



APPLICATIONS

- ◆ Fault Diagnostics
- ◆ Idle Speed Adjustment
- ◆ Engine Operation, Maintenance and Testing

FEATURES

- ◆ Petrol, LPG or Diesel Engine Variants
- ◆ Naturally Aspirated or Turbo-charged Engines
- ◆ Single, in line and 'V' cylinder configuration

INTRODUCTION

Cussons range of engine test stands provide the means for training automotive technicians in the operation and fault diagnosis of automotive piston engines. The range includes petrol, LPG and diesel engines. There is a choice between naturally aspirated and turbo-charged engines. Each test stand consists of a new automotive engine mounted in a mobile frame and equipped with battery, starting system, alternator, charging system, radiator and cooling system, exhaust system, air filter, fuel system and for petrol engines an ignition system.

The test stands are designed in such a way as to allow easy access for making engine adjustments, to allow standard 'in vehicle' maintenance work to be

CUSSONS P8952 - P8981 AUTOTRAINERS

ENGINE TEST STANDS FOR AUTOMOTIVE TECHNICIANS

accomplished and to enable fault simulation by substituting components with defective items. Optional Advanced Instrumentation, Fault Simulation and Control Modules are available, as factory fitted extras which provide additional instrumentation and a number of instructor selectable electrical faults. To suit special customer requirements it is possible to include any other automotive engine provided it is readily available.

GENERAL DESCRIPTION

Cussons Autotrainer engine test stands are of all welded construction, made from square section steel tube, and are fully mobile being mounted on four castors, two of which are lockable. The test stands are supplied complete with cooling, electrical, exhaust and fuel systems (where required) with provision for the optional factory fitted Instrumentation. The engines are flexibly mounted to reduce vibration and guarded as necessary.

COOLING SYSTEM (where required)

Engine radiator mounted in the test stand complete with a thermostatically controlled fan together with flexible hoses and engine thermostat where applicable.

ELECTRICAL SYSTEM (where required)

Negative earth 12 Volt battery located in the test stand by two clamp brackets and connected to the engine by heavy duty battery leads. The electrical system includes the engine starter circuit, battery charging circuit and all necessary engine control circuits. The battery is supplied in a dry charged condition.

EXHAUST SYSTEM

Exhaust manifold and exhaust pipe system including silencer supplied in three sections with interconnecting

clamps and catalyst for gasoline option.

FUEL SYSTEM

Small fuel tank of nominally five litres capacity, located on the frame and connected to the engine by flexible hose.

STANDARD INSTRUMENTS AND CONTROLS

The unit incorporates the necessary instruments, which may include some of the following (ask for specific data sheet for more information):

- Ignition-starter key switch,
- Alternator charge warning light,
- Manual throttle or rack control,
- Tachometer and ammeter,
- Oil pressure gauge,
- Water temperature gauge,
- Pre-start indicator - Diesel (Glow plug)

PETROL ENGINE TEST STANDS

P8952 - Cussons Autotrainer Engine Test Stand— Fuel Injected Spark Ignition Engine

The Cussons Autotrainer Engine Test Stand (as specified in the general description) and fitted with a naturally aspirated fuel injected in line four stroke, four cylinder, liquid cooled spark ignition engine of approx. 2.0 litres. It comes complete with starter motor, alternator, water pump, fuel pump, flywheel and flywheel guard. The engine is fitted with throttle assembly.

- Fuel - Unleaded gasoline 95 octane (R.O.N.)
- Fuel Injection - Electronically controlled with electro-mechanical injectors
- Electrical System - 12 volt negative earth
- Ignition System - Electronic
- Coolant Pump - Centrifugal Impeller
- Thermostat - Wax element

P8970 - Cussons Autotrainer Engine Test Stand— Single Cylinder Spark Ignition Engine

This Cussons Autotrainer Engine Test Stand is fitted with a naturally aspirated air cooled overhead valve single cylinder four stroke petrol engine of approx. 340cc. It comes complete with float fed carburettor, manual choke, fuel tank and fuel shut off valve. Includes flywheel, cooling fan, rewind pull chord start, air cleaner and exhaust muffler.

- Tachometer
- Ignition System - Electronic
- Fuel System - Float fed carburettor

DIESEL ENGINE TEST STANDS

P8962 - Cussons Autotrainer Engine Test Stand— Turbo-charged DI Diesel Engine

This Cussons Autotrainer Engine Test Stand is fitted with a turbo charged, fuel injected, in line four stroke, four cylinder, liquid cooled indirect injection diesel engine fitted with fuel injection system of approx. 1.8 litres. It has a starter motor, alternator, water pump, fuel pump, flywheel and flywheel guard. The engine is fitted with a manual rack control.

- Governor - Automotive all speed
- Electrical System - 12 volt negative earth
- Coolant Pump - Centrifugal Impeller
- Thermostat - Wax capsule

P8971 - Cussons Autotrainer Engine Test Stand— Single Cylinder DI Diesel Engine

This Cussons Autotrainer Engine Test Stand is fitted with a naturally aspirated air cooled overhead valve single cylinder four stroke direct injection diesel engine of approx. 400cc. It comes complete with fuel injector, variable speed governor with operating lever and cable, fuel tank including fuel filter. It includes flywheel, cooling fan, 2:1 handle start and decompression lever, air cleaner and exhaust muffler.

- Governor - Centrifugal
- Electrical System - 12 volt negative earth
- Engine Cooling - Flywheel mounted fan

LPG ENGINE TEST STAND

P8980 - Cussons Autotrainer Engine Test Stand— 4 Cylinder LPG Engine

This Cussons Autotrainer Engine Test Stand as specified in the general description is fitted with a naturally aspirated water cooled 4 cylinder in line engine of approx. 1.3 litres for use with LPG. It comes complete with LPG open loop mixer, mechanical governor, exhaust manifold and silencer, air cleaner, ignition module and fuel lift pump.

P8981 Cussons Autotrainer Engine Test Stand— V6 LPG Engine

This Cussons Autotrainer Engine Test Stand as specified in the general description and fitted with a naturally aspirated water cooled 6 cylinder 90° V configuration overhead valve engine of approx. 4.2 litres for use with LPG. It comes complete with LPG open loop mixer, electronic governor, exhaust manifold and silencer, air cleaner and coolant recovery system.

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