

Internal Combustion Engines II.

1. Summarize the most common cylinder arrangements for passenger car and light-duty vehicle engines, choose two and compare their advantages and drawbacks.
2. Describe the components of the cranktrain, explain the function of the mechanism and each of its parts, choose one of the main parts and show its critical loads and characteristic features.
3. Describe a common gasoline engine crankcase, explain its function, show its critical loads and characteristic features.
4. Describe a common diesel engine crankcase, explain its function, show its critical loads and characteristic features.
5. Describe a common cylinder head design for passenger car engines, explain its function, show its critical loads and characteristic features. What kind of cylinder head gasket would you recommend?
6. Choose a cylinder arrangement and present the mass forces of its crank mechanism using the graphical method. Are there any free mass forces or moments of mass forces acting in the chosen cranktrain?