

Automotive Steering, Suspension & Alignment

Chapter 21 – Vibration and Noise Diagnosis and Correction

Lesson Plan



CHAPTER SUMMARY:

1. Causes of Vibration and Noise, Test Drive, Neutral Run-Up Test, and Vibration During Braking
 2. Vibration Speed Ranges, Vibration Frequency, and Correcting Driveline Angle
 3. Checking Driveshaft Runout and Measuring Driveshaft U-Joint Phasing
 4. Checking Companion Flange Runout, Balancing the Driveshaft, and Noise Diagnosis, and Noise Correction
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OBJECTIVES:

1. List the possible vehicle components that can cause a vibration or noise.
 2. List the procedures for a test-drive and neutral run-up test for vibration/noise problems.
 3. Explain the vibration speed ranges and how to determine the frequency of the vibration.
 4. Explain how to check driveline angles and driveshaft runout.
 5. Discuss the methods for measuring driveshaft U-joint phasing and balancing the driveshaft.
 6. Diagnose and correct noise problems.
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RESOURCES: ([All resources may be found at jameshalderman.com](http://www.jameshalderman.com))

1. Task Sheet: Noise and Vibration Diagnosis
 2. Chapter PowerPoint
 3. [Crossword and Word Search Puzzles \(A4\)](#)
 4. [Videos: \(A4\) Suspension and Steering](#)
 5. [Animations: \(A4\) Suspension and Steering](#)
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ACTIVITIES:

1. Task Sheet: Noise and Vibration Diagnosis
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ASSIGNMENTS:

1. Chapter crossword and word search puzzles from the website.
 2. Complete end of chapter quiz from the textbook.
 3. Complete multiple choice and short answer quizzes downloaded from the website.
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CLASS DISCUSSION:

1. Review and group discussion chapter [Frequently Asked Questions](#) and [Tech Tips](#) sections.
 2. Review and group discussion of the five (5) chapter [Review Questions](#).
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NOTES AND EVALUATION:
