

South Central College

## **AGME 1923 Gas/Diesel Repair II**

### **Common Course Outline**

#### **Course Information**

**Description** This course is designed to assist the students in building their understanding and application of materials and procedures learned in Gas/Diesel Engine Repair I, Power Trains, Electrical systems and other mechanical courses. The students will repair customer units. The primary repair work will involve engine overhaul (gas and diesel), clutch, brake and electrical repairs. Customer units must be completed by the end of the course. Students must be enrolled in the Agribusiness Service Technician program.

**Total Credits** 4

**Total Hours** 128

#### **Types of Instruction**

### **Learning Objectives**

identify proper splitting stand installation  
identify proper lift points  
identify proper engine stand mounting  
identify teardown procedure

## **3. Disassemble engine**

### **Learning Objectives**

identify component parts to be removed  
inspect components to aid in engine diagnosis  
keep injectors, lines and pump openings sealed to prevent dirt from entering  
identify main bearing and connecting rod caps by stamping numbers on them  
identify proper piston pin removal

## **4. Identify proper head repair procedure**

### **Learning Objectives**

demonstrate cylinder head disassembly  
perform cylinder head cleaning  
perform warpage and crack detection on head  
perform valve guide knurling or replacement  
perform valve seat checking and reconditioning  
perform valve cleaning and refacing  
perform valve spring testing  
perform valve rotator check  
check for proper valve seating  
reassemble head

## **5. Identify procedure used in inspection, overhaul, and testing of a cylinder block**

### **Learning Objectives**

perform check of cylinder block top surface  
perform check of main bearing size for diameter and out of round  
check or recondition cylinder sleeve bores  
perform cam bearing removal and installation  
identify removal and replacement of galley plugs expansion plugs, cover plates and oil pressure relief valve

## **6. Identify procedure used in inspection of crankshaft**

### **Learning Objectives**

perform measurement for out of roundness on main and rod journals  
perform measurement for taper on main and rod journals  
check crankshaft thrust surfaces  
explain procedure for crack detection  
perform main bearing and crankshaft installation  
perform rear main seal installation  
perform damper and flywheel inspection and reassembly

## **7. Identify procedure used in inspection of connecting rods, pistons and piston rings**

### **Learning Objectives**

perform piston inspection to determine if piston can be used again

**Learning Objectives**

check all bearings to see that they align to all oil galleries  
check to see that all bearing caps are installed correctly  
check to see that all rods and pistons are installed correctly  
check to see if engine is timed correctly

