoming flight, and notifying individuals on field who may be concerned.
5. Responsible for notifying agencies or departments concerned in case of an emergency landing.
6. Responsible for policing or good-housekeeping of office and map room, plus outside area.

TRAINING LIST

- a. Purpose of Form No. 23.
- b. Recognition and analysis of all information required.
- a. Understand and master procedures and nomenclature used.
- b. Instrument Weather Reporting.
- c. Clear Weather Reporting
- d. Control centers to be informed.
- e. Other agencies concerned.
- a. Filing system.
- b. Daily Log.
- c. Status Board.
- a. Procedure for getting information.
- b. Notifying departments concerned.
- a. Procedure or system in effect for notifying certain vital agencies.
- a. Policies established.
- b. Location of Janitor Supplies.

SKILLS PROFILE AND TRAINING REQUIREMENTS

NAME _____ ORGANIZATION _____

POSITION TITLE _____ SSN _____ GRADE _____

PROPOSED POSITION TITLE _____ SSN _____ GRADE _____

DATE _____

PART I

Skills that are re- quired in proposed position	Skills presently possessed homogeneous to proposed position					
COLUMN I	II	III	IV	V	VI	VII
	Needs Basic Tng	Needs Re- fresher Tng	Can Per- form	Date Compld Tng	Hrs. of Tng	Remarks
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						

PART II

I certify that the above named incumbent has completed the required training and has demonstrated his ability to perform the duties required in the proposed position to which assignment has been requested.

DATE _____

Operating Official

FEAF Form No. 60

A STANDARD OPERATING PROCEDURE

Definition: An SOP is a set of written instructions defining the procedure which has been found to be the most satisfactory and effective to follow in the operations of an office, or shop or warehouse. Generally the SOP is signed by the unit chief and is posted and/or circulated. All personnel of the unit are required to follow the SOP in order to eliminate confusion and unnecessary errors in the operations.

- The Case of Mr. M, an American -

The following is an example of a case of a modern plant in America.

The "A" Laundry (250 workers) is operated by the management, as outlined in two company manuals, one outlining matters pertaining to clerical work, such as costs, accounting, forms to use, etc.; and the other which is concerned with the operation of the actual laundry itself. Each manual is profusely illustrated on steps and instructions necessary, and was developed as a training guide. Also higher echelon dictated the work standard of the job, how much or how many per hour the worker is expected to accomplish.

Mr. M. has in his hands these manuals that could assist him in the Training Phase of the new worker. Ninety-five per cent of his 250 workers were unskilled and untrained. They had never seen a laundry before, much less worked in one. Yet this laundry is an efficient organization, and guarantees 48-hour service at this time. How was this accomplished? Let us look into Mr. M's plant.

1. **INDUCTION:** Mr. M. takes a personal interest in each worker. Each new employee has a personal interview with Mr. M. before being put out on the job. At this time he is put at ease; shown where he fits into the organization; given his duty analysis; explained that quality rather than quantity is required at first and not to worry about production; is introduced to his foreman; then taken out to his job and introduced to his co-workers.
2. **DUTY ANALYSIS ESTABLISHED:** A duty analysis was developed for each job--what each employee was responsible for and whom he was responsible to. This was accomplished by close coordination with the foreman, and the duty analyses were posted near the various machines or in the departments. Each employee was then cognizant of his responsibilities, and could not make the excuse that he did not know.
3. **DEVELOP STANDARD OPERATING PROCEDURE:** Although manuals

prepared by the firm assisted in the training phase, it was necessary to go over every job and develop a Standard Operating Procedure (SOP), a step by step analysis of operation, which also assisted in better instructional technique on the part of the foreman or supervisor.

4. TRAIN THE WORKERS: The foreman introduced the worker to his new job, went through the SOP with him as listed, had him try it out, and then put him on his own. The instruction was all organized, if the SOP was followed, and a producer was quickly and efficiently trained. Speed was not emphasized, but quality was. The level of intelligence was not exceptional, or even high among this class of workers. Follow-up, or checking on part of the foreman, was es-

sential, though, for clarification. A seemingly difficult operation soon became routine and production increased in short order so that 48-hour service was made possible.

5. ABOVE THE STANDARD: Rates of production had been set by the home office as follows: The Ironing Department; (a) 20 shirts per hour, or 22 pair trousers per hour per operator; (b) $7\frac{1}{2}$ hour day (15 min. break in a.m. and 15 min. break in p.m.) (c) this means 150 shirts, or 157 trousers, per day as a standard.

Yet most workers were accomplishing 200 per day, and one worker was averaging 227 pair trousers pressed. The average for the department was 172, well above what was required.

A SAMPLE STANDARD OPERATING PROCEDURE

OPERATOR A.

1. Sleeve (Form)
 - a. Remove shirt from damp box
 - b. Place on sleeve (be sure sleeve seam is in line with edge of sleeve form)
2. Sleeve (Press)
 - a. Open sleeve press
 - b. Take shirt from sleeve
 - c. Place shirt between sleeve and collar press
 - d. Make lay
 - (1) Left sleeve
 - (2) Right sleeve
 - e. Close sleeve press
 - f. Open sleeve press
3. Collar
 - a. Open collar press
 - b. Place shirt between collar and cuff press
 - c. Make collar lay (stretch collar tightly, draw ends toward operator)
 - d. Close collar press
 - e. Open collar press
4. Cuff
 - a. Open cuff press
 - b. Place shirt between cuff and yoke press
 - c. Make lay
 - (1) Left sleeve
 - (2) Right sleeve
 - d. Close cuff press
 - e. Open cuff press
5. Yoke
 - a. Open yoke press
 - b. Place shirt in yoke press
 - c. Make yoke lay
 - d. Close yoke press
 - e. Open yoke press

Repeat on next shirt.

OPERATOR B.

1. Body (left side)
 - a. Open body press
 - b. Place shirt between body and bosom press
 - c. Make first body lay left side.
 - d. Close body press
 - e. Open body press
2. Bosom
 - a. Open bosom press
 - b. Place shirt in collar form
 - c. Make bosom lay (clamp collar band and tail band and stretch)
 - d. Close bosom press
 - e. Open bosom press
3. Body (right side)
 - a. Open body press
 - b. Make lay right side
 - c. Close body press
 - d. Open body press

Repeat on next shirt.

OPERATOR C.

1. Finish
 - a. Remove shirt from collar form
 - b. Button collar first and third buttons
 - c. Lay face up on finish table
 - d. Hand finish any bad wrinkles or rough spots
2. Feld
 - a. Place shirt front down, collar clamped in collar form
 - b. Feld both sides in
 - c. Feld sleeves
 - d. Feld up tail and tuck in
 - e. Remove shirt to finish rack, shirt front up

Repeat on next shirt.

Conference 11, Worksheet 43

TRAINING TIMETABLE (SAMPLE)BRANCH: PRODUCTIONSupervisor: Higashi, Foreman, Factory 1UNIT: SHEET METAL FACTORY NO. 1Reviewed by: Kuroda, Factory ChiefDate Reviewed: 5 Jan. '51

JOBS OR OPERATIONS		Simple Operations																Longer Operations																REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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V = Adequately trained

2-10 = Date Training is to be Completed

- = Not Required to Know this Job

PREPARATION FOR INSTRUCTION

1. MAKE A TRAINING TIMETABLE:
 - a. Isolate jobs and individuals for instruction.
 - b. Determine deficiencies in knowledge and skill.
 - c. Schedule training activities.
2. BREAK DOWN THE JOB:
 - a. List principal steps.
 - b. Pick out points for attention.
 - c. Develop instruction sheets and a teaching plan.
3. GET ALL THE MATERIALS AND FACILITIES READY:
 - a. Set up devices, facilities and materials.
4. ARRANGE THE WORK PLACE:
 - a. Arrange the work place just as the worker will be expected to keep it.
 - b. Alert the trainee.

NOTES:

- a. Each step of instruction must be within the ability of the trainee.
- b. Instruction should deal with two or more senses of the trainee.
- c. Consideration must be given to the span of attention.
- d. Association of ideas and repetition of operations are necessary.

