

COURSE TITLE : **DIESEL ENGINE SERVICE LAB**
COURSE CODE : **4057**
COURSE CATEGORY : **B**
PERIODS/WEEK : **6**
PERIODS/SEMESTER : **84**
CREDITS : **3**

TIME SCHEDULE

Module	Topic	Periods
1	Inspect various engine components and perform engine reconditioning	19
2	Remove and refit the coolant pump from the Engine	23
3	Carryout the Bleeding of diesel fuel system	19
4	Dismantle, clean and assemble distributor type & in line type fuel pump	23
TOTAL		84

GENERAL COURSE OUTCOME

Module	G.O	Student will be able to
1	1	Understood dismantling and assembling procedure of engines.
	2	Analyse the need of engine reconditionaly
	3	Compact dismantling and assembling
	4	Carryout t dismantling and assembling of coolant pump, oil pump, air cleaner, and oil coder
	5	Check defects in engine components.
	6	Understand the various components in diesel fuel system
	7	Dismantle and assemble distributor type and inline type fuel pump.

SPECIFIC COURSE OUTCOME

MODULE I

1.1.0 Inspect various engine components and perform engine reconditioning

MODULE II

- 2.1.0 Remove and refit the coolant pump from the Engine
- 2.1.1 Dismantle and assemble oil pump
Remove and refit oil bath type air cleaner
- 2.1.2 Remove and refit oil-cooler

MODULE III

- 3.1.0 Carryout the Bleeding of diesel fuel system
- 3.1.1 Carryout the servicing of nozzles
- 3.1.2 Dismantling & assembling of fuel feed pump

MODULE IV

- 4.1.0 Dismantle, clean and assemble distributor type & in line type fuel pump
- 4.1.1 Troubleshoot diesel engines

CONTENT DETAILS

MODULE I

1. Removal , inspection and refitting of the cylinder head.
2. Dismantle, inspect and assemble the valve assembly.
3. Removal of piston, connecting rod and crankshaft.
4. Valve tappet clearance adjustment.
5. Inspection of cylinder bore (Ovality and taperness)

MODULE II

1. Reconditioning of cooling system components.
2. Dismantling and assembling the oil pump.
3. Removal and refitting of oil bath type air cleaner.
4. Removal and refitting of the oil filter.

MODULE III

1. Dismantling and assembling of the F.I .pump.
2. Dismantling and assembling of the fuel feed pump.
3. Dismantling and assembling of the fuel injector. Perform the various tests using Fuel injector tester.
4. Bleeding of diesel fuel system.

MODULE IV

1. Dismantling and assembling the distributor type fuel pump.
2. Set FI pump timing and starting the diesel engine.
3. Removal and refitting of the fuel filter.
4. Identification of the missing cylinder in a misfiring diesel engine.

REFERENCE:

Service manuals of Bosch, Caterpillar, TVS, MICO