**Automotive Technology 7th Edition**

**Chapter 121 – Clutch Components, Operation, and Replacement**

**Lesson Plan**

**CHAPTER SUMMARY:**

1. Clutch Assembly, Clutch Discs, Pressure Plates, Flywheels, and Dual-Mass Flywheels

2. Pilot Bearings, Clutch Pedal Linkage, Release (Throwout) Bearing, and Clutch Pedal Switch

3. Clutch Diagnosis and Replacement

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**OBJECTIVES:**

1. Explain the purpose and function of a clutch.

2. Discuss clutch discs.

3. Discuss pressure plates.

4. Discuss flywheels.

5. Discuss dual-mass flywheels.

6. Discuss pilot bearings.

7. Describe clutch pedal linkages including hydraulic clutch systems.

8. Discuss release (throwout) bearings.

9. Discuss clutch pedal switches.

10. Explain the diagnosis of common clutch problems, recommend the proper repair procedures, and explain how to remove and replace a clutch assembly. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**RESOURCES:** (All resources may be found at jameshalderman.com)

1. Task Sheet: Clutch Identification

2. Task Sheet: Diagnose Clutch Concerns

3. Task Sheet: Clutch Linkage Inspection

4. Task Sheet: Inspect the Hydraulic Clutch

5. Task Sheet: Inspect Clutch Components

6. Task Sheet: Bleed Clutch Hydraulic System

7. Task Sheet: Flywheel and Ring Gear Inspection

8. Task Sheet: Flywheel Runout

9. Task Sheet: Dual Mass Flywheel Inspection

10. Crossword Puzzle and Word Search

11. Videos: [(A3) Manual Drive Train Axles Videos](https://jameshalderman.com/a3_vid_lib_page/)

12. Animations: [(A3) Manual Drive Train Axles Animations](https://jameshalderman.com/a3_anim_lib_page/)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ACTIVITIES:**

1. Task Sheet: Clutch Identification

2. Task Sheet: Diagnose Clutch Concerns

3. Task Sheet: Clutch Linkage Inspection

4. Task Sheet: Inspect the Hydraulic Clutch

5. Task Sheet: Inspect Clutch Components

6. Task Sheet: Bleed Clutch Hydraulic System

7. Task Sheet: Flywheel and Ring Gear Inspection

8. Task Sheet: Flywheel Runout

9. Task Sheet: Dual Mass Flywheel Inspection

10. Crossword Puzzle and Word Search

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Automotive Technology 7th Edition**

**Chapter 121 – Clutch Components, Operation, and Replacement**

**Lesson Plan**

**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.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**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.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**NOTES AND EVALUATION:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_