# Pro m efi engine management system

JavaScript seems to be disabled in your browser. For the best experience on our site, be sure to turn on Javascript in your browser. Maximum 30 characters. Maximum 10 characters. Maximum characters. It is not a universal harness. It is not an "add-on" harness like you get from the other guys. This harness replaces your existing EFI harness entirely. The Pro-M EFI Powertrain Management system is a Mass Air, sequentially fired, port fuel injection system, with full ignition control, and transmission controls, as well as a host of other features listed below. The Pro-M EFI system provides a combination of drivability and quality typically only found in the OEM, combined with a level of performance typically only found in the aftermarket. It is truly the best of both worlds. All provided in a package so easy to use, most anyone can become their own tuner. We have several different wiring harness configurations made specifically for all Mustangs produced from through The harness can also be used as part of one of our complete EFI conversion packages. You can read about our complete EFI conversion kits here. The customer need only enter some basic information about their specific application. These parameters can also be entered here at Pro-M for an additional fee if the customer desires. This tune will run virtually any engine right out of the box. Tuning is neither required, nor is it recommended. No one else can make this claim. Everything you could ever want in a management system is right here! OEM quality wiring harness. Installs exactly like the original harness, using all the same connectors. Fully laptop programmable. Tune because you want to, not because you need to. Your laptop also acts as a powerful scan tool. New improved calibration tool with multiple user levels. Tuning software so easy and intuitive, most anyone can be a tuner. Now compatible with both PC and Apple! OBD II compatible. Not only does your laptop act as a powerful scan tool, you may also read codes and sensor data using a generic OBD II scan tool. Manual shift option. Use your cruise control buttons Mustangs , or your own switches to manually shift your automatic transmission! Done the right way. No external controller needed. Worlds better than a CD box! Read More. Ignition module problems are a thing of the past! No more failed TFI Modules. No special tuning required for forced induction. Self-protecting PCM. We cannot stress this enough The real beauty of the Pro-M EFI system is that it can be as simplistic, or as sophisticated as you want it to be. It works perfectly right out of the box with some simple data entry, but if you want to tune, you'll have the most powerful tuning software ever offered anywhere by anyone, and OEM quality components that will last a lifetime. If you want the best, look no further. There is simply no other management system that offers the quality, features, reliability, and ease of use that we offer with the Pro-M EFI engine management system, period Want to learn more? Automatic Transmission Controls. Coil On Plug. Flex Fuel system. Fuel Pressure Compensation. Launch Assist. No Lift Shift. Programmable Outputs. Boost Controls. Progressive Nitrous Controls. Traction Control. It is easy to install, simple to use, and allows for customization of virtually every electronically controlled powertrain function. However, tuning is neither required, nor recommended. Tune if you want to, not because you have to. Though this may sound complex, engine management is not as complicated as you may think. The proper value for each of these can only be determined if we have an accurate value for Load. Any other method is just guesswork. Load is simply the air mass being ingested by the engine divided by the engine's potential for air mass. The engine's potential for air mass is calculated using the engine's displacement and the RPM. When using a mass air based engine management system, the ingested air mass is constantly obtained in real-time from the output of the mass airflow sensor. Therein lies the beauty of a mass air system â€" T he single most important values for proper engine control is directly metered by a sensor and not derived from multiple other values. All you need to do is enter the proper information into the calibration: the MAF transfer function, the engine's bore and stroke, and the number of cylinders. Indirectly, yes it does. But that combination of engine parts is going to result in some amount of airflow, which will result in a certain value for Load, and that is what really matters. It does not matter how you get that airflow. All that matters is what you get. It makes no difference what engine you are using. It makes no difference what heads and intake you have, what cam s you use, what you have for an exhaust system, or how many times you decide to change these things. If the PCM knows your displacement, RPM, and your ingested air mass, it knows Loadâ€¦ and if it knows Load, then it can accurately control fueling and spark advance. It is that simpleâ€¦. This is how all OEM systems work. The OEM systems that do not use mass air, generate their volumetric efficiency calculations by mapping out the engine with a mass air meter, then use that to determine Load. They can do this because they use the same engine combination over and over again but understand that every OEM management system uses Load. The OEM method for using Speed Density is obviously not practical in the aftermarket since every engine will be different. Closed Loop means the PCM is monitoring a particular engine variable and comparing it to the desired target. When there is a discrepancy, the PCM will automatically make corrections until the actual monitored value

