Standard Work
Standard Operations
Aims & Objectives

Target Audience
- Production staff, ME & Training personnel

Aim
- To give attendees the skill to write Standard Operations & deploy them

Objective
- By the time you have completed this course you will be able to
  - Understand what Standard Operations are
  - The benefits of using them
  - Observe and record work
  - Write and Maintain Standard Operations
  - Train your team to work to Standard Operations
What is a Standard Operation?

DEFINITION

A STANDARD OPERATION IS CENTRED AROUND HUMAN MOVEMENTS, OUTLINING EFFICIENT, SAFE WORKING METHODS THAT ELIMINATE WASTE, WHILST ENSURING PROPER USE OF EQUIPMENT AND TOOLING
What is it used for?

- Training of staff
- A means of standardisation
- A platform for improvements
- Safe working practices
- A tool to help manage the workplace
- An audit document
# Standard Operation Sheet

<table>
<thead>
<tr>
<th>No.</th>
<th>Revision</th>
<th>Date</th>
<th>S/V</th>
<th>Operation No.</th>
<th>Operation Name</th>
<th>Area</th>
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- **Number (No.)**
- **Revision**
- **Date**
- **S/V**
- **Operation No.**
- **Operation Name**
- **Area**
- **Sht of**
- **Dept**
- **Date**

**Prepared by:**

<table>
<thead>
<tr>
<th>No.</th>
<th>Operation Description</th>
<th>Main Element</th>
<th>Key point</th>
<th>Reason / Sketch</th>
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- **Safety Wear**
- **Jigs / Tools**
- **Required Checks**
- **Training Comments**
- **Authorisation**
# Working Example

## Standard Operation Sheet

<table>
<thead>
<tr>
<th>No</th>
<th>Main Steps</th>
<th>Operating Description</th>
<th>Q</th>
<th>S</th>
<th>E</th>
<th>Key Points</th>
<th>Time</th>
<th>Explanation / Examples / Diagrams</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Obtain Puller</td>
<td>Obtain pulling equipment from calibration centres.</td>
<td>X</td>
<td>X</td>
<td></td>
<td>Specify which size of puller is required.</td>
<td></td>
<td><img src="image" alt="FIG 1" /></td>
</tr>
<tr>
<td>2</td>
<td>Operate power pack</td>
<td>Ensure footprinted area to operate the power pack is clean and free from swarf, etc…</td>
<td>X</td>
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<tr>
<td></td>
<td>Ensure power pack is within date of electrical calibration.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>indicated on side of power pack. (see fig 3).</td>
<td></td>
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<tr>
<td>3</td>
<td>Place power pack in footprinted area with handle positioned at 180 degree's to the area to be worked on.</td>
<td>X</td>
<td>X</td>
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<tr>
<td>4</td>
<td>Confirm which diameter of bolts are to be pulled on the area. (ie 1/4 or 5/16).</td>
<td>X</td>
<td></td>
<td></td>
<td>Check work package or drawing.</td>
<td></td>
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<tr>
<td>5</td>
<td>Ensure power pack is configured for the relevant operation.</td>
<td>X</td>
<td>X</td>
<td></td>
<td>See visual training aid placed in the standard op's pack and displayed at workstation.</td>
<td></td>
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<tr>
<td>3</td>
<td>Connect hose</td>
<td>Pick up puller unit and offer male connector to female coupling on the power pack.</td>
<td></td>
<td></td>
<td></td>
<td>See fig 1.</td>
<td></td>
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<tr>
<td><strong>P.P.E.</strong></td>
<td>Safety Glasses, Cotton gloves, Hearing protection.</td>
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<tr>
<td><strong>Jigs/Tools (As per Eng Dwg):</strong></td>
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<td><strong>Required Checks:</strong></td>
<td>Deficiencies/Damage to be reported to TL.</td>
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<tr>
<td><strong>Training Comments:</strong></td>
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How we develop the Standard Operation

• Select Operation
• Record data of Operation
• Analyse the operation
• Develop the best current method
• Confirmation stage
• Identify Main Steps
• Identify Key Points
• Write the Standard Operation
Select Operation

Job Selection - Criteria to take into consideration

- Ease / Difficulty of Manufacture
- Inconsistencies manufacturing times
- Inconsistencies in Quality
- High Labour Turnover
- High accident rates
- Excessive handling of materials
Record Data of Operation

Recording

When recording the present situation, direct observation is the preferred method, but information can also be collected from:

- Historical Records
- Interviews etc.

Useful methods of recording include:

- Flow Process Charts
- Video etc.

......the potential savings MUST justify the cost of investigation
Analyse the Operation

- Gather all the relevant paperwork
- Ensure all parts & tooling are at hand
- Watch operation being performed (across all shifts where possible)
- Ask for the operators inputs
- Is there a sequence
- Take rough notes
Develop the best method

- Question what we are doing & when

- If there are differences between shifts which one gives us more benefits?

- Consider applying the 4 principles of motion economy
  - Reduce motions
  - Perform motions simultaneously
  - Reduce distances/effort
  - Make motion easier

- Can the operators follow the Standard Operation safely?
Confirmation Stage

- Try to perform the task using the rough notes
- This should be carried out in the production environment where possible as a trial
Identify Main Steps

- A task title

- This will allow the task to be broken down into smaller sections
Identify Key Points

A Key point is a part of the operation, which if not adhered to could impact on

● Quality
● Safety
● Delivery
Writing a Standard Operation

- Keep everything clear and concise
- Write in pen
- Avoid waffling
- Avoid using Technical terms
- Use recognised and agreed abbreviations
- Use sketches / photos
- Do not assume prior knowledge
- Make it as neat as possible
Why should we maintain Standard Operations?

• To ensure it is being followed
• To ensure it is still the best current method
• Are there any changes to the spec?
How to train others to Standard Operations

There are Six Steps to follow

- Preparation
- Explanation
- Demonstration
- Participation
- Examination
- Practice
Next Steps

• Write a Standard Operation for wiring a 3 pin plug
• Have it bought off
• Write an actual Standard Operation for your area
Standard Operations

Course Aim & Objectives

• **Aim**
  To give attendees the skill to write Standard Operations & deploy them

• **Objective**
  By the time you have completed this course you will be able to
  - Understand what Standard Operations are
  - The benefits of using them
  - Write and Maintain Standard Operations
  - Train your team to work to Standard Operations

Did we?