

Product Name :
Diesel Engine Test Bed**Product Code :**
AutomobileLab0016**Description :**

Diesel Engine Test Bed

Technical Specification :

The Diesel Engine Test Bed should be supplied complete with a diesel engine and transmission with all components necessary for operation. The test bed should be especially designed for teaching diagnosis, tune up, fault finding and trouble shooting. The engine should be mounted on a strong tubular steel frame, power coated and come complete with instrumentation and accessories thus the unit should be ready to run. Test bed must have capability to connect to a modular dynamometer system for future upgradeability.

Specifications:

1. The modules should have the following requirements:

A. Modular frame

- Should have strong heavy duty welded tubular, power coated frame, cross braced
- The rear guard should be easily removed to increase work space area
- Rubber engine mount
- Hard rubber or nylon wheels for mobility with locking mechanism
- 10 liter fuel tank and 12 V battery are mounted to the frame
- All wiring should be neatly routed next to frame members for operational safety and must have number identification codes on the cables.

B. Instrumentation and control system:

- Should have key ignition switch, operation lights, ammeter, oil pressure gauge and water temperature gauge.
- Throttle controller.

C. Cooling system:

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- Should have standard water radiator matched to engine size.
 - Should have thermostat for controlling engine temperature and a temperature meter for monitoring temperature.

D. Electrical system:

- Should be provided with 12V battery.
- Should have alternator, voltage regulator, fuse box installed and relay grouping.

E. Fuel System

Complete with a 10 liter fuel tank that connects to the fuel filter, fuel pump and fuel injection system.

F. Air intake and exhaust system

Should match with engine and includes silencer.

G. Engine

Should be a complete diesel engine (4 stroke, 4 cylinder) with matching transmission, shifting mechanism and clutch operation lever.

The test bed should be included with operation manuals and experiment manuals which includes Step – by – step chapters with theoretical information and practical student Experiments.

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