

## 5460 SERIES PORTABLE ENGINE EXHAUST ANALYZERS



### APPLICATIONS

For spot-checking engine exhaust emissions for diesel, gasoline, propane, or natural gas powered 2 and 4 cycle engines. Analysis of carbon monoxide (CO), hydrocarbons (HC's), carbon dioxide (CO<sub>2</sub>), oxygen (O<sub>2</sub>), nitric oxide (NO), nitrogen dioxide (NO<sub>2</sub>), and sulfur dioxide (SO<sub>2</sub>).

### FEATURES

- Same rugged easy-to-use design as traditional Nova portable analyzers, but approx. 65% smaller and 50% lighter
- Fast warm up and accurate response
- Rugged touch-screen display of gas readings
- Solid state infrared detectors for % CO, CO<sub>2</sub>, and HC's
- Electrochemical sensors for O<sub>2</sub>, ppmCO, NO, NO<sub>2</sub>, and SO<sub>2</sub>
- Rechargeable lithium ion battery; up to 8hrs use per charge (recharge from vehicle or from AC adapter)
- Provided with sample filter, and flexible sample probe with 12 ft. of hose, built-in sample pump and automatic condensate removal
- Local USB data logging creates CSV files
- Built-in trouble-shooting prompts
- Meets Bar 97 and ISO 3930/OIML R99, Class O specifications

### OPTIONS

- 4-20mA output in external adaptor
- Built-in printer, with remote print button
- PPM CO in place of % CO measurements for recent engine designs with lower emissions



5460 series with optional printer



Standard engine exhaust probe with flexible tip

### CALIBRATION

- Zero on air
- Span on analyzed calibration gases

## DESCRIPTION

The Nova 5640 Series Portable Engine Exhaust Analyzers are built on the NOVANOW next-generation rugged portable platform. This series has been designed for accuracy, reliability, ease of use and ease of service, providing a detailed spot-check analysis of engine exhaust gas composition. The 5460 uses customer-replaceable electrochemical sensors that respond quickly to the O<sub>2</sub>, ppmCO, NO, NO<sub>2</sub>, and SO<sub>2</sub> present in the exhaust gas sample. The O<sub>2</sub> sensor life expectancy is typically 3-4 years. The CO, NO, NO<sub>2</sub>, and SO<sub>2</sub> sensor life is typically 2-3 years. The infrared CO<sub>2</sub> and HCs sensors should not need to be replaced under normal conditions of use.

A rechargeable lithium ion battery provides enough power for about 8 hours of continuous operation and the analyzer can be used while it is being recharged. The 5460 series integrated case is small but rugged, and dust & water resistant when closed. The 5460 Series Analyzers are complete with built-in sampling pump, flow meter, automatic condensate removal, filters, PTFE liquid blocker, 12 ft. (4m) sampling hose, and stainless steel engine exhaust probe with pre-filter. Also included are a cigarette lighter power plug and remote printer actuator button for printer-equipped models.

## MODELS

- 5461K: any single gas
- 5462K: CO and HC's
- 5463K: CO, CO<sub>2</sub>, and HC's
- 5464K: O<sub>2</sub>, CO, CO<sub>2</sub>, and HC's
- 5465K: O<sub>2</sub>, CO, CO<sub>2</sub>, HC's, and NO<sub>x</sub> (as NO)
- 5466K: O<sub>2</sub>, CO, CO<sub>2</sub>, HC's, and NO & NO<sub>2</sub>

## SPECIFICATIONS

*Nova reserves the right to specification changes which may occur with advances in design without prior notice.*

### Description

#### Method of Detection:

CO (standard range), CO<sub>2</sub>, and HC by infrared detector  
CO (low range), NO, NO<sub>2</sub>, SO<sub>2</sub>, and O<sub>2</sub> by electrochemical sensor.

#### Available Ranges:

0-5.00% / 10.00% CO (standard range)	0-25.0% O <sub>2</sub>
0-2,000 / 5,000 / 10,000 PPM CO (low range)	0-20.0% CO <sub>2</sub>
0-2,000 / 5,000 PPM NO <sub>x</sub> (as NO)	0-800 PPM NO <sub>2</sub>
0-2,000 / 5,000 / 10,000 (as hexane)	0-2,000 PPM SO <sub>2</sub>
0-20,000 PPM HC's (as propane)	

#### Resolution:

0.1% on % ranges, 0.01% on standard range CO, 1 PPM on most PPM ranges

#### Accuracy and Repeatability:

±1% of full scale for O<sub>2</sub>, CO, CO<sub>2</sub>, and HCs; ±2% of full scale for NO<sub>x</sub> and SO<sub>2</sub>

#### Drift:

< ± 1% in 8 hours after full warmup

#### Response Time (T90):

8-10 seconds

#### Ambient Temperature Range:

0 to 40°C

#### Linearity:

±1.0% of full scale each gas measured

#### Size And Weight:

approx. 26 x 18 x 13 cm @ 3.4 kg (10" x 7" x 5" @ 7.5lbs)

#### Power:

115 VAC or 220VAC, 50/60Hz for recharging. Also 12VDC for cigarette lighter socket

#### Optional Outputs:

CSV log files written to USB memory stick



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