

Operation Sheet & Job sheet

Objectives: At the end of this lesson you shall be able to

- explain operation sheet and state the elements of operation sheet
- explain job sheet and state the elements of job sheet.

Operation sheet

It is the basic instruction sheet to help the instructor to teach elements of skills for the required trade. It tests the trainee to perform the skill. Sequencing the procedures are most important, to enable the learners to do the operation and complete the same successfully.

The trainee must be given direction for the use of tools and materials in a correct manner. This sheet is not written for use in production of any particular job, but is rather used in any other job that needs the particular operation. This sheet has flexible application. The title of operation sheet is the name of operation. The operation sheet is prepared by the instructor for the use of learners, to imitate the skill. This helps to form correct habits for learning skills correctly, with the minimum personal attention of the instructor. The following are the basic elements of the operation sheet.

Skill: Name of the operation or skill. This would be the same as that of the demonstration. This is obtained job/task analysis with reference to the syllabus extract.

Objectives: As a operation sheet this is only used for the development of a particular skill. Generally there will be only one objective. Based on written performance orientation for trainee centered objectives following the guide lines given in previous chapter.

Tool and equipments: Materials and other requirements provides specific tools and equipments required with meticulous detail to perform the skill. The exact range of tools, or equipments must be stated to avoid improper choice. If there is a particular tolerance to be achieved or a method of operation specified, then write the tool required for achieving.

Material: Mention the type, shape, size etc, of the material so that the trainee can select it correctly. Never state ambiguous words. Correct statement of materials helps learner and instructor to be precise and enables developing better work.

Introduction: This gives a brief instruction regarding the utility of the operation in completing the skill. The method of learning this element of skill makes the learner a good craftsman. The purpose of learning the skill must be made clear to the learners/trainees.

Procedure: Mention direct and simple sentences while giving procedural steps. The step by step activity is serially numbered in a sequence to be done by the learner. While safety precautions are indicated by appropriate steps at the end. The instructor should remember the correct sequence, of language used to address the trainee. The procedure must lead the learner to complete the operation successfully to reach the expected standard. As per the objective use the words of action such as-mark, measure, cut, layout, drill-ream, turn, etc.

Safety habits: Safety precautions has to be done to avoid accidents to person and equipments. The words such as do not give a deep cut, mark and punch before drilling, call instructor must be given using goggles, keeping the tools to particular requirements of sharpness, must be explained clearly. A simple operation sheet is given for development.

Operation sheet		
Trade		Semester
Week No	Skill No	Time Required
Title:		
Objectives: At the end of this demonstration, the trainee shall be able to A. B. C. D.		
Introduction		

DEMONSTRATION PLAN

Name Admin No

Trade ...MMV..... Date

Semester1..... Demo No2..... Week No1..... Time Required

I Preparation

a. **Skill:** Perform Compression test

b. **Objectives:** At the end of this demonstration, the trainee shall be able to do

- 1 Install compression gauge in the engine
2. Test engine compression in different stages
- 3 Conclude the results.

c. Tools & equipments required

A petrol vehicle, Compression gauge with adopters, Spare plug, Spanner, Engine oil with oil can, Trainees tool test.

d. Materials required

Engine oil, cloth waste, Banyan cloth

e. Introduction

i. Review : Performance of Vacuum test

ii. Motivation

II Presentation (Demo)

Procedure (DO)	Information points/ safety precautions (Tell)	Spot hints (Ask to do)

Procedure (DO)	Information points/ safety precautions (Tell)	Spot hints (Ask to do)
<p>III Application (Imitation)</p> <p>a. Install Compression Gauge</p> <p>b. Test the engine compression</p> <p>Summary: Show and tell how to do this exercise and ask the trainees to do the same.</p> <p>IV Test/practice (Evaluation)</p> <p>Ask the trainee's individually</p> <p>Next skill</p> <p>Perform oil pressure test</p>		

OPERATION SHEET	
Trade :	Semester :
Week No :	Skill No : Time Required :
Title :	
<p>Objectives: At the end of this demonstration, the trainee shall be able to do</p> <ul style="list-style-type: none"> • Test engine compression in different stages <p>Tools, equipments and materials required</p> <ol style="list-style-type: none"> 1 A petrol vehicle is running condition 2 Compression gauge with necessary adopters 3 Spark plug spanner 4 Engine oil in oil can 5 Trainees tool kit <p>Procedure:</p>	
<p>Introduction</p> <p>The engine's compression is tested by the compression gauge. The results of compression gauge in different stages tell us the condition of the engine and with this we can decide whether the engine needs reconditioning or not.</p> <p>Install Compression gauge</p>	<ol style="list-style-type: none"> 1 Place the vehicle in a level ground. 2 Apply hand brake. 3 Switch off ignition 4 Open the bonnet 5 Remove air filter assembly 6 Remove ignition coil assembly from all the cylinders 7 Remove spark plug from all the cylinders 8 Select correct size adopter and fit with the compression gauge 9 Install compression gauge in 1st cylinder spark plug hole 10 Hold it properly for taking readings 11 Press the accelerator pedal fully and crank engine for few seconds 12 Observe the readings and allow the engine to crank till the needle of the compression gauge stalls. 13 Stop cranking engine 14 Note down the maximum reading obtained 15 The reading obtained during dry test is _____ kg/cm² 16 Remove compression gauge 17 Put few drops of engine oil through the spark plug hole 18 Install compression gauge again 19 Crank engine and note down the readings 20 The reading obtained during wet test is _____ kg/cm² 21 Do the same procedure for all cylinders

Job sheet

- Job sheet provides an overall plan of a particular job and it indicates all of the operations involved.
 - It shows what is to be done, and how to do it. This must be prepared by an instructor based on demonstration plan.
 - The trainees may be asked to prepare job sheets to analyse the job and planning for the work.
 - Safety work habits to be followed should also be included in the job sheet.
 - Job sheet is similar to operation sheet.
 - There is not much difference in between job sheet and operation sheet.
- The Job sheet gives the procedure for a number of skills required in a sequential order, whereas the operation sheet provides the procedure for doing a skill in a particular sequence.
 - They include working habits.
 - The procedural steps for each operation is given both in operation sheet and in the job sheet. This will give assistance to the learner in preparing initial materials.

Note: A model of job sheet and job sheet for a practical job is enclosed for your reference and to study.

JOB SHEET

Trade Date

Lesson No Time

Syllabus extract..... Name.....

TOPICS

Preparation

a **Objectives:** At the end of this demonstration, the trainee shall be able to do

- 1
- 2
- 3
- 4

b Introduction

c Procedure

Sketch

d Safety

e Assignment