Gear Macro Geometry
Gear Macro Geometry

- Manage and optimise alternative gear set designs

Gear Sets

Selected Gear Set Properties

Load Cases & Duty Cycles
Show analysis results for the selected load case or duty cycle. The results are from the Power Flow analysis.

Edit the selected gear set design. Default editor is the same as the one in Design mode.
Tabs

Create Custom CAD Reports

View a report of the selected gear set’s geometry
View Drawings of the selected gear set

View advanced calculations on spiral bevel and hypoid gear sets
View contribution of different load cases to total gear damage

View a report of ‘scuffing’ analysis on cylindrical gear sets
Explore geometry search space
Alternative Designs

➢ Right click on a Gear Set to create a duplicate. This can then be modified to explore alternative geometries

➢ Design with the tick is the “Active Design”. This will be used in detailed analyses
Optimise a design automatically

➢ Right click on a gear set and choose “Optimise Strength”
Optimise a design automatically

Right click on a result and choose “Add To Design” to accept the design and add it to your model.
Optimise a design manually

➢ You can position the tabs side by side and modify the parameters to see the effect on the results

Try changing Face Width
Next task...

➢ Please now work through the document:

   6. Efficiency

➢ The next slide in this document contains some additional tasks you might want to attempt after completing all the other tutorials
Tasks

➢ Try and create a design with safety factors as high as the automatically optimised design