

Manual Drivetrains and Axles 9th Edition

Chapter 17 – Vibration and Noise Diagnosis and Correction



CHAPTER SUMMARY:

1. Cause of Vibration and Noise, Test-Drive, Neutral Run-Up Test, and Vibration During Braking
 2. Vibration Speed Ranges, Vibration Frequency, and Correcting Driveline Angles
 3. Checking Driveshaft Runout, and Measuring Driveshaft U-Joint Phasing
 4. Checking Companion Flange Runout, Balancing the Driveshaft, 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 <http://www.jameshalderman.com>)

1. Task Sheet: Noise and Vibration Diagnosis
 2. Task Sheet: Universal Joint Noise and Vibration Diagnosis
 3. Task Sheet: Driveshaft Phasing and Balance
 4. Chapter PowerPoint
 5. Crossword Puzzle and Word Search
 5. Videos: [\(A3\) Manual Drive Train Axles Videos](#)
 7. Animations: [\(A3\) Manual Drive Train Axles Animations](#)
 8. Animations: [\(A4\) Suspension and Steering Animations](#)
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ACTIVITIES:

1. Task Sheet: Noise and Vibration Diagnosis
 2. Task Sheet: Universal Joint Noise and Vibration Diagnosis
 3. Task Sheet: Driveshaft Phasing and Balance
 4. Crossword Puzzle and Word Search
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ASSIGNMENTS:

1. Chapter crossword and word search puzzles.
 2. Complete end of chapter 10 question quiz.
 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:
