

## **DIESEL PUMP-SET REPAIRING [ DPSR ]**

### **General Information:**

1. Name of the Trade : Diesel Pump-set Repairing
2. Entry Qualification : Passed Class VII I
3. Duration of Training : 06 Months [Under Vocational Short Term Course]

### **Objective of The Course:**

The objective of the course is to impart necessary competencies with the focus on technical competencies like skill and knowledge so that they become employable in the small scale industry and are able to set up own shop on pump-set repairing.

At the end of the training, the trainees will be able to :

- Identify different parts of a diesel engine.
- Differentiate between 2 stroke & 4-stroke engines.
- Identify and state different parts of diesel engines pump and state their functions.
- Identify and state different tools and equipment required for repair of diesel pump set.
- Identify different types of faults of lubricants. Identify common defects.

The course content is to be covered in less than 26 weeks since some weeks will be used for enrolment, holidays, leave of the instructors etc.

### **Course Break-up:**

(a) Practical instruction	:	288 Hours.
(b) Theoretical Instruction	:	67 Hours
(c) Entrepreneurial Institution	:	05 Hours
Total = 360 Hours		

### **Marks Alloted :**

- |               |   |     |
|---------------|---|-----|
| (a) Practical | : | 400 |
| (b) Theory    | : | 100 |

### **Industrial Visit:**

Industrial cum study tour to at least two different industries having modern machineries.

**1. Course Curriculum :**

- (1) Introduction.
- (2) Demonstration of diesel pump set used in agriculture.
- (3) Different types of diesel engines-idea of 2-stroke & 4-stroke engines-single cylinder & multi-cylinder engines.
- (4) Different parts of a diesel engine, identification by physical verification & function of each part.
- (5) Different parts of pump, Identification by physical observation & function of each part.

**2. Shop Practice:**

- (1) Practice on fitting, use of file, chisel, hammer, vice, measuring tools etc.
- (2) Practice of gas & arc welding on simple job & precautions to be taken during the work.
- (3) Idea, identification & use of different repairing jobs tools, measuring tools, special tools e.g., puller, piston ring expander, piston, ring squeezer, groove cleaner, valve lifter, torque wrench, grease gun etc. their maintenance & servicing.

**3. Fuels & Lubricants:**

Different types, qualities of fuels, lubricants and their specific applications.

**4. Pump :**

- (1) General ideas on pumps; common faults, dismantling of a pump.
- (2) Assembly of the parts to make a complete pump set.
- (3) Alignment test for pump & engine and its adjustment.

**5. Engine:**

- (1) Dismantling of engine, cleaning of parts, fault-detection, rectification and refitting.
6. Parts, e.g., couplings, pipes, glands, gaskets etc defects identification & repair.
7. Complete overhauling of a pump set, dismantling, different parts, defect identification, minor repairing, replacement of damaged parts, refitting.

**8. Preventive Maintenance:**

- (1) Preventive maintenance schedule-precaution.
- (2) Trouble shooting in running condition.

**Estimation and costing :**

- (1) Costing for different parts, their costs, Brand names of parts, costs etc., Market survey.
- (2) Preparation of an estimate for a repair work-overhauling of an engine etc.