

AF-900PC Air/Fuel Ratio Control System

The AF-900PC Air/Fuel Ratio Control System uses an advanced microprocessor-based controller to precisely maintain the air/fuel ratio of naturally aspirated and turbocharged carbureted gaseous fuel engines without the use of pneumatic converters.

Recent findings on pre-catalyst-only air/fuel ratio controllers show inaccurate exhaust emissions due to the system's inability to detect variations in catalyst performance.

The AF-900PC Air/Fuel Ratio Control System, designed by Dynalco's customer-driven research and development team, eliminates this problem.

By using a heated O₂ sensor downstream from the catalytic converter, in addition to the pre-catalyst O₂ sensors upstream (one per bank), the AF-900PC self-compensates for slow changes in operating conditions.

The AF-900PC implements this compensation through an intelligent closed-loop algorithm which provides a smooth control behavior adaptable to changing engine load, speed, fuel quality, ambient temperature/pressure, and catalytic converter conditions.

The AF-900PC is also equipped with intake manifold pressure sensor(s) capability to maintain emissions over an even wider range of engine loads and operating conditions.

Once the AF-900PC system is installed and your laptop is loaded with Dyna-Host software, programming of the system parameters is performed using the soft keys located directly under the LCD. These multi-functional keys assist in navigating through the numerous screen levels on the LCD. The main soft keys are PRE, POST, TEMP, and MAP.

The AF-900PC system monitors the proper operation of all sensor inputs and controller outputs, flagging errors and changing its operating mode when a fault is detected. The system also monitors proper operation of the catalytic converter itself, by checking the temperature differential across the catalytic converter and flagging a system fault if the catalyst's exothermic process is out of tolerance.

Equipped with a powerful onboard data logging feature and real-time clock, the AF-900PC logs controller conditions at a pre-determined time of day or at specific time intervals. This helps the user trouble-shoot hard to catch intermittent system problems by automatically capturing and storing overall system performance data and diagnostic errors over any chosen period of time.



Features

- Powerful data logging feature with real time clock allows time of day or period of time performance analysis
- Pre- and post-catalytic sensor system accounts for variations in catalytic converter performance
- Sensor input, controller output fault detection capability
- Large-character, user-friendly backlit LCD display
- Soft key menus to display most system operating parameters
- Onboard multi-media flash memory card
- Quick and easy laptop configuration; download and upload capabilities
- Intake manifold pressure sensor(s) for additional catalytic setpoint management

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System Components

<u>Part Number</u>	<u>Description</u>	<u>Per Single Bank</u>	<u>Per Dual Bank</u>
AF-900PC	Air/Fuel Ratio Controller	1	1
OXY-200	Pre-Catalyst Oxygen Sensor	1	2
400A-12070	Sensor Cable for OXY-200	1	2
ETC-107	"K" Type Thermocouple	3	4
270L-0007	"K" Thermocouple Extension Wire	150 ft.	200 ft.
237D-100774	Post-Cat Heated Oxygen Sensor	1	1
400A-12064	Sensor Cable for Post-Cat Sensor	1	1
400A-12065	Valve Assembly, Trim Fuel Control	1	2
265A-10083	Manual Shut-Off Valve	1	2
400A-12091	DynaHost Software Diskette Set	1	1
237D-100845	Manifold Air Pressure Sensor with 4/20 mA Output	1	1

Optional System Components (Must be purchased separately)

<u>Part Number</u>	<u>Description</u>	<u>Single Bank</u>	<u>Dual Bank</u>
237D-100845	Manifold Air Pressure Sensor with 4/20 mA Output	0	1
ETC-107	"K" Thermocouple for Manifold Air Temperature	1	2
M-201	Magnetic Pickup for Speed Sensing	1	1
C-101	Pickup Cable for M-201	1	1

