

**2015 PARTS CATALOG** 

FUEL DELIVERY SYSTEMS FOR CARBURETED AND FUEL INJECTED ENGINES





SINCE 1995, MAGNAFUEL HAS DESIGNED AND MANUFACTURED PREMIUM, LONG-LASTING, DURABLE, HIGH-PERFORMANCE FUEL SYSTEMS. MAGNAFUEL PRODUCTS CONTINUE TO BE DEVELOPED IN CLOSE ASSOCIATION WITH PROFESSIONAL RACERS. WHEN YOU PURCHASE A MAGNAFUEL FUEL SYSTEM, YOU REAP THE BENEFITS FROM THE WORK OF THOSE SUCH AS WARREN JOHNSON, KURT JOHNSON, GREG ANDERSON, JASON LINE, GREG STANFIELD, RICK JONES, V. GAINES AND MANY OTHERS.

WHEN KURT JOHNSON BECAME THE FIRST NHRA DRIVER TO ENTER THE SIX-SECOND CLUB, HE DID IT WITH A MAGNAFUEL RACING FUEL SYSTEM. AS A MATTER OF FACT, A MAGNAFUEL FUEL SYSTEM WAS ONBOARD FOR EVERY 200 MPH PASS WARREN AND KURT JOHNSON EVER MADE. NOW, MAGNAFUEL RACING FUEL SYSTEMS ARE INSTALLED ON EVERYTHING FROM SPEEDBOATS TO HILL-CLIMB TRUCKS.

MAGNAFUEL IS ABLE TO DELIVER HIGH-END FEATURES AND RACE-PROVEN DURABILITY IN A SYSTEM THAT'S AFFORDABLE TO ALL RACERS, STREET TO PRO. MAGNAFUEL TESTS EVERY PUMP AND REGULATOR FOR PRESSURE AND VOLUME. ALL MAGNAFUEL PUMPS AND REGULATORS ARE SERIALIZED AND MARKED WITH THE LOGO AND NAME. IF IT DOESN'T SAY MAGNAFUEL, IT ISN'T A MAGNAFUEL PRODUCT.

WHEN YOU BUY A MAGNAFUEL FUEL SYSTEM, YOU GET A LOT MORE PERFORMANCE FOR YOUR RACING INVESTMENT.





### SWIVELING ELECTRIC GEAR PUMPS

#### **ProStar EFI Series**

Engine Horsepower: up to 2,500+1

First electric gear pump on the market.
Swivel adapter allows more mounting options.

- Swivel pump head allows more mounting freedom
- First electric motor gear pump to supply 2,500+ HP
- · Provides highest volume at highest pressure... Period
- Great performance for the high volume and pressure demands of supercharged and turbo-charged applications
- · Never requires voltage reduction devices due to high quality motor construction
- Powered by the same motor as the race proven MagnaFuel ProStar 500
- · Compatible with alcohol and gasoline racing fuels
- · Hand assembled to the highest quality standards
- Pump bodies computer machined out of high quality 6061-T6 Billet Aluminum
- · Flow tested to ensure maximum performance
- All MagnaFuel pumps are totally rebuildable to "As New" factory specifications
- · Durable hardened steel wear plates for smooth, quiet operation
- Designed for 12 or 16-volt applications





Model	Part No.	Horsepower <sup>1</sup>	Pressure	Amps @ 12.5V	Ports <sup>2</sup>	Dimensions	Weight
ProStar EFI 750	MP-4703 MP-4703-BLK	2,500+	20 to 120 psi	17A @ 45psi	#10 AN (inlets and outlets)	9.5″L x 3″W x 3″H	6.5 lbs
ProStar EFI 625	MP-4701 MP-4701-BLK	2,000+	20 to 120 psi	15A @ 45psi	#10 AN (inlets and outlets)	9.5″L x 3″W x 3″H	6.5 lbs
ProStar EFI 525	MP-4702 MP-4702-BLK	1,500+	20 to 120 psi	12A @ 45psi	#10 AN (inlets and outlets)	9.5″L x 3″W x 3″H	6.5 lbs

<sup>&</sup>lt;sup>1</sup> Power ratings are for naturally aspirated engines running gasoline. <sup>2</sup>Fittings not included. Some products legal for racing only; never to be used on public roads or emission-controlled vehicles.

### **ELECTRIC GEAR PUMPS**

#### **ProStar EFI SQ Series**

Engine Horsepower: up to 2,500+1

One-piece design is more compact and lightweight.



- · Compact design fits in smaller spaces
- First electric motor gear pump to supply 2,500+ HP
- Provides highest volume at highest pressure. Period
- Great performance for the high volume and pressure demands of supercharged and turbo-charged applications
- Never requires voltage reduction devices due to high quality motor construction
- Powered by the same motor as the race proven MagnaFuel ProStar 500
- · Compatible with alcohol and gasoline racing fuels
- · Hand assembled to the highest quality standards
- Pump bodies computer machined out of high quality 6061-T6 Billet Aluminum
- Flow tested to ensure maximum performance
- All MagnaFuel pumps are rebuildable to "as-new" factory specifications
- Durable hardened steel wear plates for smooth, quiet operation
- Designed for 12 or 16-volt applications.



ProStar Swivel ProStar SQ Fixed

Fixed-head pump (right) is much more compact to fit in tighter spaces. <sup>2</sup>Fittings not included.

Model	Part No.	Horsepower <sup>1</sup>	Pressure	Amps @ 12.5V	Ports <sup>2</sup>	Dimensions	Weight
ProStar EFI SQ 750	MP-4103 MP-4103-BLK	2,500+	20 to 120 psi	17A @ 45psi	#10 AN (inlets and outlets)	8"L x 3"Dia.	5.5 lbs.
ProStar EFI SQ 625	MP-4101 MP-4101-BLK	2,000+	20 to 120 psi	15A @ 45psi	#10 AN (inlets and outlets)	8"L x 3"Dia.	5.5 lbs.
ProStar EFI SQ 525	MP-4102 MP-4102-BLK	1,500+	20 to 120 psi	12A @ 45psi	#10 AN (inlets and outlets)	8"L x 3"Dia.	5.5 lbs.

¹ Power ratings are for naturally aspirated engines running gasoline. ²Fittings not included. Some products legal for racing only; never to be used on public roads or emission-controlled vehicles.