matches the target. You may be familiar with the closed loop fuel controls used at idle and cruise in factory vehicles equipped with narrow band O2 sensors. The narrow band O2s tell the PCM that the mixture is not correct. Operating in closed loop, the PCM makes a correction to the fueling until the O2s detect an actual ratio of Pro-M EFI uses two wide band O2 sensors One in each bank to provide the most accurate fueling possible under any operating condition. This results in the most accurate fueling calculations in the industry. In addition to fueling, the Pro-M EFI system also utilizes closed loop feedback to precisely control idle speed. No more surging or varying idle speeds as various loads are put on the engine. The PCM constantly monitors actual idle speed, compares it to the target idle speed, then uses both the idle air control valve and spark advance until actual and target match under any condition. OEM level control of an aftermarket add-on. No tuning needed. But if you want to make changes, there is nothing simpler. Again, herein lies the beauty of mass air. We always know exactly where we need to be in the base fuel and base spark tables because we are constantly monitoring actual ingested air mass and using this to calculate Load. Controlling both fuel and spark is as simple as delivering the commanded amount from the cells in the tables that correspond to the Load and RPM at that given instant. There are also modifiers for things like air charge temperature and coolant temperature that will adjust the target fuel and spark as required, but we have those all covered as well. We ship every Pro-M system with all the fuel, spark, and modifier tables written for you. The values provided in those tables will give you the optimum blend of power, drivability, and fuel economy. A proper tune is a blend of all three of these things. But if you'd like to modify those tables to make more, you certainly can. Add or subtract whatever you want from the base fuel and base spark tables. Simple as that Many people who are shopping for engine management systems are doing so because they've spent a lot of money on performance parts hoping to make big power. Now they need something to pull it all together and make it run smoothly and reliably. Roll into a car show or even a gas station in a modified vehicle and what is the number one question you hear? Or if you prefer, you can have a professional tuner do it for you. That includes cold starts, idling, cruising, deceleration€¦ everything. We can control your automatic transmission. We offer helpful features like launch assist and traction control. Why does that matter? Many of those items are available in separate packages in the aftermarket. You can buy a WM system that comes with its own controller. With a separate controller, the engine management system has no idea that the extra fuel methanol is entering the engine. The result is the engine starts running rich from the extra fuel. The OEM doesn't use tricks to control your multi-thousand dollar engine. Neither do we. Because our system is controlling the WM system and commanding an exact flow amount, and because we monitor the actual flow being delivered, we know precisely how much fuel to deliver via the fuel injectors. No tricks On top of that, we use closed loop feedback to ensure that the amount of WM being injected is exactly what is being commanded. The same fully-integrated control concept is applied to all the other features as well. No one else does this€¦. Inferior quality parts can be your worst nightmare. It doesn't matter how fast the car is if you can't keep it out of the garage. For that reason, we use only the finest parts available. It is made on the same assembly line as the Ford ones are. It goes through all the same rigorous testing as the Ford modules. You'd be surprised what they put these through€¦ Our modules share no code whatsoever with the production Ford modules, but our code is written by Ford contractors. You simply cannot do better than that. Why do we do this? We assure you, it's not because they are inexpensive. They are anything but. We do it because they are the best. We have been providing MAF sensors and generating MAF transfer functions virtually since the advent of the technology. No one knows it better. We perform all of our own flow testing and generate all our transfer functions in house right here in the USA. We have a variety of mass airflow meters employing many sizes, shapes and designs. We know what works best in a particular application. We are after all, primarily a mass air meter manufacturer. Our wiring harnesses are constructed right here in the USA with the finest quality components available. Our exact fit powertrain harnesses are made to be exact duplicates of the originals, using all of the same connectors as the original harnesses for a fast and simple installation. These harnesses are assembled then covered in a protective loom, then wrapped in friction tape for good looks and to protect them from damage. Our universal fit harnesses are preassembled, but configurable for use in most any vehicle. These harnesses include protective loom and harness wrap so you can cover them up and protect them after you've configured them as needed. You will not find a better harness. There are two strategies commonly used in engine management. One is Mass Air and the other is Speed Density. Before we get into the differences, we should go over the very basics of engine management so that those who are not at all familiar with these things are up to speed. The time at which this occurs is known as spark advance. Only two of these things are engine management related. The other two Air and Compression are strictly mechanical and are not