[illegible]

- ☒ Adequately trained
- ☒ Date Training is to be Completed
- ☒ Not Required to Know this Job

WORK AREA ANALYSIS

In order for the supervisor properly to build a program of on-the-job training he must know what jobs must be done, what operations are performed in each job, and what workers need to learn in order to perform these operations. Therefore, he must list all jobs and operations performed by workers under his jurisdiction or in his area of work. This is easy to do where the work is thoroughly and efficiently organized and broken down into specific jobs and operations--that is, where a complete analysis of the work of the area has already been made. This analysis must be made before specific jobs or operations can be listed for purposes of training.

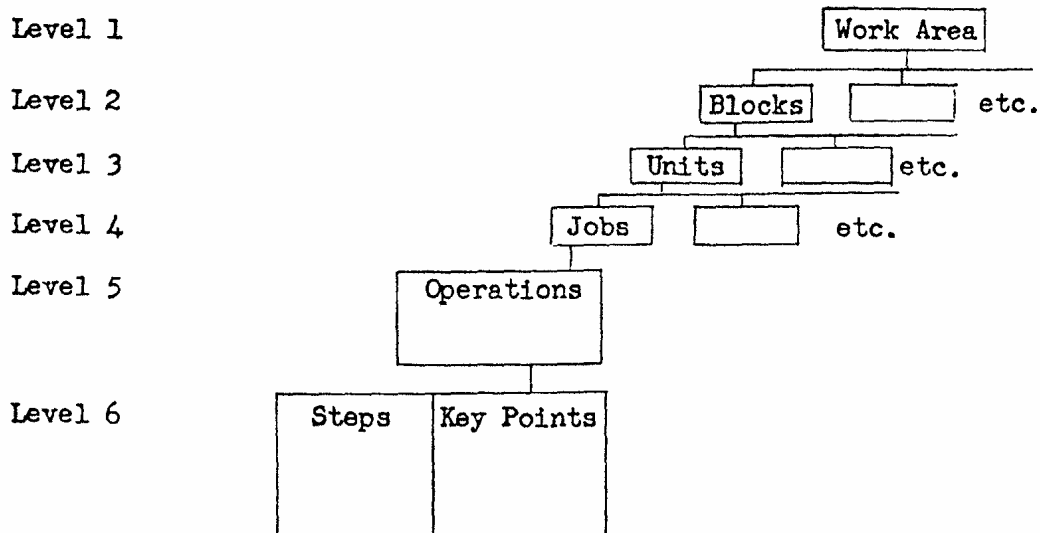
Work-area analysis is the process by which the work area is broken down into various levels of work. The term "work area" indicates the shop, division, branch, or section for which the supervisor is responsible, regardless of its organizational title. The complexity of the analysis depends upon the work of the area. The various levels shown here may not be present in all situations but they illustrate a complete pattern.

