Analysis and Reporting Module

Creating Balancing module reports

By Simon Innes • SKF

With SKF's Analysis and Reporting Module version 1.5, it is now possible to produce detailed and customized reports from your balance module results, using the Microsoft® Word Report Generator Expert. Field names in the balance report file are used to attach results to bookmarks defined in a Microsoft Word template (.dot) file, allowing you to produce balance reports using your company standard formats.

The balance report file as unloaded from your analyzer contains two columns of text information. The left column is the name of the parameter measured or set and the right column shows the value recorded:

```
Plane1-Type:        1 Fixed
Plane1-NoPositions: 3
Plane1-Offset:      0.000000
Plane1-Coupling:    0 X
Plane1-ICP:         1 Yes
```

The left column entries are listed by the Microsoft Word Report Generator Expert as fields supplying values for output. If you select one of these fields, for example, "Plane1-Type" and associate it with a bookmark in the Microsoft Word template, from the example above, a value of "Fixed" would be written to the report document.

A set of sample templates are shipped with the software, including two specifically for balance reports. Opening the template in Microsoft Word shows the bookmarks defined[1]:
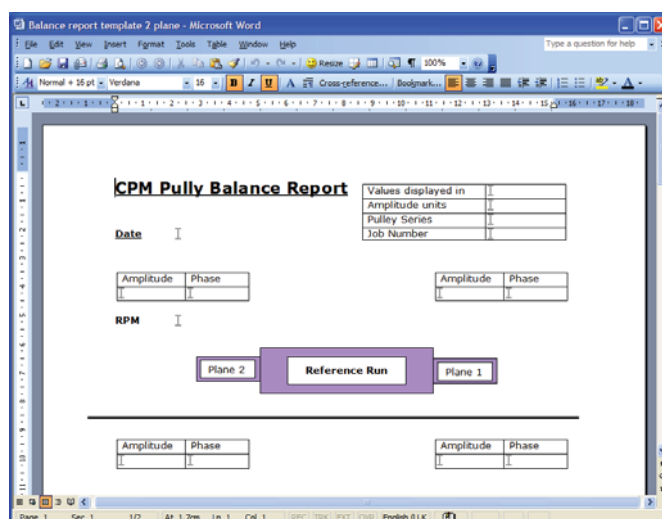

If you cannot see the bookmark symbols (shown as an I-beam symbol thus I), go to *Tools | Options* and check the *Bookmarks* control on the *View* tab.

You can use Microsoft Word to create a template for your reports containing any sort of information or layout you wish, including graphics like company logos. The full power of Microsoft Word is available for you to create the report as you like it.

Bookmarks are used to define locations where SKF Analysis and Reporting Module will be able to write out values when creating a document using this template. It is best if you name the bookmarks using the same field identifiers as used in the balance report.

For example, to define a bookmark to receive information on "Plane1-Type" as in the example above, select the position in the template where this information is to go and choose **Insert | Bookmark** from the menu. You can then enter the bookmark name in the **Bookmark** dialog[1]:
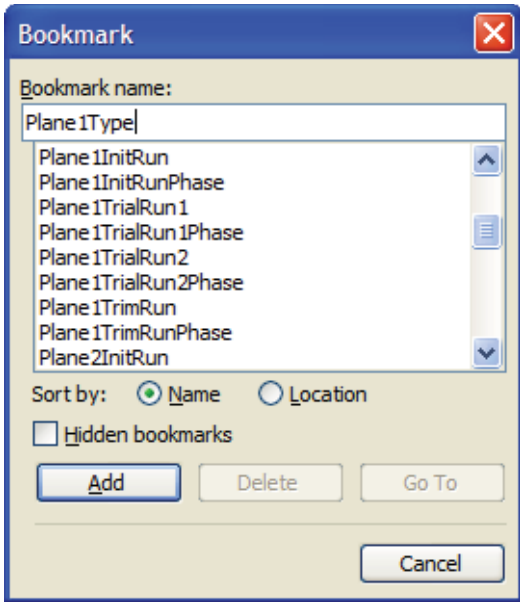
- Note that your bookmark names cannot include any spaces or hyphens.