IN-LINE PUMPS



MagnaFuel is the first pump manufacturer to bring the efficiency, reliability and durability of a gear pump to in-line pumps.

- · Ideal for street muscle cars
- Quiet operation
- Self priming
- · Continuous duty
- · No pump shaft seals, no leaks
- · Pump body CNC machined aircraft aluminum
- · High-torque custom motor with very low current draw. Never requires stepdown
- · More efficient than other motors
- · Double support bearings
- · Rebuildable to as-new condition
- · Compact design to fit in tight spaces
- Smaller than competitive pumps, lower current draw, more powerful
- · Hard anodized, long lasting finish
- . Mounting bracket included
- · Vertical or horizontal mount
- · Durable hardened steel wear plates for smooth, quiet operation
- · Optional bypass available for carbureted applications

Model	Part No.	Horsepower <sup>1</sup>	Pressure	Amps @ 12.5V	Ports <sup>2</sup>	Dimensions	Weight
ProTuner 750	MP-4303	2,000+	20 to 120 psi	14A @ 45psi	#8 AN (inlets and outlets)	7"L x 3"Dia.	4.5 lbs
ProTuner 625	MP-4301	1,500+	20 to 120 psi	12A @ 45psi	#8 AN (inlets and outlets)	7"L x 3"Dia.	4.5 lbs
ProTuner 525	MP-4302	1,000+	20 to 120 psi	10A @ 45psi	#8 AN (inlets and outlets)	7"L x 3"Dia	4.5 lbs

<sup>&</sup>lt;sup>1</sup> Power ratings are for naturally aspirated engines running gasoline. <sup>2</sup>Fittings not included. Some products legal for racing only; never to be used on public roads or emission-controlled vehicles.



Jam-nut design allows you to position the bypass at any angle. Bypass connects to output port on the top of the pump.



<sup>2</sup>Fittings not included.

### BELT-DRIVEN PUMPS



- . Tighter tolerances for easy priming, quick and reliable starts
- Flow rates up to 10.5 gpm at 100psi for engines with high-volume fuel demands, such as alcohol
- · Compact, ultralight design
- Standard 3/8" Hex drive for use with existing devices (belt, cam or oil pump)
- High-performance gear pump is more durable and requires less maintenance than other designs
- CNC machined body, with hard-anodized finish is compatible with gas, methanol and ethanol
- Double-support bearings, ground-steel shafts, precision lapped gears
- Durable hardened steel wear plates for smooth, quiet operation
- · Field serviceable with available rebuild kits
- Absolutely eliminates fuel starvation
- Increases fuel volume delivery as engine RPM increases
- Each pump is flow tested to ensure optimum performance and shipped ready-to-run
- · Requires bypassing regulator for EFI applications
- Bracket and cog pulley not included

Model Part No. Rail Pressure Ports<sup>2</sup> Up to 150 psi ProOutlaw 1000 MP-4205 10.5 gpm @ 4,000 RPM #10 AN MP-4205-BLK (inlets and outlets) ProOutlaw 750 MP-4204 Up to 150 psi 8 gpm @ 4,000 RPM #10 AN MP-4204-BLK (inlets and outlets) Outlaw 750 MP-4203 Up to 150 psi 7 gpm @ 4,000 RPM #10 AN MP-4203-BLK (inlets and outlets) Outlaw 625 MP-4201 Up to 150 psi 6 gpm @ 4,000 RPM #10 AN MP-4201-BLK (inlets and outlets) Outlaw 525 MP-4202 Up to 150 psi 5 gpm @ 4,000 RPM #10 AN MP-4202-BLK (inlets and outlets)

Belt drive with industry standard coupling for instant switch to high performance.



Outlaw MP-4203







Industry-standard belt-drive coupling



<sup>2</sup>Fittings not included.

<sup>&</sup>lt;sup>1</sup> Power ratings are for naturally aspirated engines running gasoline. <sup>2</sup>Fittings not included. Some products legal for racing only; never to be used on public roads or emission-controlled vehicles.



- Unique guided-metering valve assembly provides accurate metering of fuel flow
- MagnaFuel EFI Regulators provide the most stable platform for fuel delivery in the performance industry
- Maintains steady fuel flow during times of sudden changes in fuel demands, such as initial launch, gear change and nitrous oxide application
- Designed for use with the MagnaFuel EFI gear pumps
- Regulators available in two different body sizes and two different spring combinations to suit your fuel flow at pressure specifications
- Each Regulator has 1/8" NPT gauge port, standard filtered vent fitting or boost reference fitting (1:1 compensation ratio)
- Special fittings and adapters available for most applications
- All MagnaFuel Regulators are hand assembled to the highest quality standards
- MagnaFuel Regulators are compatible with racing gasoline and alcohol fuels
- Billet body precision CNC-machined from aircraft-quality aluminum and hard anodized for extra long service life
- · Completely user-serviceable, with ready to order replacement parts

# **EFI REGULATORS**



QuickStar EFI and ProStar EFI mounting brackets

**ProStar EFI** MP-9950-B-BLK



QuickStar EFI MP-9925-BLK



Mounting bracket MP-9950-16



**ProStar 4 EFI** MP-9940





Boost fitting

Model	Part No.	Description	Horsepower	Pressure	Ports <sup>1</sup>
ProStar 4 EFI	MP-9940 MP-9940-BLK	Four-port EFI Regulator	2,000	35–85 psi	4 x #8 AN, 1 x #8 AN return
ProStar 4 EFI	MP-9940-B MP-9940-B-BLK	Four-port EFI Regulator w/ 1:1 Boost Reference	2,000+	35–85 psi	4 x #8 AN, 1 x #8 AN return
ProStar EFI	MP-9950 MP-9950-BLK	Large Two-port EFI Regulator	2,000	35–85 psi	2 x #8 AN, 1 x #8 AN return
ProStar EFI	MP-9950-B MP-9950-B-BLK	Large Two-port EFI Regulator w/ 1:1 Boost Reference	2,000	35–85 psi	2 x #8 AN, 1 x #8 AN return
ProStar EFI	MP-9950-C MP-9950-C-BLK	Large Two-port EFI Bypassing Regulator	2,000	18–50 psi	2 x #8 AN, 1 x #8 AN return
QuickStar EFI	MP-9925 MP-9925-BLK	Two-port EFI Regulator	700	35–85 psi	2 x #8 AN, 1 x #6 AN return
QuickStar EFI	MP-9925-B MP-9925-B-BLK	Two-port EFI Regulator w/ 1:1 Boost Reference	700	35–85 psi	2 x #8 AN, 1 x #6 AN return
QuickStar EFI	MP-9925-C MP-9925-C-BLK	Two-port EFI Bypassing Regulator	700	18–50 psi	2 x #8 AN, 1 x #6 AN return

