



Model 6310/CA

Reciprocating Engine Combustion & Ignition Analyzer

Key Features at a Glance

- Power Cylinder Balancer
- Ignition Analyzer
- On-machine Analysis collecting and displaying real-time data
- Large Mass Data Storage for saving historical data, trending, and machine setups
- High Resolution Color Screen
- Lightweight (6.75 lbs)
- Compact (10.5" x 8.5" x 2" deep)
- Easy-to-use Menu-driven Interface
- Upgradeable Design

What's New

- Double "Enter" keypad for fast data collection and ease of use
- Automatic Poor Combustion and Peak Pressure Limit Count
- Estimated Fuel Savings Calculations
- Automatic Storage of Secondary Ignition Patterns
- Multiple Runs per Day

6310/CA

This rugged, battery-powered instrument provides the mechanic with an efficient and effective method to evaluate and determine secondary ignition system integrity, power cylinder combustion characteristics and peak pressure balance. The data collector/analyzer is packed with powerful features and has a large, backlit color display making the data easy to observe. The menu-driven interface is simple to operate; simply scroll through the menu items, highlight the desired option, and hit the enter key. In fact, by operating in the 6310/CA "lite" mode, a machine can be set up and ready for collecting data within a few minutes. The 6310/CA mode, using the optional encoder, allows crank angle information and calculations such as ignition timing, peak pressure angle and IHP to be acquired.

Power Cylinder Balancer

The Model 6310/CA Power Cylinder balancing function is easy to use and is the most comprehensive instrument available for balancing two-stroke and four-stroke internal combustion engines. The mechanic can select the number of continuous cycles of data from 10 to 250 to be used in the statistical calculations. The graphical display includes two pre-set viewing options, allowing the mechanic the choice of observing only the numerical peak pressure statistical data or adding simulated real-time pressure vs. time graphs for more detailed combustion analysis. On the analyzer, the "As Found" statistical report provides the mechanic with all the necessary combustion information for making the proper adjustments. The "As Left" statistical report conveys the final results of the balancing operation. By using the 6310/CA with the optional encoder, this unique instrument will allow

the mechanic the choice of balancing the engine using Peak Firing Pressure (PFP) with the angle, Mean Effective Pressure (MEP), or Indicated Horsepower (IHP). Cylinder exhaust temperatures can be manually entered via the keypad so a comprehensive report can be generated.

Secondary Ignition Analyzer

The Model 6310/CA secondary ignition analyzing function provides the most efficient, accurate, and comprehensive survey in the industry. Software, incorporating sophisticated algorithms, accurately measure and record parameters such as ionization rise time and voltage, arc duration, and ring-down characteristics automatically while displaying a detailed secondary ignition pattern. The technician can select the number of continuous cycles of data from 10 to 250 to be used in the statistical calculations. The statistical summary reports of the secondary ignition parameters immediately convey the condition of each spark plug, secondary lead, and coil. This unique instrument with the optional encoder allows the technician to measure individual cylinder ignition timing.



Windrock's 6310/CA Combustion Analyzer is the engine mechanic's perfect tool. With large, backlit, color display, comparison analysis and trending is easy to see.

With Addition of Encoder

The 6310/CA can be used to balance the engine using horsepower per cylinder instead of combustion pressure. You may use Peak Firing Pressure with the angle, Mean Effective Pressure, or Indicated Horsepower.

Optional equipment includes:

- shaft encoder kit with timing light and 50-foot encoder cable
- once-per-turn signal conditioner with magnetic pickup

The addition of either of these options allows for a quick check of compressor IHP and acquisition of other crank-angle related data, such as ignition timing and peak pressure angle.

Other data available is:

- Peak Pressure Angle Statistics
- RPM Display
- Engine Performance Report (IHP/IMEP)
- Ignition Statistics vs. Crank Angle Position
- Individual Cylinder Ignition Timing
- Horsepower Calculations
- Peak Pressure Angle Statistics

Power Cylinder Balancer Features

For use in balancing two-stroke and four-stroke internal combustion engines.

- on-machine analysis
- peak pressure statistics
- peak pressure balance
- pressure vs. crank angle pattern
- coefficient of variance
- “As left” report conveys the final results of the balancing operation
- “As found” report provides the combustion information necessary for making the proper adjustments
- cycle number may be set from 10 to 250 for statistical calculations
- manual entry of engine panel readings such as cylinder exhaust temperatures
- 12 pre-defined and 6 user customizable panel points

Secondary Ignition Analyzer Features

Provides eight secondary ignition parameters.

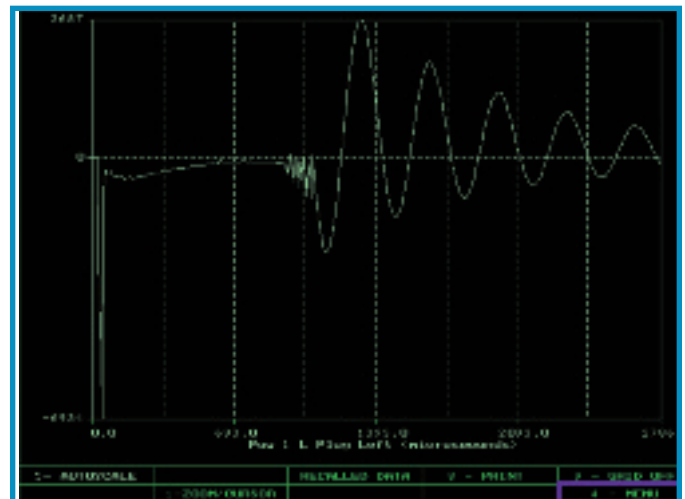
- On-machine analysis
- Secondary Ignition Peak Level Statistics
- Ignition Patterns, such as ionization rise time, arc level and duration, and coil ring-down
- Ignition Summary Report
- Cycle number may be set from 10 to 250 for statistical calculations

Upgradeable Design

Applying upgradeable design criteria, the 6310/CA is the base product in a line of portable Windrock analyzers. Consequently, if your predictive maintenance program requires additional machine data in the future, the 6310/CA can be upgraded to the 6310/MA Maintenance Analyzer or the 6310/PA Performance Analyzer at a fraction of the cost of new equipment.

Windows Software

Windows-based software is provided to easily setup the machinery database for data storage, historical archiving, and trending. Comprehensive statistical reports with graphical displays are accessible, including “As Found” and “As Left” combustion reports as well as eight secondary ignition parameters.



Spark Trace



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