controlled by the engine management system. The exception to that rule is electronic throttle control, but that topic is not relevant for the purposes of this article. In a net shell, engine management is simply a matter of providing the proper amount of fuel and providing spark at the proper time. In order to make an intelligent and informed decision about which engine management system you should choose, it is important to understand the methods used to accomplish these things. Those methods are explained below:. It's important to understand that the mass of the air being ingested by the engine is the single most important value necessary to determine how much fuel to supply to the engine and to determine what the spark advance should be. A Mass Air engine management system uses a Mass Air Meter to directly measure the mass of the air being ingested by the engine at any given time. You should also understand that the combination of engine parts is irrelevant when using Mass Air engine management. That combination will result in some amount of air mass. Since that air mass is directly measured, the combination of engine parts that resulted in that air mass simply does not matter. And for this reason, you can change that combination of engine parts as often as you'd like. You can even add a supercharger, or a turbocharger and this rule still applies. It sounds complicated but it isn't. The ingested air mass is simply the reading taken by the mass air meter. It will also determine what your spark advance should be. That's all there is to it. Speed Density systems use a method where manifold vacuum and engine RPM are used to calculate the volume of air being ingested by the engine. That estimated volume of air is then corrected for temperature and pressure. There is much more to it than this, but for the purpose of this article, this explanation will suffice. There are several articles on the web that explain this in greater detail if you care to gain a deeper understanding of speed density. In the OEM, where cost is a major factor, there are obvious cost benefits to not having to install a Mass Air Meter in every vehicle. For that reason, and that reason alone, some OEM manufacturers will use speed density engine management. In an OEM application, speed density makes a lot of sense. Think about how much money they can save by not having to buy millions of mass air meters! The method the OEM manufacturers use to do this is very time consuming and very expensive, but worth it since they can amortize this time over hundreds of thousands of vehicles that are all using the same engine. That last sentence is very important. They will have an entire team of calibrators spend about six months mapping out a specific combination of engine parts in a controlled environment on an engine dyno. They will hold that engine at every possible combination of RPM, throttle position, temperature, and atmospheric pressure and use a mass air meter to record the air mass at each operating point. It is important to understand that the Speed Density systems used in the OEM still use load for their fueling and spark advance calculations. They call this speed density, but a mass air meter was used to generate the data needed. This method works quite well, but you obviously cannot justify doing this in the aftermarket. In the aftermarket, every engine is different. You can't justify the time, even if you had access to the equipment necessary to do this. Not for one engineâ€¦ For this reason, this version of speed density is not applicable to the aftermarket but is important to understand how this is done. While much better than the old methods, due to the significant savings in the amount of time spent tuning these, the simple truth is that it is just a faster method to get to the same old incorrect result. The process Here is the problemâ€¦ Where do you come up with those values? The answer? You guess until it runs. Idle is simple. Experiment from there. Wide open throttle is a bit more involved but still simple. You experiment with values on the dyno until it makes max power. Not complicated but time consuming and expensive. The rest, which is everything in between, is just a bunch of guess work until you get it to run reasonably well. Understand that there are too many possible scenarios to ever get this anywhere near as good as it would be using a mass air engine management system. The simple truth is that everything in between idle and wide-open throttle is where you spend There is no such thing as self-tuning. How about spark advance? Speed Density offers you nothing to use to come up with proper spark advance values. Understand that spark advance is half the battle, and all you can do is guess. You should also know that speed density systems work poorly with aggressive camshafts. Aggressive cams produce little vacuum and therefor little for the MAP sensor to work with. Additionally, speed density systems need to be re-tuned every time you make a change to the engine. Even a small change. Not so great for you. There are two reasons why an aftermarket EFI manufacturer wants to sell you a speed density system. Neither of them benefits the customer. First, they are less expensive to manufacture. Second, they put the burden of getting your engine to run properly on the end user. If you want to know what the temperature is inside your house, which of these methods would you choose? As ridiculous as option 2 sounds, this is no different than using speed density. You would of course measure the temperature with a thermometer. It can beâ€¦ Much like your intake manifold, or your throttle body, or your air cleaner can be a restriction if you choose the wrong one. If that is not enough,