When you click **Add**, the bookmark will be added to your template[1]:
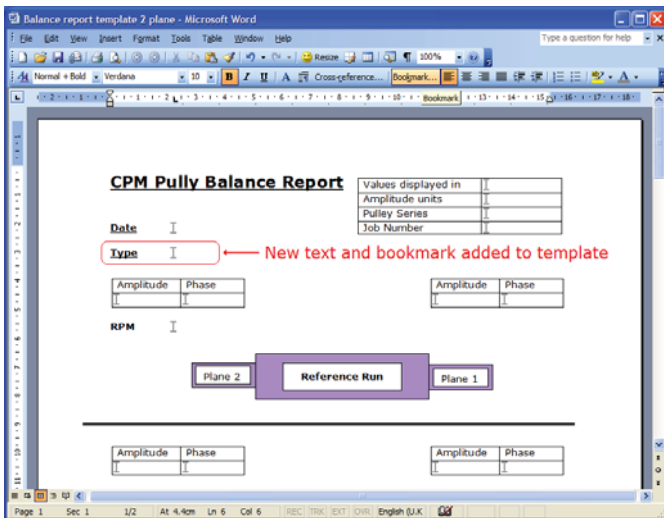
Once you have set up and saved your template file (make sure that you have opened it as a template rather than created a new document from it) you will be ready to set up a Microsoft Word Report in SKF Analysis and Reporting Module to use to create balance reports.

In the SKF Analysis and Reporting Module window, open or select a balance report (.bal) file – the contents will be shown in the right panel of the main window.

There is some extended data that may be entered to supplement the information from the balance file – this data is entered using a special form in SKF Analysis and Reporting Module and is stored with the balance report in the .pds file.