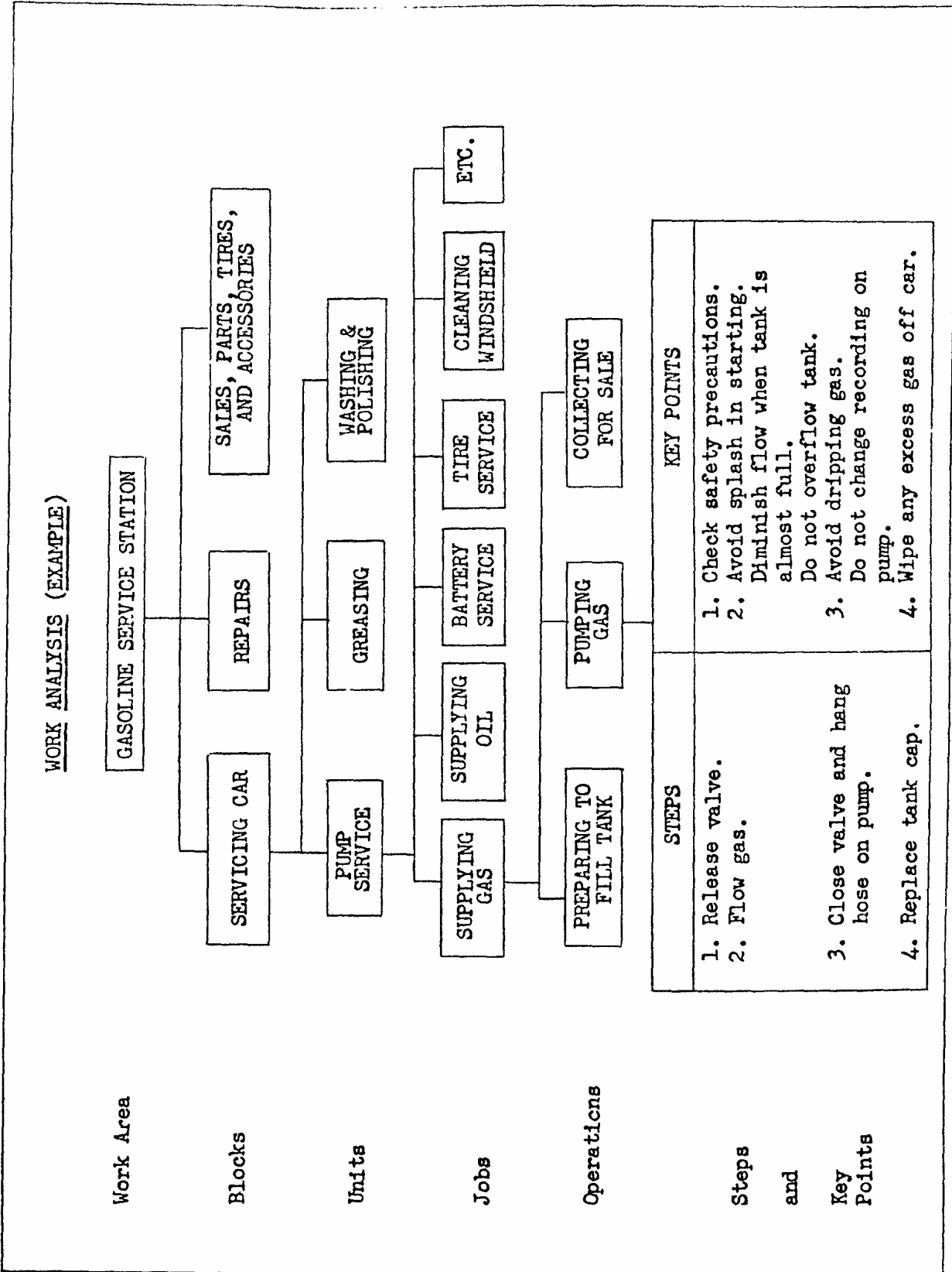
In making a complete work analysis, the work area is divided into blocks according to the major divisions of work. Each block may have its own separate mission to perform. Each of these blocks is then subdivided into units which are, in turn, divided into specific jobs. The jobs are then broken down into operations. These operations are further broken down into the necessary steps and key points that need to be emphasized in teaching a worker to perform the steps correctly.

