

Automotive Technology 7<sup>th</sup> Edition  
Chapter 122: Manual Transmissions/Transaxles  
Short Answer Quiz

Name:

Date:

1. What are the key factors that determine the torque capacity of a manual transmission, and how does the distance between the mainshaft and countershaft affect it?
2. Describe the process and significance of aligning shift forks and shift arms during the assembly of a manual transmission.
3. Explain the role of the reverse idle gear in a manual transmission and the procedure for its removal and installation.
4. How does the construction of a transmission contribute to its function as a structural member of the drivetrain?
5. Discuss the importance of the input shaft and its relationship with the clutch disc in manual transmission operation.

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6. What is the function of the countershaft in a manual transmission, and how do the gears on the countershaft contribute to gear ratio changes?

7. Describe the process of diagnosing and repairing a manual transmission that has repeated failures due to worn shift forks, as illustrated in the case study provided in the document.

8. Explain the construction and operation of a synchronizer in a manual transmission and how it contributes to smooth gear transitions.

9. Detail the torque flow through a five-speed manual transmission, including how torque is transferred from the engine to the drive wheels.

10. Discuss the types of lubricants used in manual transmissions/transaxles and their impact on the performance and longevity of the transmission.