

Hydraulic Injector Comparator

HA230



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The Hydraulic Injector Comparator HA230 is a stand-alone machine designed to test hydraulically actuated electronically controlled injectors.

It features a graduate metering system and comprehensive electronic controls, enabling a full range of tests to be performed on up to 4 injectors at a time. The machine incorporates a single test oil supply, temperature controlled, with fuel and hydraulic pressures controlled individually. An additional injector nozzle spray check station enables the injected fuel spray pattern to be viewed by the operator.

Main Features

- Rugged stand alone configuration
- Interlocked injector viewing cover
- Spray check station for nozzle spray pattern analysis
- Full test oil system filtration
- Precision test oil temperature control

Injector Control Features

- Pulse frequency control from 1 to 50Hz (equivalent to 120 to 6000 engine rpm)
- Pulse width control from 0.05 to 3ms (equivalent to injection duration)
- Shot count control from single shot up to 1000 shots, and continuous operation
- Individual line selection on/off
- Setup of complex pulses e.g. pre and main injection
- Specific actuation valve check
- Simple user-friendly display
- Preloaded basic injector parameters
- RS232 interface to cater for future injector types
- Up to 50 user-programmable test setups

Benefits

- Tests up to 4 injectors simultaneously
- Easy to set electronics with full range of test features
- Verifies injector output under controlled conditions
- Rapid set up and operation.
- Effective viewing of the injector nozzle spray pattern.
- Proven graduate calibrator ISO4008 capable

TECHNICAL SPECIFICATION

Drive System	7.5kW test oil system drive motor.
Fuel System	
Low Pressure Supply	Fully variable between 0 – 60 psi (0 – 4 bar).
High Pressure Supply	Fully variable between 300 – 3000psi (20 – 200 bar).
Tank Capacity	15.8 US gallons (60 litres).
Temperature Control	Between 30 and 50°C.
Calibration System	Open top graduates on a turn over plate mounting with 4 by 38ml and 4 by 260ml graduates. Capable to ISO4008 standard.
Other Instrumentation	Analogue gauge, 0 – 80psi (0 – 6 bar). Analogue gauge 0 – 3500psi (0 – 240 bar). Fuel temperature display. Injector control display.
Injector Mounting	The injectors are installed for testing in rigidly mounted injector sleeves. Four sleeves are provided for flow comparison testing. Quick-release clamps retain the injectors. Dummy injectors blank unused injector positions.
Injector Signal Connections	The four signal cables are provided with the machine, and plug directly into numbered outputs on the machine fascia. Each output has a signal LED to help diagnose faulty injector solenoids.
Nozzle Spray Check Station	A single horizontally positioned injector mounting entering an air-extracted, illuminated spray chamber enables the injector nozzle spray pattern to be checked.
Applications	The standard Hydraulic Injector Comparator HA230 configuration is capable of testing the HEUI injector as fitted to the following engines: <ul style="list-style-type: none">• Caterpillar 3126B• 7.3l Powerstroke.• Navistar 444e.• Navistar DT466e.• Navistar DT530e. Hartridge™ is committed to developing additional accessory kits and injector control parameters for further injector types, subject to customer demand.
Installation Requirements	
Electric Power Supply	3 Phase 200-240V 50Hz/60Hz. 3 Phase 380-440V 50Hz.
Compressed Air Supply	90/120psi, 0.2cfm (6 – 8 bar, 2.4l/min).
Cooling Water Supply	2 US gals/min, 70°F max, 60psi pressure.
Machine Footprint	33.5 x 30inches (850 x 770mm).
Test Oil	The Hydraulic Injector Comparator HA230 is designed to be run on single test oil providing both the low and high pressure supplies to the injector. The test oil used therefore needs to have added lubricating properties, and for this purpose Hartridge™ recommends Rock Valley C-3112 Type 2 Calibration Fluid.

Additional Accessories

- HJ037 Isuzu Trooper Fitting Kit

Ordering

HA230.01

3 Phase 200-240V 50Hz/60Hz

3 Phase 380-440V 50Hz

HA230.02

(Canada Only)

Shipping

Gross Weight: 486 kgs

Nett Weight: 380 kgs

Case Size: 120 x 116 x 205 cms

Contact your local **Hartridge™** distributor
for more detailed information or visit

www.hartridge.com

Continuous development is taking place. **Hartridge™** reserves the right to alter the
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HA230 (EN) 07/05



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