A short lecture on Assembly Drawings as per the Australian Standard AS1100

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Engineering Drawings

A short series of lectures on Engineering Drawing as Part of ENGG1960
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Assembly Drawings demonstrate how a number of separate subassembly drawings, detailed parts, standard components and specifications come together in a unified assembly.

**Figure 6.3 Shaft, Input with Bearing Assembly (1689-295)**
A Family Tree showing how Assembly Drawings, Sub or Working Assembly Drawings, Detail Drawings, Standard Components and Specifications are interrelated.
Assembly Drawings must provide sufficient information to enable the assembly of a component.

- Assembly Drawings must have a number of views to show how parts fit together.
- Section views to show how parts fit and to eliminate hidden detail.
- Dimensions to indicate range of motion or overall size of assembly for reference purposes.
- Individual components identified with balloons and leader lines.
- Parts list (or BOM – Bill of Materials) relates to balloon numbers on drawing.
- Revision table
- May require multiple views on separate page for very large assemblies
Enough Orthogonal Views

Enough equally spaced views are needed in order to demonstrate to the reader of the drawing how the assembly fits together.
In the Assembly Drawing above notice how dimensions are used to give an overall representation of size. Dimensions are not included on individual detail components or standard hardware.
In the assembly drawing above notice the arrangement of the numbering of the individual sub assemblies, components and standard hardware. They are numbered from the bottom of the parts list upwards. The relevant quantities and materials (missing) should also be stated.
Sub Assembly Drawings allow for less small detail to be cluttered into the main Assembly Drawing.
Detail Drawings from Sub Assembly

Note the that the Used On is a Sub Assembly not the Main Assembly
Sectional Views on Assembly Drawings

Sectional views within an Assembly Drawing allow for clarity in hidden locations where parts are located.
The revision or issue information on a drawing is either located within the title block or within its own title block. Its function is to note that a revision due to an error correction or improvement has taken place to the drawing.
Working or Detailed Assembly Drawings are a combined detail and general assembly drawing which fulfils the function of both types.
Some Features of Working Assembly or Detailed Assembly Drawings

• Only simple assemblies are drawn in this manner.
• Information is cluttered.
• Not recommended as the tasks of manufacture and assembly are very different and may be split across vendors.
• Only use when you have no option e.g. one part to be manufactured requires the co-existence of another.

• Do not use in any assignments for ENGG1960.