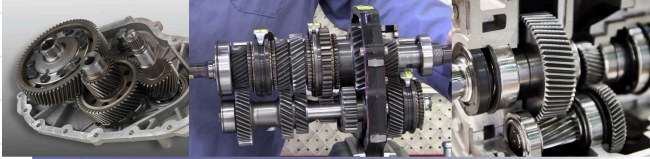
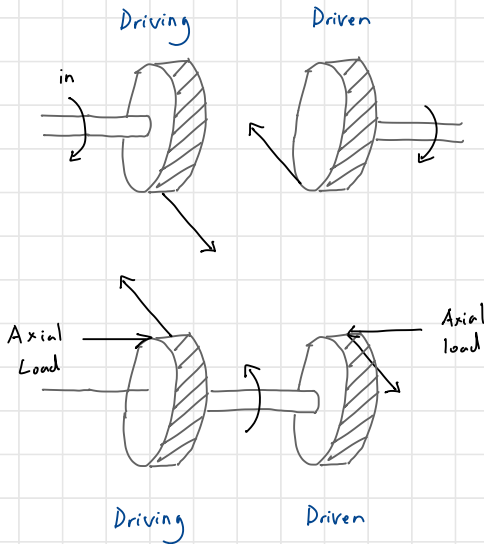


Ex 6) Helical Gears in Counter Shaft

- The following figures show examples of helical gearbox. Explain why all the directions of the helix angle in a counter shaft is the same.



Manual transmission of 92 Toyota Tacoma
Source: Youtube channel, Weber State University, Dept. of Automotive Engineering
<https://www.youtube.com/watch?v=vD03TLgLOkM&app=desktop>



In the counter shaft, one works as a driven gear (which experiences the gear contact force in the same direction as its rotation) and the other as a driving gear (contact force applied opposite to rotation). In order for axial loads from both of them to be canceled, they need to have the same helix angle directions.