1-2015

DST 229.01: Engine Service II

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THE UNIVERSITY OF MONTANA
MISSOULA COLLEGE
INDUSTRIAL TECHNOLOGY DEPARTMENT
DIESEL TECHNOLOGY PROGRAM

COURSE SYLLABUS

COURSE NUMBER AND TITLE: DET229T Engine Service II

DATE REVISED: SPRING 2015

SEMESTER CREDITS: 7

CONTACT HOURS PER SEMESTER: Lecture and Lab will be 25 hours per week

PREREQUISITES: DET128T

INSTRUCTOR: Jim Harris
PHONE NUMBER: 406.243.7649
E-MAIL ADDRESS: jim.harris@umontana.edu
HOURS: Monday-Friday 9:00 am to 12:00 pm 1:00 pm to 4:00 pm
OFFICE LOCATION: College of Technology West Campus

RELATIONSHIP TO PROGRAM: Engine Service II contributes to the objectives of the Diesel Technology program by increasing the students knowledge of rebuild, maintenance, repair and start up procedures of diesel engines.

COURSE DESCRIPTION: A continuation of Engine Service I with a major emphasis placed on the rebuilding of a diesel engine. Engine components repair and failure analysis are reviewed along with tune-up and running of diesel engines commonly found in the heavy equipment trade. Shop flat-rate procedures, work order procedures and warranty requirements are covered. Cooling, lubricating systems, air intake and exhaust systems, air intake and exhaust systems are covered in depth.

COURSE OBJECTIVES AND OUTLINE:

A. Cooling Systems:
   1. Flow in a diesel engine
   2. Low flow systems
   3. Component repair
   4. Diagnosis and repair

B. Lube Systems:
   1. Flow in a diesel engine
   2. Lube oil ratings
   3. Component repair
   4. Diagnosis and repair

C. Intake and Exhaust Systems:
   1. Turbocharger and blower repair
   2. Unit testing
   3. Exhaust system pluming

D. Engine Rebuilding:
   1. Component overhaul
   2. Failure analysis
   3. Engine assembly procedures

E. Engine Start Up:
   1. Pre-lubing a diesel engine
   2. Engine break-in period
   3. Performing testing

F. Electronic Controls
   1. Sensors
   2. Diagnostic tools and usage
   3. Troubleshooting

Attendance will be taken at least once a day sometimes more each student will be in class on time. One letter for each unexcused absence thereafter until a grade of F is reached. Being late to class will count the same as being unexcused. Call 243-7648 if you are running late.

DAYS ABSENT WILL DEDUCT FROM THE FINAL GRADE AS FOLLOWS:

3rd day	No deduction
4th day	1% point
5th day	2% points
6th day	6% points
7th day	10% points
8th day	16% points
9th day	18% points
10th day	20% points
11th day	25% points
12th day	30% points

GRADING POLICY:

100 – 90	A
80 - 89	B
70 – 79	C
60 – 69	D
59 and below	F

TEST MAKE-UP: There will be no test make-up. If you are late you will not take the test. All students will start testing at the same time**. Any student that is late for class will be counted as absent.**

SAFETY: Students shall follow all West Campus safety policies and each student will always work in a safe manner or **REMOVAL FROM CLASS WILL RESULT!!! SAFETY GLASSES** must be worn when working around the press or anytime you eyes could be injured!!!

FINAL GRADES: Final grades will be determined by the following. The lab grade will only raise, or lower the final grade one letter grade. To receive a final grade of (A) you must have a grade average of (A) on tests, and written papers. In order to receive a passing grade of (C), the student must achieve a minimum grade of (C) in lecture and lab.

NOTEBOOK: Each student will be required to hand in a notebook (3 ring binder) at the end of this class containing all handouts in order and all signed job sheets in order of completion located in a separate section. Do not put unsigned job sheets in the notebook. Missing lab sheets will not count toward your lab grade. The overall notebook will count toward your final grade.

REQUIRED TEXT: Diesel Engine and Fuel System Repair by John Edgel & Robert Brady 5th edition

SUGGESTED REFERENCE MATERIALS: Service manuals as per engine manufacture.

HAND TOOLS: Per Diesel Technology requirements, see Diesel Technology Required Tool List