AUTO 1205: Brake Systems Theory

A. COURSE DESCRIPTION

Credits: 2
Lecture Hours/Week: 2
Lab Hours/Week: *.*
OJT Hours/Week: *.*
Prerequisites: None
Corequisites: None
MnTC Goals: None

This course includes principles of hydraulic systems, disc and drum brakes, parking brakes, and power assist units. Emphasis on anti-lock operation, diagnosis, and repair of various types of braking systems. (Prerequisites: AUTO1105, AUTO1106, or instructor approval) (2 Credits: 2 lecture/0 lab)

B. COURSE EFFECTIVE DATES: 04/27/1998 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Safety Procedures
2. Principles of Hydraulic Systems, Disc and Drum Brakes, Parking Brakes, and Power Assist Units
3. Diagnosis and Repair of Various Types of Braking Systems
D. LEARNING OUTCOMES (General)
  1. Explain safety procedures
  2. Explain brake terms
  3. Identify brake related health hazards
  4. Identify brake tools
  5. Identify braking material
  6. Identify required fluid types
  7. Identify brake components
  8. Explain drum brake parts functions
  9. Describe automatic adjuster operation
 10. Explain disc brake parts functions
 11. Describe 4 wheel disc operations
 12. Describe automatic adjuster operation
 13. Explain disc brake internal parking brake operation
 14. Explain hydraulic operation
 15. Describe master cylinder operation
 16. Complete mid-course exam
 17. Describe automatic release park brake system
 18. Describe metering valve operation
 19. Describe proportioning valve operation
 20. Explain diagonal brake system
 21. Identify directional and laminated rotor assemblies
 22. Describe car rotor resurfacing operation
 23. Identify brake fluid loss
 24. Explain vacuum and power assist unit operation
 25. Describe anti-skid systems operation
 26. Exhibit professionalism
 27. Complete final exam

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted