

CHAPTER 10



EDELBROCK PRO-FLO AND ADVANCED PROGRAMMABLE FUEL-INJECTION SYSTEMS

Edelbrock Pro-Flo

COST: Approximately \$2,000

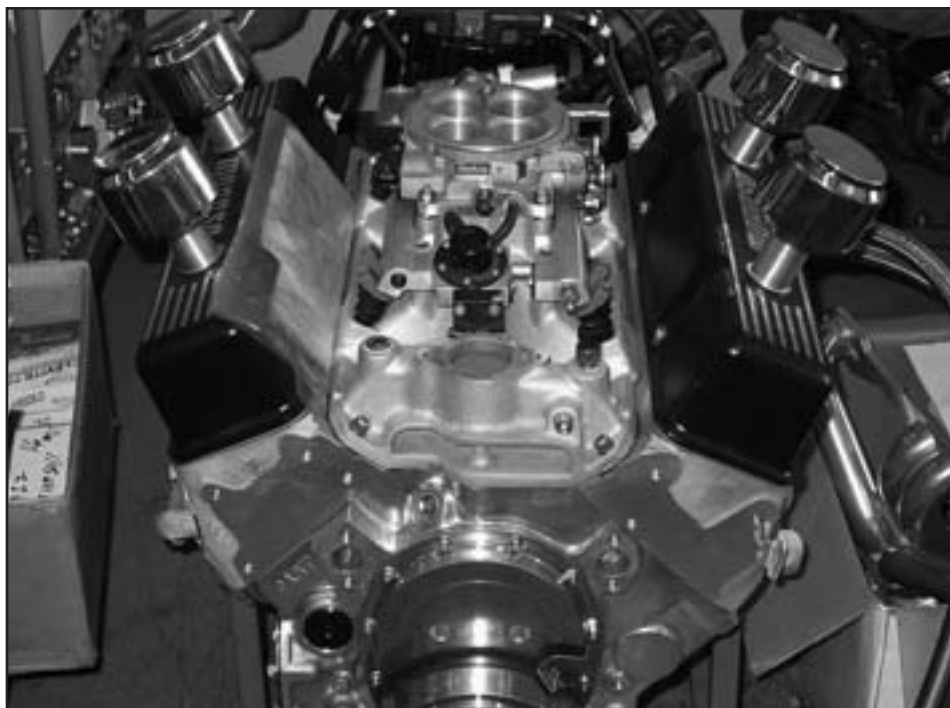
FEATURES: This setup only suits a narrow variety of engines (small- and big-block Chevys and small-block Fords).

EASE OF INSTALLATION AND TUNING: This system is extremely easy to install, very simple to get up and running, and requires no laptop for tuning.

Edelbrock has been around since the 1950s and has continuously been a leader in performance technology and parts manufacturing. Edelbrock has also entered the fuel-injection arena with its new Pro-Flo multi-port fuel-injection system. This has been a great selling system that has worked well for them, but now they have really taken things to the next level with their new Advanced Programmable Fuel-Injection System for small- and big-block Chevrolet engines. It will be available in the spring of 2004.

PRO-FLO

Edelbrock currently makes two models of their Pro-Flo system: the



Edelbrock was one of the first companies to offer complete fuel-injection kits for Chevy engines that included every part needed for installation, including the intake manifold and fuel system. They also allow the user the ability to tune without a laptop computer. Edelbrock's latest offerings from MotoTron look to hold great things for the future of Edelbrock fuel injection.

Performer, and the Performer RPM. They offer complete kits for big- and small-block Chevy and Ford engines, and kits for Chrysler engines are almost ready for release. The Pro-Flo kits are designed for non-emission engines, and

include everything you need to convert a carbureted engine to powerful multi-point fuel injection.

Using a speed-density system for control over fuel and spark, Edelbrock EFI systems give you total

Setting Advance

Whether you are tuning an engine on an engine dyno or a chassis dyno, you should always make sure that it gets tuned to the proper amount of ignition timing. The best way to do this is to use a steady-state holding pattern on the dyno and hold the engine to a specific RPM. Then load the engine to whatever site you wish to tune and record the instantaneous power readings. When you make a change to add or subtract ignition timing, you will normally see a corresponding change in power output.

Using an on-board or aftermarket knock sensor to check for detonation is the easiest way to find the maximum allowable ignition advance. However, if you do not have access to one, there is another way to get pretty close. Advance the timing until maximum power is reached (this is the point where power begins to fall off when more timing is added). From there, back off the ignition advance one or two degrees and set it there.

Once you have made a few hard pulls on the engine at this setting, shut it off and remove the spark plugs. Inspect them for obvious signs of detonation or erosion. Pay careful attention to the J-shaped ground strap. You will notice that somewhere on the strap it begins to change color.

Ideally, when the proper timing is set, there will be enough heat in the combustion chamber to make the color at about the center of the strap look almost rainbow-like. If it changes more out towards the end of the strap, then there is not enough heat, and more advance is needed. Conversely, if the color change is near the bottom where the strap joins the plug, then take some ignition advance out in order to start the burn later and transfer more heat out the exhaust!



Edelbrock currently makes two models of their Pro-Flo system: the Performer and the Performer RPM. Their current offerings suit the entire Chevrolet line of big- and small-block engines and Ford small-block engines with some Chrysler applications coming soon!



Designed for non-emission engines, these high-performance EFI systems include everything you need to convert a carbureted engine to powerful multi-point fuel injection.

engine control — without a laptop computer. The result is excellent throttle response throughout the RPM range, great fuel economy, incredible horsepower, smooth engine operation, and improved cold starting. Using speed and density also simplifies the installation by deleting all of the necessary plumbing and bracketry used in a mass airflow system.

All of their manifold assemblies, air valves, and electronics for the Pro-Flo system are built by Magneti Marelli Powertrain USA, a major QS9000-certified OEM supplier. Components are matched and tested as a set, and then serial numbers are added for quality control.



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Edelbrock EFI systems are shipped without the calibration chip that is necessary to operate the ECU. The user must fill out the camshaft specs on the provided postage-paid card and Edelbrock will send the appropriate chip, free of charge, via second day air. The chip must be installed inside the ECU.

Edelbrock Pro-Flo EFI systems use an exclusive digital Calibration Module. This user-friendly computer allows you to make adjustments at any time right from the driver's seat. You have complete control of the fuel curve, spark advance, and idle speed without a laptop computer. In fact, the fuel and spark curves are infinitely adjustable using a three-dimensional look-up table, with millions of combinations available.

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