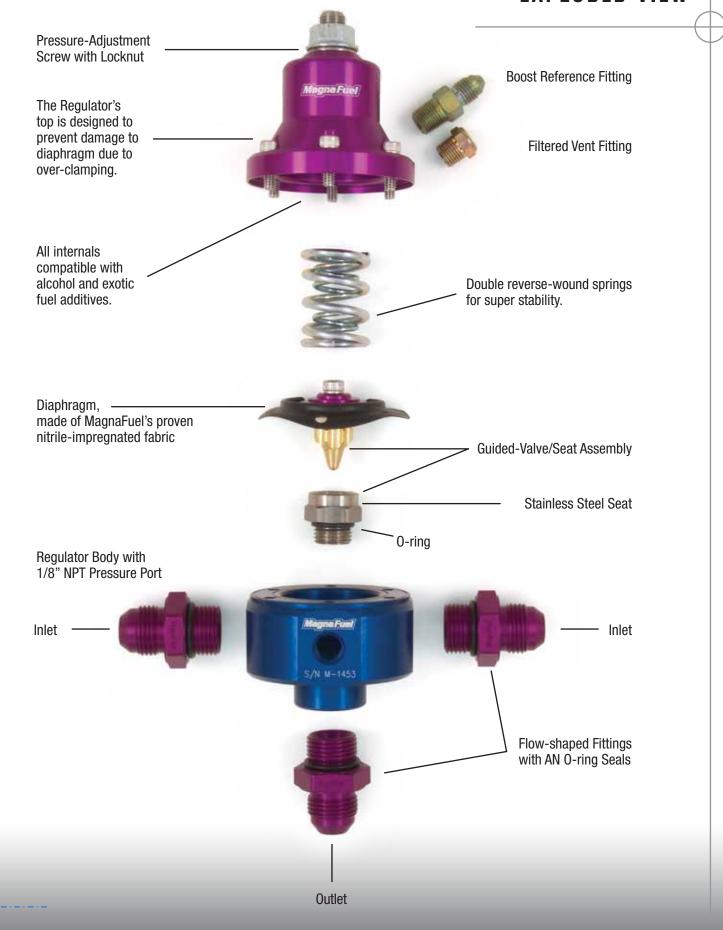
ProStar EFI MP-9950-BLK



Filter fitting

¹Fittings not included.
Some products legal for racing only; never to be used on public roads or emission-controlled vehicles.

### **EXPLODED VIEW**



### CARBURETED PUMPS



Engine Horsepower: 2,000+1 at 28 psi

The classic: high volume at rated pressure.

- · High performance when rated at flow vs. pressure
- External by-pass to eliminate pump cavitations
- Instantaneous compensation for sudden changes in fuel demand
- Consistent, reliable fuel supply for optimum carburetor performance
- Compatible with both alcohol and gasoline racing fuels
- Light weight
- . Hand assembled to the highest quality standards
- Pump bodies computer machined out of high quality 6061 Aluminum
- Custom built low amperage motors the best in the industry
- Compatible with 12- and 16-V electrical systems
- . No metal to metal contact for reduced wear and greater reliability
- · Blades self-compensating for wear
- Flow tested to ensure maximum performance
- All MagnaFuel pumps are rebuildable to "as-new" factory specifications
- . Designed for 12 or 16-volt applications



Model No.	Part No.	Horsepower <sup>1</sup>	Pressure	Amps @ 12.5V	Ports <sup>2</sup>	Dimensions	Weight
ProStar 500 with Filter	MP-4450	2,000	25–36 psi	13A @ 28 psi	2 x #12 in and out, #8 bypass	8¼ x 3 x 7"	8 lbs.
ProStar 500	MP-4401	2,000	25–36 psi	13A @ 28 psi	2 x #12 in and out, #8 bypass	5¾ x 3 x 7"	7 lbs.
QuickStar 300 with Filter	MP-4650	950	25–36 psi	10A @ 25 psi	2 x #10 in and out, #8 bypass	8 x 3 x 6¾"	8 lbs.
QuickStar 300	MP-4601	950	25–36 psi	10A @ 25 psi	2 x #10 in and out, #8 bypass	5 x 3 x 6¾"	7 lbs.
QucikStar 275 with Filter	MP-4550	750	18 psi	8A @ 18 psi	2 x #10 in and out, #8 bypass	8 x 3½ x 6½"	7 lbs.
QuickStar 275	MP-4501	750	18 psi	8A @ 18 psi	2 x #10 in and out, #8 bypass	5 x 3½ x 6½"	5.5 lbs.

<sup>&</sup>lt;sup>1</sup> Power ratings are for naturally aspirated engines running gasoline. <sup>2</sup>Fittings not included. Some products legal for racing only; never to be used on public roads or emission-controlled vehicles.

# NEW BODY DESIGNS

### CARBURETED PUMPS





Photo by SRA PHOTO



### CARBURETED REGULATORS



#### **Carbureted Regulators**

Engine Horsepower: up to 2,000+1

Fast response, low maintenance.

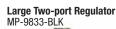
- MagnaFuel unique cartridge design provides the most stable platform for fuel delivery in the performance industry
- Durable metal to metal seat for instantaneous response and low maintenance
- · Two and four-port configurations available
- 1/8" NPT gauge ports on all models
- Boost-reference models provide a 1:1 compensation ratio
- Suitable for drag racing, circle track, road racing, mud bog, power boat, tractor pulling
- · Adjustable base pressure
- Machined from billet aircraft aluminum and anodized for long lasting finish
- · Precise pressure control

