Working Drawings
Packet / BOM
ENGR 1182
SolidWorks 09
Working Drawings

• Working Drawings Packet
  • Assembly Drawings
    • Assembled
    • Exploded
  • Detail Drawings of Non-standard parts

• Bill of Materials
Bill of Materials

- Table
- Number Bubbles
- Descriptions
- Quantity
Recall that there are 3 ASSEMBLY DRAWING options all with:

- An ASSEMBLED VIEW
- The BILL OF MATERIALS (BOM)
- BALLOONS

MULTI-VIEW ➔
3 ORTHOGRAPHICS + ISOMETRIC

SINGLE ASSEMBLY

SINGLE EXPLODED ASSEMBLY
Working Drawings Packet

• Assembled View
• Exploded View
• Bill of Materials
• Detail Drawings
  • Non Standard Parts
• Communication Tool
  • Engineer to Manufacturer

Let's use a simple flashlight as an example to construct complete working drawings for a product.
Working Drawings: Flashlight

Assembly Drawings with Bill of Materials (BOM), exploded views, and section views
Working Drawings: Flashlight

Detailed drawings for all non-standard parts
SolidWorks Bill of Materials

- Bill of Materials is created inside of the Drawing file
- The Exploded View created in the Assembly can be used to show the bill of materials
Bill of Materials can be added to an Assembly Drawing by selecting Bill of Materials.

Click on the green arrow in the B.O.M drop-down list on the left portion of the screen, and then click OK.

Place the BOM (Bill of Materials) in the bottom right corner above the Title Block.

The Description Column can be deleted by left-clicking on the top of the C column, right-clicking, and selecting delete/column.

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>PART NUMBER</th>
<th>QTY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Flash Light Main Shaft</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Flash Light Bulb Cap</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Flash Light Bulb</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Flash Light End Cap</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Flash Light Lens Cap</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Flash Light Lens</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Flash Light Reflector</td>
<td>1</td>
</tr>
</tbody>
</table>
Bubbles are used to callout part numbers in association with the Bill of Materials.

SolidWorks Bubbles

- Click on Insert, then Annotations and finally on Balloon.
- Sequentially click on each assembled part to produce it’s associated Balloon.
Working Drawings Wrap Up

Working Drawings Packet

• Assembly Drawings

• Detail Drawings of Non-standard parts

Bill of Materials

• Table of Parts

Homework Assignment:

OSU Flashlight Working Drawings

Create a Working Drawings Packet for the OSU Flashlight including:

• Assembled Drawing
• Exploded View with BOM
• Detail Drawings of Non Standard Parts with overall shape dimensions (provide only the Flashlight Main Shaft and Lens)