then we can use two of them! No, we're not talking about the throttle body stuff. Those systems aren't even worth buying, but that's a whole other conversation. Compare the initial cost of our system to any of the decent ones out there and you'll see it is about the same. But the Pro-M EFI system is much easier to install, much easier to use, has worlds better technical support, and will save you thousands in money spent at the dyno. In the end, our system will cost you much less than what the others do and will give you much better results. You are obviously buying an engine management system to make your engine run well, make power, and provide the best fuel economy possible. Items 1 to 10 of 18 total. What Engine Are You Using? What is Your Engine's Cylinder Bore? What is Your Engine's Stroke? What is your Rear Differential Gear Ratio? What is your Rear Tire Size? Are You Using a Power Adder? Please email the mass air meter transfer data to support promracing. Please make sure to include your order number. What Transmission are you Using? Please type the name of the transmission you are using Maximum characters. Which distributor are you using? Add to Cart. Add to Wish List Add to Compare. Skip to the end of the images gallery. Skip to the beginning of the images gallery. Made side by side with the OEM's. No one else does this! Store an unlimited number of tunes. Tune on the fly and see the results immediately. Flex Fuel. Done the right way! Easily make big power on E85! Traction control. Intergraded into the PCM! No parts to buy! Launch assist. Fully programmable progressive nitrous controls. No external controller needed! Individual cylinder tuning. Able to run two Mass Air Meters simultaneously. No limit to the amount of power you can make! Easy, user adjustable two stage Rev Limiter. Cut fuel or spark or both. T Reverse lockout control. Adaptive fuel control. Adaptive idle controls. Fuel pressure compensation. Fuel pressure warning. Electric cooling fan control with Soft Start feature. Cooling fan cool down feature. User programmable outputs. Saves fuel! Advanced data logging feature built into the software. Automatic updates for the calibration tool and user manuals. More Information. More Information Featured Yes. Want to Learn More? Use only top quality components. We will touch on each of these below. No one else does thisâ€ 5 Pro-M uses and endorses only the very best components for its engine management systems. Probably most importantly, you need to be capable of following directions and working methodically. If you prefer to have the work done for you, then anyone meeting the requirements above can perform the work. It does not need to be a shop. This question originated back in the days when the Fox Body Mustangs came equipped from the factory with a very small Mass Air Meter that couldn't support much more than the stock engine. Is a mass airflow meter a restriction? My car has some mechanical problems. Is that going to be an issue? Most likely, yes. Proper drivability is dependent on the components in your car operating as they should. You make your system sound like the greatest thing out there. Is it too good to be true? We honestly believe that no other system currently available will be able to deliver the OEM level of drivability and quality that we offer. The truth is technology is advancing all the time. Pro-M constantly strives to take advantage of new technology and develop new components and software that will make what we think is already the best even better. We release updates and add new features on a constant basis, often at no extra charge to pre-existing customers. Let us know! Mass Air vs Speed Density. For an engine to run, you must have four things. A simple analogy. How about cost? A final thoughtâ€ You are obviously buying an engine management system to make your engine run well, make power, and provide the best fuel economy possible. Featured Products. Related Products. Check items to add to the cart or select all. Because of the way this has grown and the vast number of options out there now, it can sometimes be a little overwhelming to determine which MegaSquirt EFI System is the best choice for your project. This page aims to fix that. Please read on. The MegaSquirtPNP systems just plug in and are ready to rock in minutes, with a complete base map to get the car running at the first turn of the key and are then ready for fine tuning to fit the vehicles unique modifications. Would you prefer to spend less money and not mind putting in a bit more work? Do you enjoy the satisfaction of working on your own car? If you love the pride that comes from knowing you built everything on the car you can even get a kit to build your own ECU from a circuit board and bags of parts! These DIY EFI kits continue to be extremely good sellers and customers have some incredible results running these systems they built themselves! Without a doubt though, when you put that effort into your system your results will be incredible and at the same time less expensive than pretty much any other engine management system option available. We offer a number of ready to wire-in Engine Management Systems that in many cases will work for you right out of the box. You want something you can just take out of the box and have it work. Tune it right. Tune it for less. Tune it Yourself. Website built by Creative Combustion. We are open and shipping! Hi, Guest! Welcome Guest Login Register. Confused by all the options out there? Start here to determine which ECU fits your needs. At first glance, what do you think interests you most? MicroSquirt with 8' Harness. Sign-up Now. Keep up with us. Create a new list. This product is