#### All Regulators available in standard blue/purple or black.

Part No.	Description	Horsepower	Pressure	Ports <sup>1</sup>
MP-9945 MP-9945-BLK	Bypass Carbureted Regulator	2,000+	3-12 psi	5 x #8 in/out, 1 x #10 return
MP-9433 MP-9433-BLK	4-port Regulator	1,600+	4–12 psi	1 x #10 in, 4 x #6 out
MP-9433-B MP-9433-B-BLK	4-port Boost Reference Regulator	1,600+	4–12 psi	1 x #10 in, 4 x #6 out
MP-9450 MP-9450-BLK	4-port Flow-Thru Regulator	1,600+	4–12 psi	1 x #10 in, 4 x #6 out
MP-9633 MP-9633-BLK	2-port Regulator	750+	4–12 psi	1 x #10 in, 2 x #6 out
MP-9650 MP-9650-BLK	2-port Nitrous Regulator	750+	4–12 psi	1 x #10 in, 2 x #6 out
MP-9690 MP-9690-BLK	2-port Boost Reference Regulator	750+	4–12 psi	1 x #10 in, 2 x #6 out
MP-9833 MP-9833-BLK	Large 2-port Regulator	1,600+	4–12 psi	1 x #10 in, 2 x #8 out
MP-9833-B MP-9833-B-BLK	Large 2-port Boost Reference Regulator	1,600+	4–12 psi	1 x #10 in, 2 x #8 out
MP-9850 MP-9850-BLK	Large 2-port Flow-Thru Regulator	1,600+	4–12 psi	1 x #10 in, 2 x #8 out

<sup>1</sup>Fittings not included.

Some products legal for racing only; never to be used on public roads or emission-controlled vehicles.





Five - port Bypass Carbureted Regulator MP-9945-BLK



Two-port Nitrous Regulator MP-9650



Two-port Boost Reference Regulator MP-9690



### EXPLODED VIEW





#### **Original Cartridge Design:**

The high-performance MagnaFuel cartridge design is easy to adjust, maintain and repair. Just remove the fasteners and you can check or replace the internal cartridge without removing the regulator body from hoses and mounting bracket.

The top and body are made of computer-machined aluminum. The internal cartridge is custom-machined stainless steel.



The Regulator's top is designed to prevent damage to diaphragm due to over-clamping



Special-wound heat-treated stainless steel adjustment spring

#### Special Design, Lightweight Spring Cup.

Diaphragm, made of the highest quality nitrile-impregnated fabric.

> Regulator Body with 1/8" NPT Pressure Port

# Setting Pressure All pressure adjustments should be made while

Regulator is in a flowing condition (motor running at 1,800-2,000 RPM).

MagnaFuel's unique cartridge design simplifies maintenance by eliminating alignment problems.



Outlet



tagna Fuel



Outlet



Optional boost reference fitting provides a 1:1 pressure compensation ratio.



Flow-shaped fittings with AN 0-ring seals



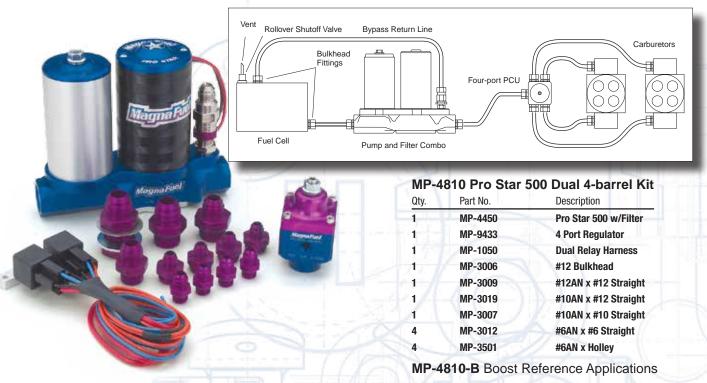
All carbureted regulators include CNC-machined, hard-anodized mounting bracket that attaches to the rear of the regulator.



Inlet

MagnaFuel's flow-shaped fittings reduce restrictions in the fuel flow.

#### **Dual Four-barrel Carburetor up to 1,600 hp**

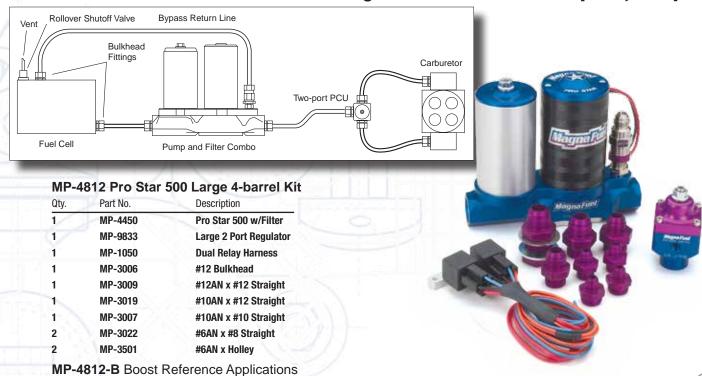


Carburetor

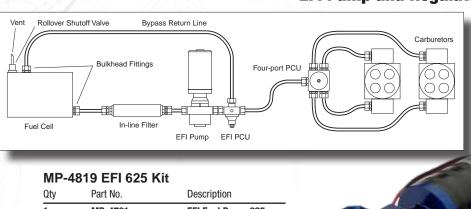
#### Single Four-barrel Carburetor up to 750 hp



### Single Four-barrel Carburetor up to 1,600 hp

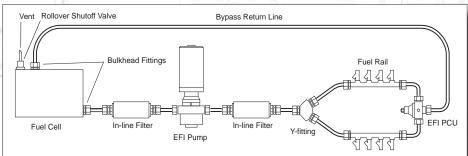


#### **EFI Pump and Regulator for ProStock Carburetor**



MP-4	MP-4819 EFI 625 Kit					
Qty	Part No.	Description				
1	MP-4701	EFI Fuel Pump 625				
1	MP-9950-C	Large 2 Port EFI Regulator				
1	MP-3006	#12 Bulkhead				
3	MP-3005	#12F X #10S				
1	MP-3007	#10F X #10S				
1	MP-7009	Medium In-Line PreFilter 74 Micr				
1	MP-3028	#10 X #8 Coupler				
1	MP-3013	#8F X #8S				
1	MP-3016	#10F X #8S				
1	MP-9433	.33" 4 Port Regulator				
4	MP-3012	#6F X #6S				
4	MP-3501	#6F x Holley				

#### Fuel-injection with Swivel Pump Head for 1,000+ hp





#### MP-4813 EFI 625 Kit with Swivel Head

Qty.	Part No.	Description
1	MP-4701	EFI Fuel Pump 625
1	MP-9950	ProStar Large 2 Port EFI Regulator
1	MP-3006	#12 Bulkhead
3	MP-3005	#12F X #10S
3	MP-3007	#10F X #10S
1	MP-7009	Medium In-Line PreFilter 74 Micron
1	MP-7008	Medium In-Line AfterFilter 25 Micron
2	MP-3022	#6F X #8S
1	MP-3013	#8F X #8S
1	MP-6208	Y-Fitting - 1 #10AN by 2 #8AN
1	MP-1050	Dual Relay Harness

