



COURSE OUTLINE

MPF130

Prepared: George Parsons Approved: Corey Meunier

Course Code: Title	MPF130: TRUCK COACH VEHICLE SYSTEMS MAINTENANCE
Program Number: Name	4044: MOT POWER ADV REPAIR
Department:	MOTIVE POWER
Semester/Term:	18W
Course Description:	You will learn the procedures for servicing truck and coach vehicle systems for the purpose of routine maintenance. This will involve servicing of the truck, bus or tractor and trailer combination vehicles on a monthly maintenance schedule. You will perform engine and power train lubrication fluid inspections and changes, as well as lubrication to chassis steering and suspension components and inspections of brake and brake adjustment systems. You will be required to record data from such vehicles and equipment into the service records similar to that used by trucking and bussing companies and fleets. This will include the creation and setup of such programs that could be adapted to electronic files and storage as so commonly used today. All servicing of this nature would be conducted by using proper safety and maintenance procedures as outline in the proper manufacturer service manuals.
Total Credits:	1
Hours/Week:	2
Total Hours:	14
Prerequisites:	MPF103
Vocational Learning Outcomes (VLO's):	<p>4044 - MOT POWER ADV REPAIR</p> <p>#1. Analyse, diagnose, and solve various motive power system problems by using problem-solving and critical thinking skills and strategies and by applying fundamental knowledge of motor vehicle operation, components, and their interrelationships.</p> <p>#2. Diagnose and repair climate control systems in compliance with manufacturer's recommendations.</p> <p>#3. Diagnose and repair engine systems in compliance with manufacturer's recommendations.</p> <p>#4. Diagnose and repair electrical, electronic, personal safety, and emission components and systems in compliance with manufacturer's recommendations.</p> <p>#5. Diagnose and repair drive train components and systems in compliance with manufacturer's recommendations.</p> <p>#6. Diagnose and repair suspension, steering, and brake components and systems in compliance with manufacturer's recommendations.</p> <p>#7. Disassemble and assemble components to required specifications by applying workshop</p>
Please refer to program web page for a complete listing of program outcomes where applicable.	

	<p>skills and knowledge of basic shop practices.</p> <p>#8. Select and use a variety of troubleshooting techniques and test equipment to assess electronic circuits, vehicle systems, and subsystems.</p> <p>#9. Apply knowledge of hydraulics and pneumatics to the testing and analysis of motive power systems and subsystems.</p> <p>#10. Communicate information effectively, credibly, and accurately by producing supporting documentation to appropriate standards.</p> <p>#11. Use information technology and computer skills to support work in a motive power environment.</p>						
Essential Employability Skills (EES):	<p>#1. Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.</p> <p>#2. Respond to written, spoken, or visual messages in a manner that ensures effective communication.</p> <p>#3. Execute mathematical operations accurately.</p> <p>#4. Apply a systematic approach to solve problems.</p> <p>#5. Use a variety of thinking skills to anticipate and solve problems.</p> <p>#6. Locate, select, organize, and document information using appropriate technology and information systems.</p> <p>#7. Analyze, evaluate, and apply relevant information from a variety of sources.</p> <p>#8. Show respect for the diverse opinions, values, belief systems, and contributions of others.</p> <p>#9. Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.</p> <p>#10. Manage the use of time and other resources to complete projects.</p> <p>#11. Take responsibility for ones own actions, decisions, and consequences.</p>						
Course Evaluation:	Passing Grade: 50%, D						
Other Course Evaluation & Assessment Requirements:	<p>The following semester grades will be assigned to students:</p> <p>Grade Definition Grade Point Equivalent A+ 90 100% 4.00 A 80 89% B 70 - 79% 3.00 C 60 - 69% 2.00 D 50 59% 1.00 F (Fail) 49% and below 0.00</p> <p>CR (Credit) Credit for diploma requirements has been awarded. S Satisfactory achievement in field /clinical placement or non-graded subject area. U Unsatisfactory achievement in field/clinical placement or non-graded subject area. X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course. NR Grade not reported to Registrar`s office. W Student has withdrawn from the course without academic penalty.</p>						
Evaluation Process and Grading System:	<table border="1"> <thead> <tr> <th>Evaluation Type</th> <th>Evaluation Weight</th> </tr> </thead> <tbody> <tr> <td>Assigned Shop Projects</td> <td>50%</td> </tr> <tr> <td>Shop - Practical</td> <td>50%</td> </tr> </tbody> </table>	Evaluation Type	Evaluation Weight	Assigned Shop Projects	50%	Shop - Practical	50%
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Assigned Shop Projects	50%						
Shop - Practical	50%						
Books and Required Resources:	Heavy Duty Truck Systems by Bennett Publisher: Cengage Learning Edition: 6th						
Course Outcomes and	Course Outcome 1.						

Learning Objectives:

Properly raise, support and lower vehicles and equipment such as trucks, tractors and trailers for the purpose of performing lubrication and service.

Learning Objectives 1.

Find lifting locations
Safely raise and support assigned vehicles

Course Outcome 2.

Perform the applicable engine lube service and chassis lubrication service to a variety of on road vehicles and equipment.

Learning Objectives 2.

Change engine oil and filters
Lube chassis as required
Lube steering linkage and driveline components as required

Course Outcome 3.

Perform visual inspection, test and repair vehicle lighting systems.

Learning Objectives 3.

Check operation of all lighting systems
Replace and repair lighting as required

Course Outcome 4.

Perform a proper circle check inspection of a combination vehicle as well as a truck or tractor type vehicle according to Trucking Industry Standards.

Learning Objectives 4.

Inspect tire wear and record measurements and pressures
Measure brake chamber push rod stroke
Check wheel attachment
Check compressor mounting and air pressure build time
Listen for audible air leaks
Check fifth wheel for proper mounting
Visually inspect the frame for cracks

Course Outcome 5.

Perform Cooling System testing and Service using the proper methods and coolant handling equipment according to Manufacturers

Learning Objectives 5.

Test antifreeze freeze protection
Test PH and recommend the proper procedure to correct the problem
Check water pump drive system and fan
Check rad and hoses for condition, external leaks and cleanliness

Course Outcome 6.

Perform scheduled maintenance inspections according to various Company oriented inspection criteria and record results.

Learning Objectives 6.

Perform A, B and C type inspections on forms supplied
Electronically store records of inspection results

Course Outcome 7.

Visually inspect batteries for loose and corroded cables and open circuit voltage. Check charging and starting system operation. Clean and service batteries as required. Perform battery load test with an electronic battery tester to confirm that the batteries are within the proper specifications.

Learning Objectives 7.

Perform wiggle test
Check battery voltage
Test charging voltage
Clean and service batteries as required
Perform electronic load test
Check charging system voltage at the batteries
Test cranking voltage
Perform starter current draw test

Date:

Monday, December 18, 2017

Please refer to the course outline addendum on the Learning Management System for further information.