

## DISL 110-PREVENTATIVE MAINTENANCE AND INSPECTION 6 CREDITS

### SYLLABUS

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#### CATALOG DESCRIPTION

This course is intended as an introduction to diesel equipment technology. Students will be presented with information about the career field, proper use of tooling, precision measuring, inspection practices, preventive maintenance scheduling, pre-and post-repair inspections, and record keeping. Work will be done on a variety of class 6 to class 8 medium/heavy duty trucks and several types of off-highway equipment. Safety will be strictly enforced. A grade of 'C' or better must be earned to receive credit for this course.

Prerequisites:           None

Semester Offered:     Fall, Spring

#### ***Common Student Learning Outcomes***

*Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in...*

##### **BROAD AND SPECIALIZED LEARNING**

Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

##### **CRITICAL THINKING**

Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

##### **CULTURAL AND CIVIC ENGAGEMENT**

Students will act purposefully, reflectively, and ethically in diverse and complex environments.

##### **EFFECTIVE COMMUNICATION**

Students will exchange ideas and information with clarity in multiple contexts.

##### **INFORMATION LITERACY**

Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

##### **INTEGRATING TECHNOLOGIES**

Students will demonstrate fluency in the application and use of technologies in multiple contexts.

*Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.*

#### **Course Learning Outcomes**

1. To provide the student with techniques and diagnostic procedures to perform a complete visual/walk around inspection, record discrepancies noted, perform minor adjustments and repairs. The student will also be

capable of performing various diagnostic tests utilizing specialized test equipment to determine additional required repairs.

## Specific Learning Objectives

Upon successful completion of the course, the student will be able to...

1. Inspect engine for oil, coolant, and fuel leaks; add fluids to proper level.
2. Inspect and adjust belt tension.
3. Inspect engine and radiator mounts for looseness, and damage.
4. Inspect air intake and exhaust systems for leaks and damage.
5. Test and adjust engine clutch free travel to specifications.
6. Inspect transmission mounting for looseness and damage.
7. Check transmission oil level; add fluids to proper level.
8. Inspect driveline, U-joints, and carrier bearings for looseness, damage, and alignment (phasing).
9. Check differential oil; add fluids to proper level.
10. Check/tighten wheel lugs to proper torque.
11. Measure and adjust brake chamber travel to specification.
12. Check battery electrolyte level state of charge.
13. Inspect battery boxes, hold downs, and mountings.
14. Inspect battery cables and connections.
15. Inspect alternator mounting and wiring.
16. Inspect starter mounting and connections.
17. Check lighting circuits for operation.
18. Perform air system cut-in/cut-out pressure.
19. Test air pressure build-up time.
20. Check park/emergency brake operation.
21. Test tractor protection valve.
22. Inspect air system couplings and glad hands for damage.
23. Check dash gauge operation.
24. Inspect tires for irregular wear patterns and tread direction.
25. Measure tread depth.
26. Check and adjust tire air pressures to specification.
27. Inspect frame for cracks.
28. Test fifth wheel operation.
29. Check/adjust wheel bearing adjustment.
30. Lubricate entire vehicle per lubrication chart recommendation.
31. Demonstrate ability to perform various industry inspections including PDI, Pre-trip, oil and filter service, A-PM, B-PM, and C-PM.
32. Outline the procedure to prepare equipment for winter and summer operations.
33. Identify common CVSA OOS criteria.
34. Demonstrate ability to identify the correct procedure for putting a vehicle back in service after various types of OOS diagnosis.