MP-4813-B Boost Reference Applications

#### Fuel-injection with Fixed Pump Head for 1,000+ hp

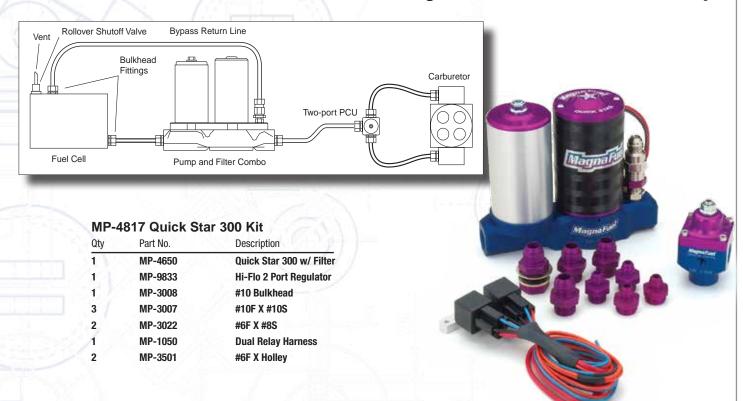


#### MP-4814 EFI 625 Kit with Fixed Head

Qty.	Part No.	Description
1	MP-4101	EFI Fuel Pump 625
1	MP-9950	ProStar Large 2 Port EFI Regulator
1	MP-3006	#12 Bulkhead
3	MP-3005	#12F X #10S
3	MP-3007	#10F X #10S
1	MP-7009	Medium In-Line PreFilter 74 Micron
1	MP-7008	Medium In-Line AfterFilter 25 Micron
2	MP-3022	#6F X #8S
1	MP-3013	#8F X #8S
1-(1)	MP-6208	Y-Fitting - 1 #10AN by 2 #8AN
1	MP-1050	Dual Relay Harness

MP-4814-B Boost Reference Applications

#### **Single Four-barrel Carburetor for 950 hp**



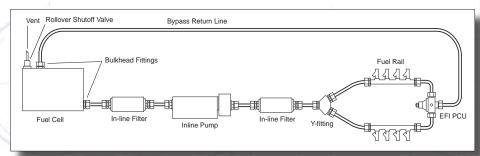
#### **Single Four-barrel Carburetor for 750 hp**

#### MP-4818 Quick Star 275 Kit

Qty	Part No.	Description
1	MP-4550	Pump and Filter Combo
1	MP-9633	.33" 2 Port Regulator
1	MP-3008	#10 Bulkhead
1	MP-3007	#10F X #10S
2	MP-3017	#8F X #10S
2	MP-3012	#6F X #6S
1	MP-1050	<b>Dual Relay Harness</b>
2	MP-3501	#6F X Holley



#### In-line Pump for Fuel Injection 800 hp or more





#### MP-4815 In-Line Pump Kit (800 HP or more)

Qty.	Part No.	Description
1	MP-4301	625 In-Line Pump
1	MP-3006	#12 Bulkhead
2	MP-3005	#12F X #10S
2	MP-3007	#10F X #10S
1	MP-7008	Medium In-Line AfterFilter 25 Micron
1	MP-7009	Medium In-Line PreFilter 74 Micron
1 5	MP-3016	#10F X #8S
2	MP-3022	#6F X #8S
1	MP-3023	#12F X #8S
1	MP-6208	Y-Fitting - 1 #10AN by 2 #8AN
1	MP-9950	Pro Star EFI Regulator
1	MP-3013	#8F X #8S
1	MP-1050	Dual Relay Harness

MP-4815-B Boost Reference Applications

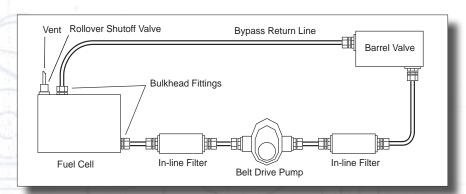
#### In-line Pump for Fuel Injection up to 800 hp



#### MP-4816 In-Line Pump Kit (800 HP or less)

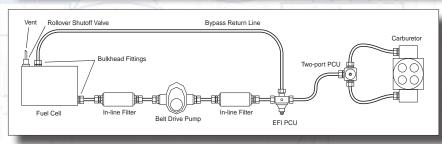
Qty.	Part No.	Description
1	MP-4302	525 In-Line Pump
1	MP-3008	#10 Bulkhead
2	MP-3007	#10F X #10S
1	MP-7010	Small In-Line AfterFilter 25 Micron
1	MP-7009	Medium In-Line PreFilter 74 Micron
1	MP-3016	#10F X #8S
3	MP-3013	#8F X #8S
1	MP-6288	Y-Fitting - 1 #8AN by 2 #8AN
1	MP-9925	EFI Regulator
2	MP-3022	#6F X #8S
1	MP-1050	Dual Relay Harness
1	MP-3012	#6F X #6S
MP-4	816-B Boost F	Reference Applications

MP-4816-B Boost Reference Applications

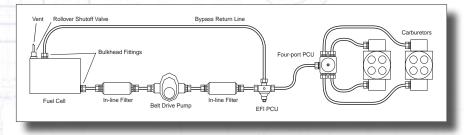


#### **Belt Drive Diagrams**

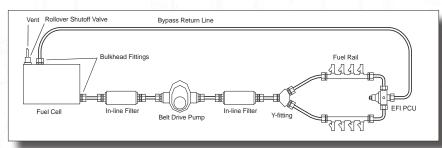
**MFI-Belt Drive** 



**Belt Drive Single Carburetor** 

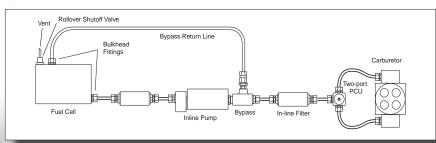


**Belt Drive Duel Carburetor** 



**Belt Drive EFI** 

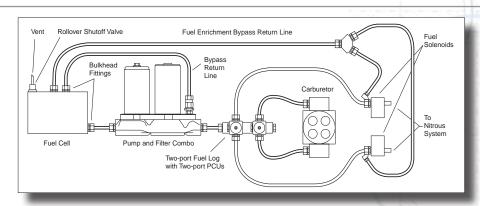
#### **InLine Pump in Carburetor Application**



**Carburetor Swivel Pump** 

# NITROUS OXIDE REGULATOR KITS

# Pump/Filter Combo for Single 4-bbl Carburetor with Single Stage Nitrous Fuel Enrichment Circuit with Solenoid Air Bleed



#### Single Four-barrel Carburetor with One-stage Nitrous (MP-9520) or Two-stage Nitrous Regulator (MP-9540)\*

Qty.	Part No.	Description
2	MP-9633	Two-port regulator
2	MP-3011	#10 X #10 coupler
1	MP-7600-2	Double fuel log
1	MP-3007	#10 AN X #10 straight fitting (fuel log inlet)
1	MP-3002	#10 port plug

### Single Four-barrel Carburetor with Two-stage Nitrous Under 700hp (MP-9525)\*

Qty.	Part No.	Description
3	MP-9633	Two-port Regulator
3	MP-3011	#10 X #10 coupler
1	MP-7600-3	Triple fuel log
1	MP-3007	#10 AN X #10 straight fitting (fuel log inlet)
1	MP-3002	#10 port plug

\*Also available in the new black finish.
When ordering you part, make sure to designate BLK to your order.

### **Dual Four-barrel Carburetor** with One-stage Nitrous (MP-9530)\*

Qty.	Part No.	Description
1	MP-9433	Four-port Regulator
1	MP-9633	Two-port Regulator
2	MP-3011	#10 X #10 coupler
1	MP-7600-2	Double fuel log
1	MP-3007	#10 AN X #10 straight fitting (fuel log inlet)
1	MP-3002	#10 port plug



### AIR-BLEED SYSTEMS



#### Air Bleed Systems

We strongly recommend using an air bleed with all nitrous Regulators to eliminate air from the fuel system and allow for easy adjustment of the Regulator at a flowing condition.

Part No.	Description
MP-9575	Dual air-bleed system (shown)
MP-9580	Triple air-bleed system
MP-9585	Nitrous fuel solenoid air bleed



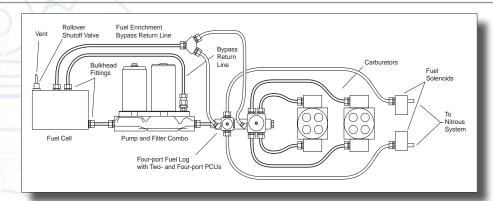
#### **Air Bleed Adapter Fitting**

Part No. Description

MP-3110 #3 x 1/8" pipe x 1/8" pipe with pill

# NITROUS OXIDE REGULATOR KITS

# Pump/Filter Combo for Dual 4-bbl Carburetor with Single Stage Nitrous Fuel Enrichment Circuit with Dual Air Bleed



### **Dual Four-barrel Carburetor** with Two-stage Nitrous (MP-9535)\*

Qty.	Part No.	Description
1	MP-9433	Four-port Regulator
2	MP-9633	Two-port Regulator
3	MP-3011	#10 X #10 coupler
1	MP-7600-3	Triple fuel log
1	MP-3007	#10 AN X #10 straight fitting (fuel log inlet)
1	MP-3002	#10 port plug

#### Three-stage Nitrous Regulator (MP-9545)\*

Qty.	Part No.	Description
3	MP-9633	Two-port Regulator
3	MP-3011	#10 X #10 coupler
1	MP-7600-3	Triple fuel log
1	MP-3007	#10 AN X #10 straight fitting (fuel log inlet)
1	MP-3002	#10 port plug

### Single Four-barrel Carburetor with One stage of nitrous 700+ Engine HP (MP-9550)\*

Qty.	Part No.	Description
1	MP-9833	Hi-Flo 2 Port Regulator
1	MP-9633	Two-port Regulator
2	MP-3011	#10 X #10 coupler
1	MP-7600-2	Double fuel log
1	MP-3007	#10 AN X #10 straight fitting (fuel log inlet)
1	MP-3002	#10 port plug

### Single Four-barrel Carburetor with Two stages of nitrous 700+ Engine HP (MP-9555)\*

Qty.	Part No.	Description
1	MP-9833	Hi-Flo 2 Port Regulator
2	MP-9633	Two-port Regulator
3	MP-3011	#10 X #10 coupler
1	MP-7600-3	Triple fuel log
1	MP-3007	#10 AN X #10 straight fitting (fuel log inlet)
1	MP-3002	#10 port plug



MP-9535
Regulator outlet fittings not included.

<sup>\*</sup>Also available in the new black finish.
When ordering you part, make sure to designate BLK to your order.

# WIRING KITS

### RELAY HARNESSES

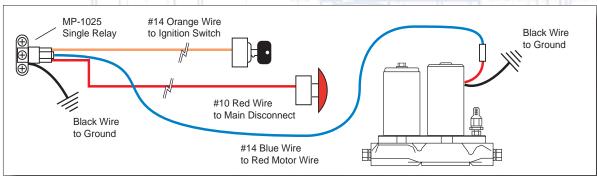


#### Eliminate long wire runs that cause voltage drops. 12 VDC, 40/30A.

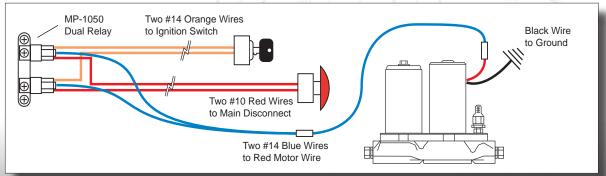
Part No.	Description
MP-1010	Electric relay
MP-1025	Single electric relay harness
MP-1050	Dual electric relay harness

- Use with electric fans, water pumps, nitrous/fuel solenoids, fuel pumps, lighting systems, etc.
- MagnaFuel always recommends the Dual Relay Harness for redundancy

#### **MP-1025 Single Relay harness wiring**



#### **MP-1050 Dual Relay harness wiring**



# FITTING KITS



Fuel Cell Kit\*
Use these fittings to connect vent, inlet and outlet lines to your racing fuel cell. Kit includes (1) Rollover Valve/Vent, (2) Bulkhead Outlet and (3) Bulkhead Bypass Return. All fittings include 0-rings and washers. .

Part No.	Description
MP-3623	#10 outlet, #8 return, #8 vent
MP-3624	#12 outlet, #8 return, #8 vent

#### **Four-port Regulator Kit**

Use this fitting kit on your four-port Regulator. All fittings include O-rings.

#### MP-9433 Regulator Kits\*

Part No.	Description
MP-3604	#10 in & (4) #6 out
MP-3605	#10 in & (4) #8 out

#### **Pump Fitting Kit**

Description MP-3633 #12 in #10 out MP-3634 #10 in #8 out

**ProTuner\*** Part No.

Fittings for inlet and outlet of pump. All fittings include 0-rings.





#### PS-500 Pump, Std or Combo\*

Part No.	Description
MP-3614	#12 in & #10 out
MP-3613	#10 in & #10 out

#### QS-300, 275, EFI and EFI DXL Pumps, Std or Combo\*. EFI Pump, 4700 and 4100 Series\*

Part No.	Description
MP-3612	#10 in & #10 out
MP-3611	#10 in & #8 out

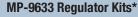
#### **PS-600 EFI\***

Part No.	Description
MP-3617	#12 in & #8 out
MP-3618	#10 in & #8 out
MP-3619	#12 in & #10 out
MP-3620	#10 in & #10 out

Part No.	Description
MP-3631	#12 in #10 out
MP-3632	#10 in #10 out

#### **Two-port Regulator Kit (carb & EFI)**

Use this fitting kit on your two-port Regulator. All fittings include O-rings.



Part No.	Description
MP-3600	#8 in & (2) #6 out
MP-3601	#8 in & (2) #8 out
MP-3602	#10 in & (2) #6 out
MP-3603	#10 in & (2) #8 out

#### MP-9833 Regulator Kits\*

Part No.	Description
MP-3606	#8 in & (2) #6 out
MP-3607	#8 in & (2) #8 out
MP-3608	#10 in & (2) #6 out
MP-3609	#10 in & (2) #8 out

#### MP-9925 EFI Regulator Kits\*

Part No.	Description
MP-3626	(2) #6 in & #6 out
MP-3627	(2) #6 in & #8 out
MP-3628	(2) #8 in & #8 out

#### MP-9950 EFI Regulator Kits\*

Part No.	Description
MP-3629	(2) #6 in & #8 out
MP-3630	(2) #8 in & #8 out

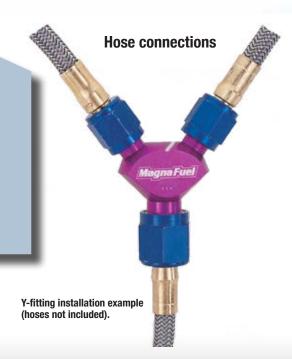
\*Also available in the new black finish. When ordering you part, make sure to designate BLK to your order.



### 'Y' FITTINGS



- Great for any liquid or gas application where a high-flow splitter is needed.
- MagnaFuel's sleek new Y-fitting design replaces a seven-piece assembly when compared to Y-block with fittings and O-rings
- Smoother flow path
- One-piece design is compact and lightweight. This eliminates leaks due to poor solder joints or leaky 0-rings.
- CNC-machined from one-piece 6061-T6 billet
- Hard-anodized coating is compatible with alcohol, exotic fueladditives, water and oil
- · Laser-etched logo and AN fitting sizes
- · High flow capacity
- Sizes available to accommodate most plumbing needs



### 'Y' FITTINGS



AN Sizes		
Part No.	Single	Double
MP-6200	#10	#10
MP-6208	#10	#8
MP-6220	#12	#10
MP-6222	#12	#12
MP-6228	#12	#8
MP-6231	1/8" NPT	#3
MP-6233	#3	#3
MP-6244	#4	#4
MP-6263	#6	#3
MP-6264	#6	#4
MP-6266	#6	#6
MP-6283	#8	#3
MP-6286	#8	#6
MP-6288	#8	#8
Part No.	Single	Triple
MP-6363	#6	#3
MP-6364	#6	#4
MP-6366	#6	#6
MP-6383	#8	#3

AN Sizes Part No.	Single	Double
MP-6200-BLK	#10	#10
MP-6208-BLK	#10	#8
MP-6220-BLK	#12	#0 #10
	···-	
MP-6222-BLK	#12	#12
MP-6228-BLK	#12	#8
MP-6231-BLK	1/8" NPT	#3
MP-6233-BLK	#3	#3
MP-6244-BLK	#4	#4
MP-6263-BLK	#6	#3
MP-6264-BLK	#6	#4
MP-6266-BLK	#6	#6
MP-6283-BLK	#8	#3
MP-6286-BLK	#8	#6
MP-6288-BLK	#8	#8
Part No.	Single	Triple
MP-6363-BLK	#6	#3
MP-6364-BLK	#6	#4
MP-6366-BLK	#6	#6
MP-6383-BLK	#8	#3



MP-6120







MP-6160

Y-block

Join or split fuel lines for a neat installation with minimal flow loss.

Part No.	Description

MP-6120 One #12 port and two #10 ports

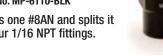
MP-6150 One #8 port and three #6 ports with mounting holes

MP-6160 One #8 port and two #6 ports

#### Ouad-Y-Block

Part No. MP-6110-BLK

Takes one #8AN and splits it to four 1/16 NPT fittings.



#### Replacement Filter

Part No. MP-7050

Polyethylene filter is cleanable and reusable. Alcohol compatible. Fits all "Pump with Filter" filter housings. O-ring used in 500 series pumps only.

#### **Seal Kit**

Keep a seal kit in your tool box just in case. These kits are composed of the exact same seals that go in your pump when it's new. They are the highest quality available.

Part No.

MP-4401-SK PS-500 Pump w/o Filter

MP-4450-SK PS-500 Pump w/ Filter

MP-4501-SK QS-275 and 300 Pump w/o Filter

MP-4550-SK QS-275 and 300 Pump w/Filter

MP-4301-SK ProTuner Pumps

MP-4701-SK ProStar EFI, SQ, Pro Outlaw, and Outlaw Pumps

#### **Regulator Diaphragm Kits**

Part No.

MP-9400-03 Four Port and Large Two Port Regulators

MP-9600-03 Standard Two Port Regulators

MP-9950-03 ProStar EFI and Carb Bypass Regulators

MP-9925-03 QuickStar EFI Regulators

#### **Bulkhead O-Ring & Washer Kit**

Factory replacement seals for the MP-3006, MP-3008, and MP-3014 bulkhead fittings.