To enter or edit the extra balance report data, go to **Edit | Enter balance report data**. This will open up the **Balance Report Information** dialog[1]:
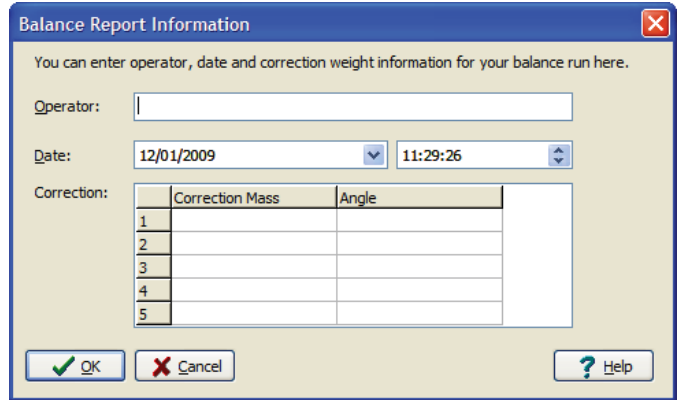
The main information entered here is up to five pairs of correction weight data – you can enter both a mass and an angle for each. You may also put in a date and time and the operator name.
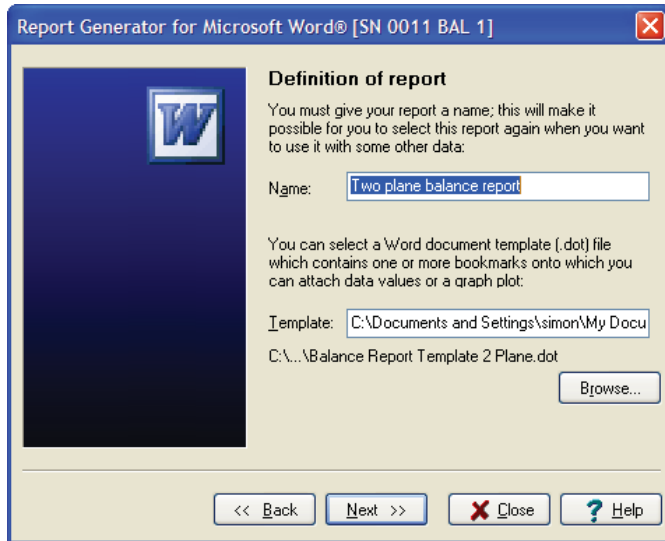
When you are ready to produce the report, choose **Reports | Microsoft Word Report Generator Expert**. On the welcome page, click **Next** to go to the page for selection or creation of reports[1]:
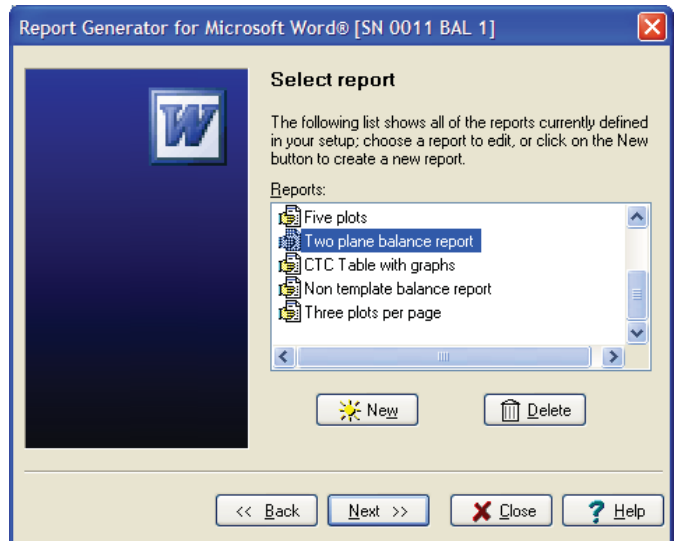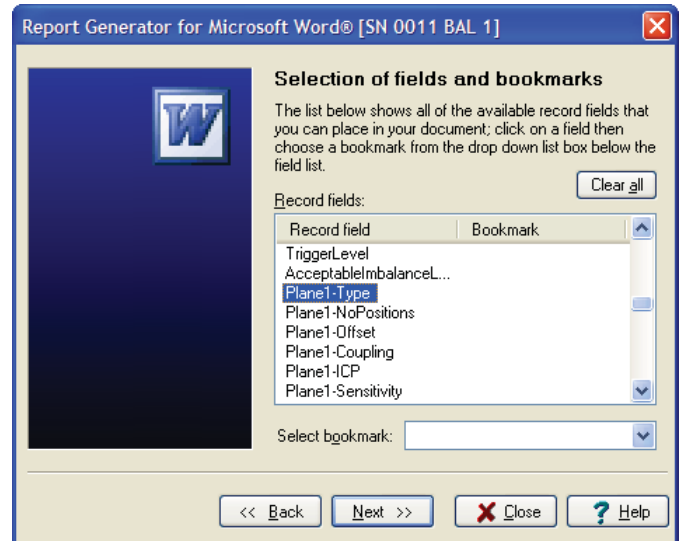

You can either create a new report or use one of the pre-defined ones. SKF Analysis and Reporting Module ships with a sample report that works with the two-plane balance report template. If you are using this template or a modified version of it, select that report, otherwise, you could create a new one by clicking the **New** button.

SKF

Once you have made your selection, click on **Next** to go on with defining the report.

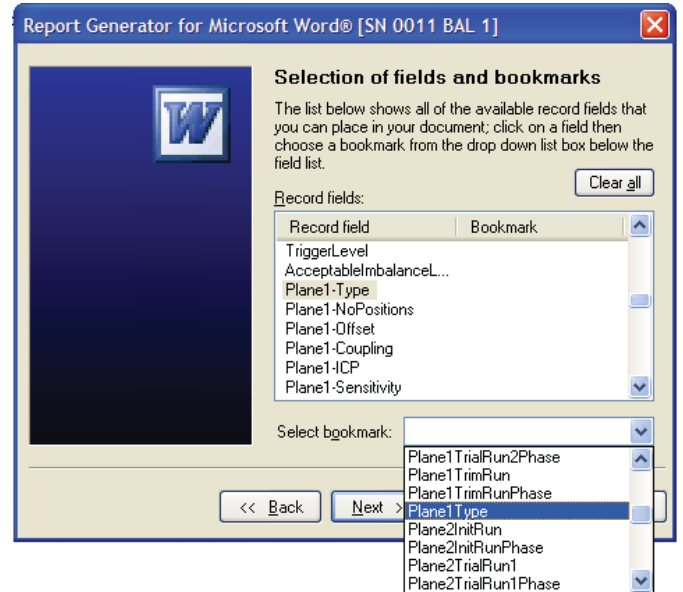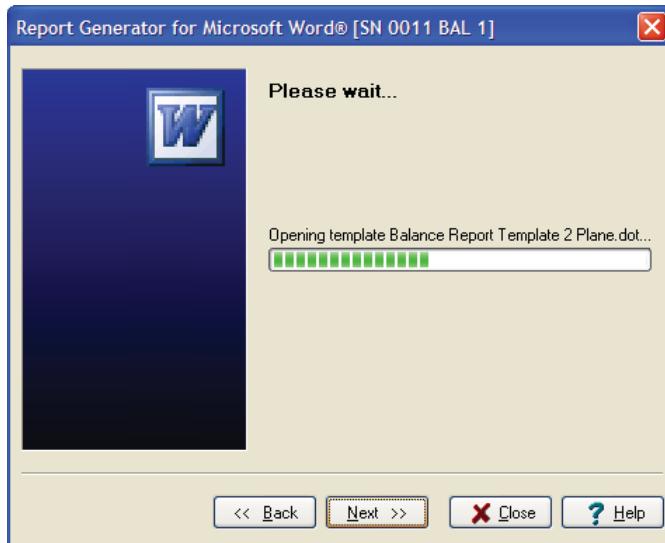On the next page, you can edit the report name and choose the template[1]:

Make your selections and click on **Next**. The application will load the template specified and read its bookmarks[1]:

This leads to a page where you can choose the bookmarks from your template. In the list box on this page are listed the record fields that the software recognises as being available for a balance report.

The report is set up by assigning bookmarks in your template to these fields; for instance, to get the type of plane one in the report, you need to select the field called "Plane1-Type" and assign a bookmark to it[1]:
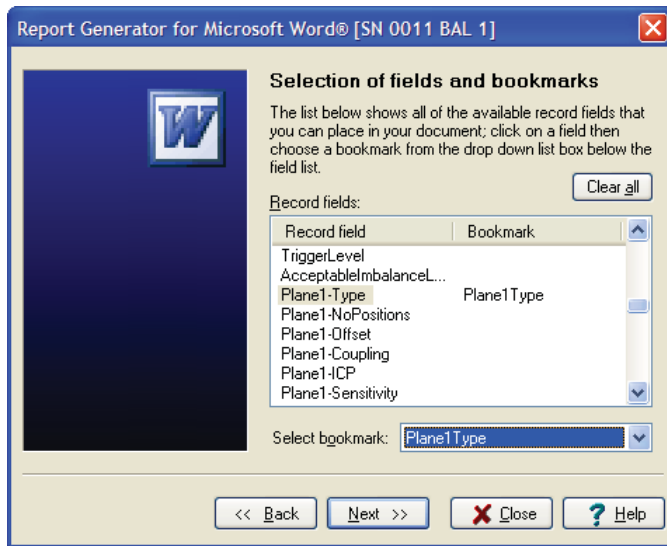

Use the **Select bookmark** drop-down list, which contains all of the bookmarks read from the template, to select the new bookmark we defined earlier called "Plane1Type"[1]:

You can now select this bookmark to be the place in the document where the value for Plane1-Type can be written[1]:


When you have selected all of the bookmarks you need, click **Next** to go to the page where you can choose where the file will be created and how it will be named[1]:
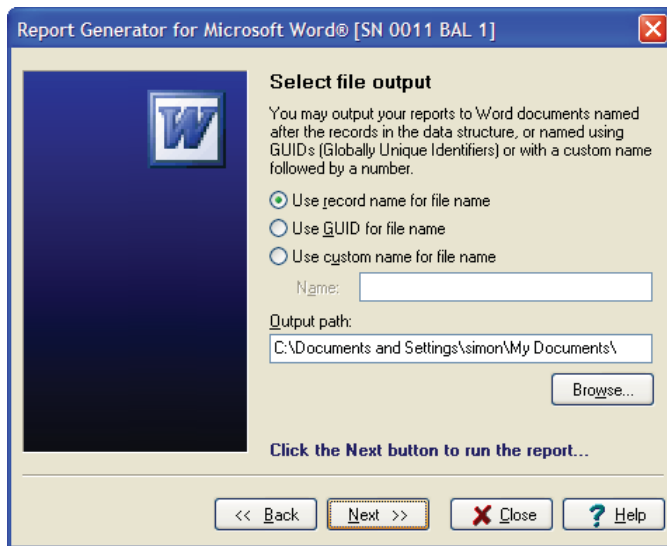

You can use the record name for the document, generate a unique GUID or enter a name manually. Duplicated file names will have a number added on creation to ensure nothing gets overwritten.

