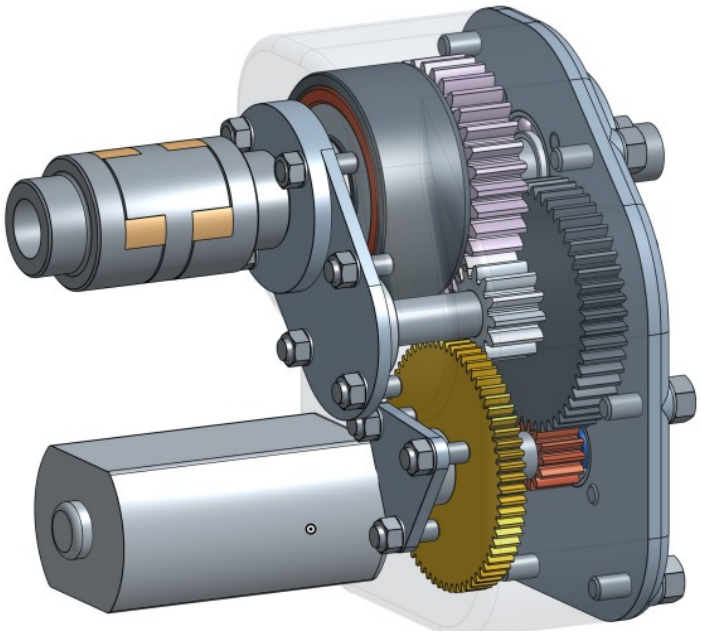
Petertha's model starter gearbox:



How to translate starter torque into tooth loading:

Consider the following pinions, and number of teeth per pinion:

1. Motor pinion: teeth. (A)
2. Yellow pinion: teeth. (B)
3. Red pinion: teeth. (C)
4. Intermediate large pinion: teeth. (D)
5. Intermediate small pinion: teeth. (E)
6. Clutch: teeth. (F)

Using the motor stall torque as the maximum torque that can be applied: = (T)

1. Torque on (A) = Max torque to stall the motor (Manufacturer's data)
2. Torque on B = T x B/A
3. Torque on C = T x B/A
4. Torque on D = T x B/A x D/C
5. Torque on E = T x B/A x D/C
6. Torque on F = T x B/A x F/E

And for each pinion, the force on a tooth is F = Torque on pinion / radius of contact point on tooth (Pitch circle).

You need to convert the pitch circle of your gears into the diameral pitch of the gear tooth as per this: What is Diametral Pitch? (with picture) (infobloom.com)

When you know that, you can input the data into this calculator to check tooth strength.
Gear Tooth Strength Calculator | Engineers Edge