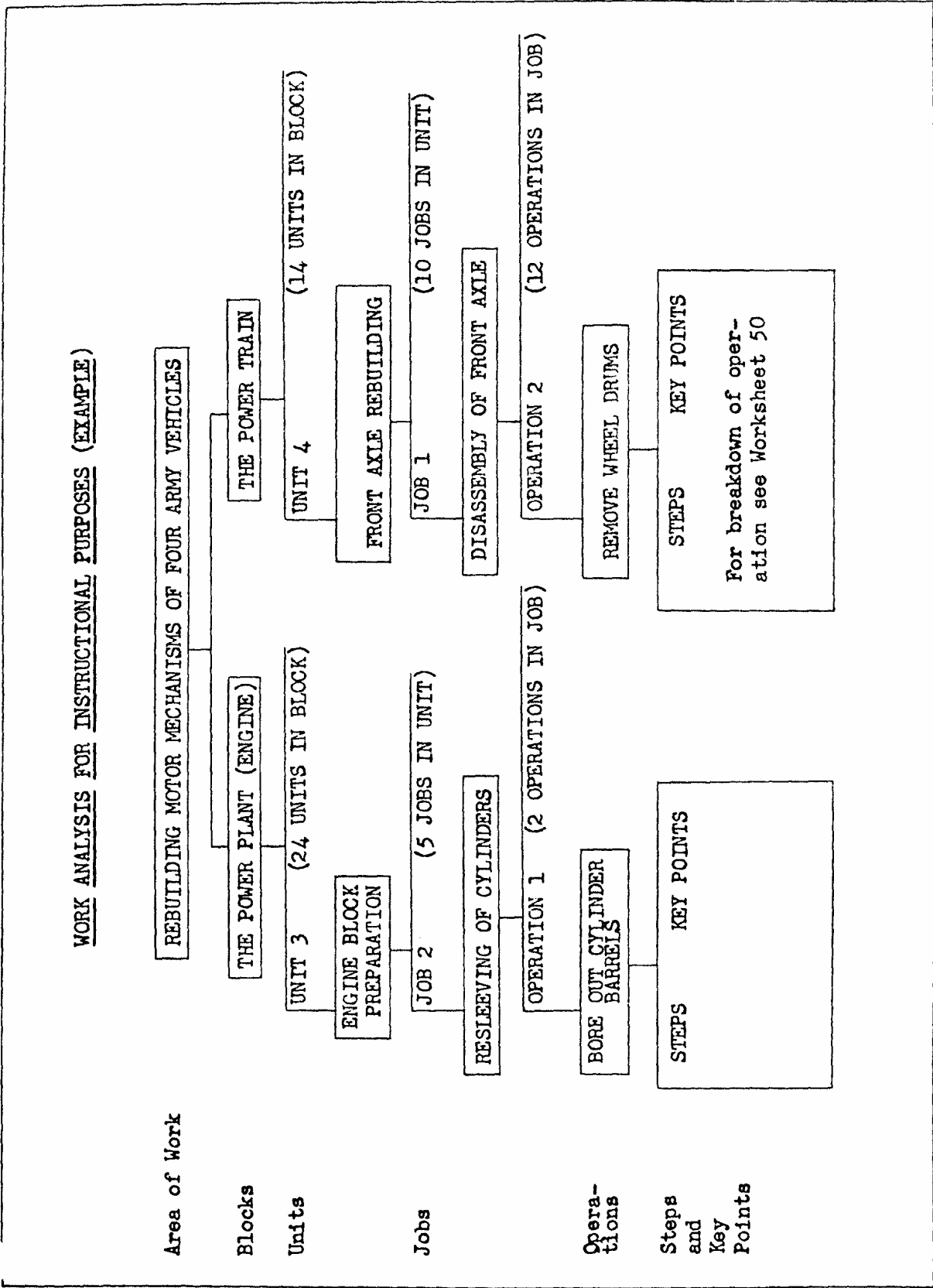
This analysis is shown by levels as follows:

- | | |
|---------------------|-----------------------------------|
| Level 1--The area | Level 4--The jobs |
| Level 2--The blocks | Level 5--The operations |
| Level 3--The units | Level 6--The steps and key points |

The following diagram shows this analysis process:







A TRAINING JOB BREAKDOWN

Supervisor Training Program

ITEM NO. 4
TRAINING TIMETABLEPrepare
Present
Perform
Follow-upTOOLS, EQUIPMENT, DEVICES
2 screw drivers, diag. pliers, pry bar,
rubber mallet, flange puller, chisel,
socket wrenchJOB: Disassembly of front axle
OPERATION: Remove wheel drumsMATERIALS: None

STEPS	CRITICAL POINTS
1. Remove hub caps.	1. Place 2 screw drivers against inner flange of cap opposite each other and pry outward. Avoid bending caps.
2. Remove axle shaft nut.	2. Use diagonal pliers to remove cotter pin from axle shaft. If wheel drum turns, hold by inserting pry bar under tire lugs. Protect threads on lugs.
3. Remove attaching caps screws of axle flange.	3. Tap flange with rubber mallet to loosen. If flange cannot be tapped loose, use special flange puller.
4. Remove axle flange.	4. Use a chisel to bend back tang of lock washer. Use socket wrench.
5. Remove wheel bearing nuts and lock washers.	5. Release any drag on drum by turning adjusting nuts at back of brake plate.
6. Release brakes.	6. Lift off.
7. Remove drums.	