You can also choose the output path for the document – this defaults to your own personal documents path, but can be changed to any other path. This value is stored as part of the report set up, so you can have different reports writing files to different locations if required.
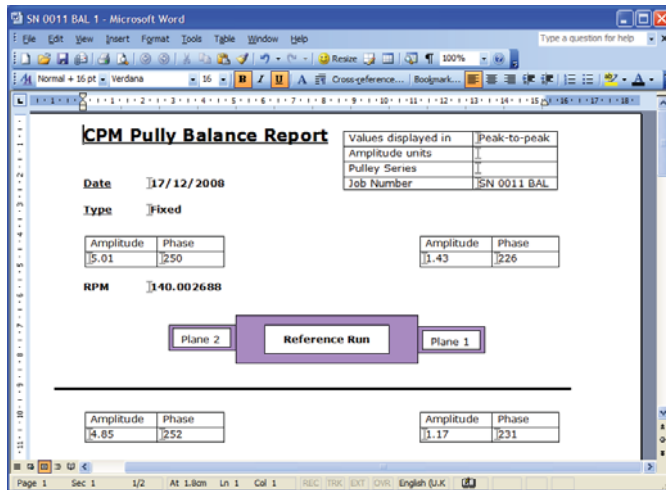
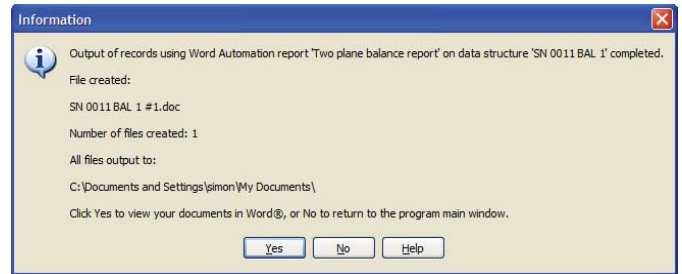Click **Next** to generate the report document; a progress bar will show the report creation progress[1]:
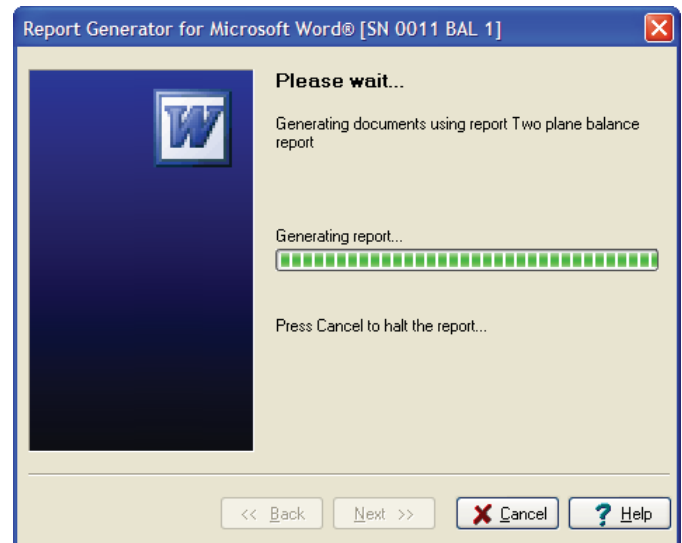
Once complete, a summary page will be shown which includes a button you can click to view the actual file created in Microsoft Word[1]:
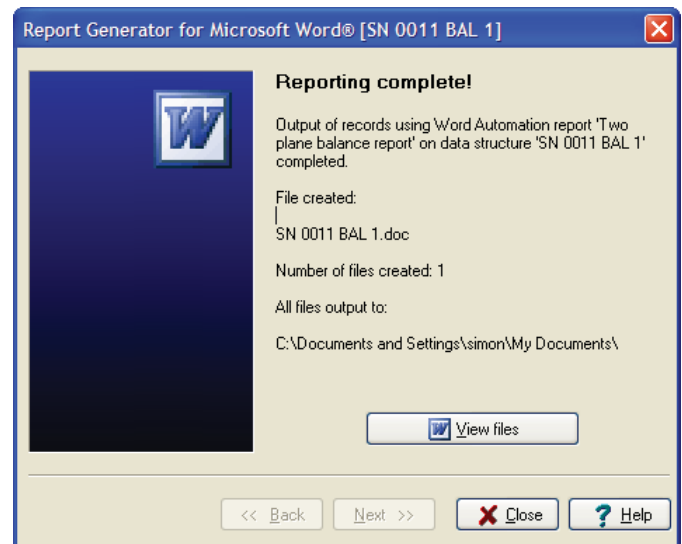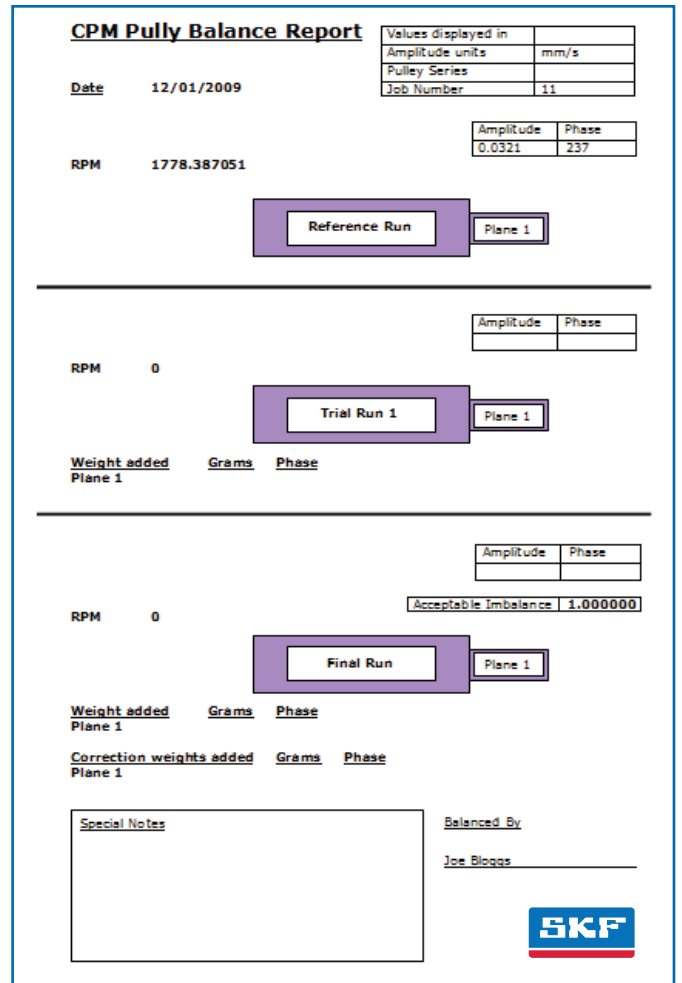
Click the **View files** button to display your completed and saved balance report[1]:

You can see the value of "Fixed" has been written to the "Plane1Type" bookmark that we defined earlier.