intended for off-road use only, and is not legal for use in emission restrictive states. Off-Road Disclaimer. Limited Warranty - Click Here. Ford Mustang - 94 - Upload a Photo. Ships from supplier by Monday, March This product cannot be sold or shipped to the state of California. More Details. Add to Wishlist Call to Order. This item is not eligible for discounts or coupon codes. The kit features factory style connectors for a direct replacement bolt on system. There is no need to buy anything else when purchasing this engine management system, no spark controllers, no Boost Timing Module BTM , no nitrous controller. Simply download and fill out the tuner form below to get your custom tune created! Store Unlimited Number of Tunes No more towing your Mustang to the dyno as you can write and re-write the processor as many times as you'd like. This software has a feature that copies the existing tune to another file, then runs the engine on that copy. You will then be able to modify the copy any way you'd like on the fly and instantly see the results! This allows you to modify your tune without actually modifying your tune. If you like the results, then save it as your new tune and if you don't like it simply switch back to the original tune! For crisp visibility, this wideband offers an OLED display that is user configurable allowing you multiple options on how you want to display the data. Application -Fits Mustang This product is intended for off-road use only, and is not legal for use in emission restrictive states. Tune Form Download the pdf. Customer Photos 0 Upload a Photo. Vehicle Applications Ford Mustang - 94 - Pro-M quickly became the most respected name in the industry, offering the only real practical solution to the restrictive production mass air meters found in most of today's production Mustangs. We manufacture mass air meters in various sizes, shapes, and styles, as both direct bolt-in replacements, and in universal designs, to maximize your engine's horsepower potential, by allowing your engine to breathe to its fullest potential. Each mass air meter is individually calibrated specifically for you Mustang or Lighting application on one of our in-house flow benches specific to your particular application, and fuel injector size, eliminating the need for time consuming and expensive dyno tuning. Others make claims, but only Pro-M Racing possesses both the intellectual and physical properties necessary to calibrate your mass air meter to within two percent of what the OEM considers the perfect baseline. By uploading an image, you agree to give LMR. This product is intended for off-road use only, and is not legal for use in emission restrictive states. Off-Road Disclaimer. Limited Warranty - Click Here. Check out our YouTube channel for even more tech tips, installation videos, how-tos, and more. The best place to go for anything Mustang related! Ford Mustang - 87 - 88 - Upload a Photo. Ships from supplier by Monday, March This product cannot be sold or shipped to the state of California. More Details. Add to Wishlist Call to Order. This item is not eligible for discounts or coupon codes. With a fully programmable Pro-M EFI processor, tuning software, and a Foxbody specific engine management harness, this kit helps increase horsepower and engine efficiency. The kit features factory style connectors for a direct replacement bolt on system. There is no need to buy anything else when purchasing this engine management system, no spark controllers, no Boost Timing Module BTM , no nitrous controller. Simply download and fill out the tuner form below to get your custom tune created! Store Unlimited Number of Tunes No more towing your Mustang to the dyno as you can write and re-write the processor as many times as you'd like. This software has a feature that copies the existing tune to another file, then runs the engine on that copy. You will then be able to modify the copy any way you'd like on the fly and instantly see the results! This allows you to modify your tune without actually modifying your tune. If you like the results, then save it as your new tune and if you don't like it simply switch back to the original tune! For crisp visibility, this wideband offers an OLED display that is user-configurable allowing you multiple options on how you want to display the data. Tune Form Download the pdf. More videos of this product! Published on Easier Engine Management. With a fully programmable Pro-M EFI processor, tuning software, and a Foxbody specific engine management harness, this kit helps increase horsepower a nd engine efficiency. Store Unlimited Number of Tunes. No more towing your Mustang to the dyno as you can write and re-write the processor as many times as you'd like. For crisp visibility, this wideband offers an OLED display that is user configurable allowing you multiple options on how you want to display the data. Published on This will be a very exciting and information-packed three-part series covering the installation process on Pro-M's EFI engine management system! We will cover the removal of the factory harness, the installation of the new harness, as well as show you some very basics within the tuning software. Enj oy! Easier Engine Management. Customer Photos 0 Upload a Photo. Vehicle

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Applications Ford Mustang - 87 - 88 - Pro-M quickly became the most respected name in the

industry, offering the only real practical solution to the restrictive production mass air meters found in most of today's production Mustangs. We manufacture mass air meters in various sizes, shapes, and styles, as both direct bolt-in replacements, and in universal designs, to maximize your engine's horsepower potential, by allowing your engine to breathe to its fullest potential. Each mass air meter is individually calibrated specifically for you Mustang or Lighting application on one of our in-house flow benches specific to your particular application, and fuel injector size, eliminating the need for time consuming and expensive dyno tuning. Others make claims, but only Pro-M Racing possesses both the intellectual and physical properties necessary to calibrate your mass air meter to within two percent of what the OEM considers the perfect baseline. By uploading an image, you agree to give LMR.