You may define any number of different reports in SKF Analysis and Reporting Module for creating Microsoft Word documents, using any templates that you create or modify. The software automatically saves any changes you make to your reports and there is a handy quick report function that you can call up to run the last selected report on your data and run it directly without having to go through any of the editing process:

The **Default Word report** option will run the last report you used or you can choose **Select Word report** to run (without modifying) any other previously defined report. (The default report is shown with a tick).

You can also access these functions directly from the toolbar:

Once the report has been run, a message dialog will show you the results of the operation and allow you to view the document created:

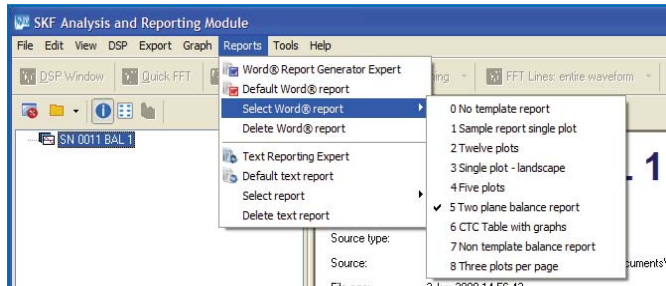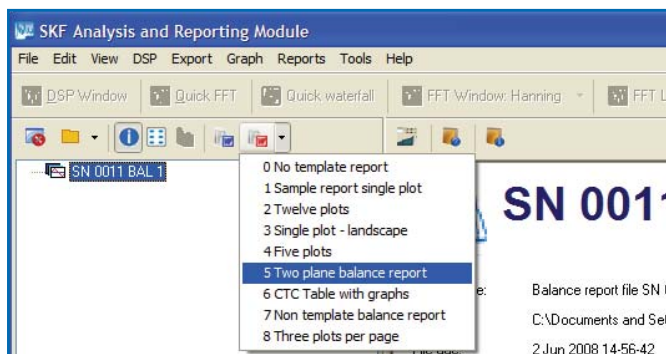Here is an example of a single plane balance report:

Here is an example of a two plane balance report:

CPM Pully Balance Report

Values displayed in	Peak-to-peak
Amplitude units	
Pulley Series	
Job Number	SN 0011 BAL

Date 17/12/2008

Type Fixed

Amplitude	Phase
5.01	250

Amplitude	Phase
1.43	226

RPM 140.002688

Plane 2 — **Reference Run** — Plane 1

Amplitude	Phase
4.85	252

Amplitude	Phase
1.17	231

Plane 2 — **Trial Run 1** — Plane 1

Weight added   **Grams**   **Phase**
Plane 1
Plane 2

Amplitude	Phase

Amplitude	Phase

Plane 2 — **Trial Run 2** — Plane 1

Weight added   **Grams**   **Phase**
Plane 1   97.1   88.3
Plane 2

Amplitude	Phase

Amplitude	Phase

Acceptable Imbalance [ ]

Plane 2 — **Final Run** — Plane 1

Weight added   **Grams**   **Phase**
Plane 1
Plane 2

Correction weights added   **Grams**   **Phase**
Plane 1
Plane 2

Special Notes   **Balanced By**

_____
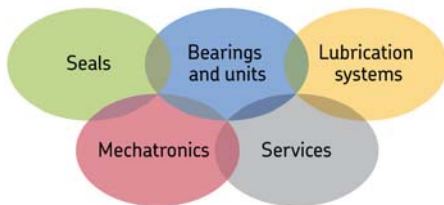
The Power of Knowledge Engineering

Drawing on five areas of competence and application-specific expertise amassed over 100 years, SKF brings innovative solutions to OEMs and production facilities in every major industry worldwide. These five competence areas include bearings and units, seals, lubrication systems, mechatronics (combining mechanics and electronics into intelligent systems), and a wide range of services, from 3-D computer modelling to advanced condition monitoring and reliability and asset management systems. A global presence provides SKF customers uniform quality standards and worldwide product availability.

Seals · Bearings and units · Lubrication systems · Mechatronics · Services

SKF