Part No.	AN Siz
MP-3301	#8
MP-3302	#10
MP-3303	#12



#### **Mounting Brackets**

#### **Regulator to Carburetor Bracket**

MP-964150 Carb bracket for 4150/4160 and MP-9633 Regulator MP-964500 Carb bracket for 4500 and MP-9633 Regulator MP-944150 Carb bracket for 4150/4160 and MP-9433/MP-9833 Regulators MP-944500 Carb bracket for 4500 and MP-9433/MP-9833 Regulators



MP-9400-16 **Carbureted Regulator Bracket** 



MP-9950-16 **EFI Regulator Bracket** 

#### **Standard Mounting Bracket**

All pumps come with standard clear zinc-plated steel mounting bracket and pump-side hardware.

Part No.	Description
MP-4401-16	Pump Mounting Bracket with bolts and washers



#### **Fuel Pump Mounting Kit**

Give your pump a quieter, more stable mount. Can be used with both the 500 and 300 Series pumps. Used with the stock mounting bracket and a cushioned clamp to give extra stability to the motor.

MP-4900	Band clamp	
Part No.	Description	



#### **Jet Plate**

Keep jets organized and free from damage. Jets screw in and out. For Hollev®-style carburetor jets.

Part No.	Description

MP-2000 Billet aluminum jet plate



#### **Pressure Gauges**

Accurate pressure readings are critical for proper calibration. MagnaFuel supplies 1½" diameter gauges. These are the right tools for the job. All come with easy-to-read black faces.

Description
MagnaFuel logo gauge (0-15 psi).
MagnaFuel logo gauge (0-60 psi).
MagnaFuel logo gauge (0-100 psi).
MagnaFuel logo gauge (0-30 psi).









### FUEL FITTINGS





Many MagnaFuel fittings are flow-shaped; computer-machined to provide the best possible flow by eliminating sharp edges and angles that cause flow losses and aeration.

#### **Barbed Fittings\***

Part No.	Description
MP-3092	8mm Barb x #6S
MP-3093	3/16 Barb x 1/8 NPT
MP-3094	1/8" Barb to 10-32 Th
MP-3097	1/4" Barb to #8
MP-3098	8mm Barb to #4

8mm Barb to #8









MP-3503







MP-3504 MP-3508 MP-3550

#### **Carburetor Fittings\***

Part No.	Description		
MP-3500	Holley® float bowl plug		
MP-3501	Holley float bowl #6AN		
MP-3503	Holley float bowl (short) #8AN		
MP-3504	Holley float bowl (long) #8AN		
MP-3508	Holley float bowl (long) #10AN		
MP-3505	DemonTM Carburetor #8AN		
MP-3506	Demon Carburetor #6AN		
MP-3550	Holley jet extension		







MP-3099

#### **Coupler Fitting**

	Part No.	Str. Size
١	MP-3010-BLK	#12 x #12
	MP-3011-BLK	#10 x #10
١	MP-3004-BLK	#8 x #8
	MP-3028-BLK	#10 x #8
	MP-3029-BLK	#10 x 3/8 NPT
	MP-3030-BLK	#10 x 3/8 npt w/ Jam Nut

Flow shaped MP-3031-BLK #10 x #12



_	_
Part No.	Str. Size
MP-3000-BLK	#6
MP-3001-BLK	#8
MP-3002-BLK	#10

MP-3003-BLK #12

Flow shaped



Part No.	Str. Size
MP-3014-BLK	#8
MP-3008-BLK	#10
MP-3006-BLK	#12
	Flow sh





#### Plugs with 1/8" NPT in Center\*

Part No.	Str. Size
MP-3071	#6
MP-3072	#8
MP-3073	#10
MP-3074	#12
Part No.	AN Size
MP-3083	#10

#### 1/8" NPT Fuel Gauge Port Adapter\*

Part No.	An Size	Str. Size	
MP-3062	#8	#10*	
MP-3063	#10	#10	
MP-3064	#10	#12	
Part No.	An Size	Pipe	
MP-3065	#6	1/8" NPT male	
*with only one gauge port			



		-
Part No.	AN Size	Str. Size
MP-3024	#3	#6
MP-3020	#4	#10
MP-3012	#6	#6
MP-3022	#6	#8
MP-3021	#6	#10
MP-3015	#8	#6
MP-3013	#8	#8
MP-3017	#8	#10
MP-3018	#8	#12
MP-3025	#10	#6
MP-3027	#16	#12
MP-3016	#10	#8
MP-3007	#10	#10
MP-3019	#10	#12
MP-3023	#12	#8
	#12	
MP-3009	#12	#12

#### **Rollover Shut-off Valve For Fuel Cell\***

Part No.	Description		-
MP-3125	#8AN vent valve	-9	





\*Also available in the new black finish. When ordering you part, make sure to designate BLK to your order.





Designed to configure multiple Regulators with less restriction and even fuel distribution. All ports are #10

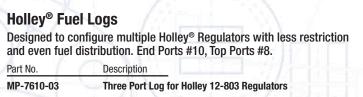
Part No.	Description	
MP-7600-01	Single fuel log	
MP-7600-01-BLK	K Single fuel log	
MP-7600-02	Double fuel log	
MP-7600-02-BLK	Double fuel log	
MP-7600-03	Triple fuel log	
MP-7600-03-BLK	Triple fuel log	
MP-7600-04	Quad fuel log	
MP-7600-04-BLK	Quad fuel log	



Photo by SRA PHOTO

Magna Fuel

FUEL LOGS

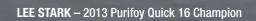


MP-7610-04-BLK

MP-7610-03 Three Port Log for Holley 12-803 Regulators
MP-7610-03-BLK Three Port Log for Holley 12-803 Regulators
MP-7610-04 Four Port Log for Holley 12-803 Regulators
MP-7610-04-BLK Four Port Log for Holley 12-803 Regulators
MP-7610-05 Five Port Log for Holley 12-803 Regulators
MP-7610-05-BLK Five Port Log for Holley 12-803 Regulators









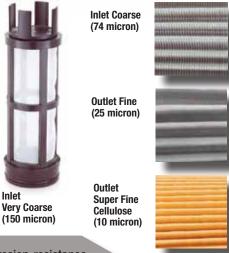
### Protect expensive components with an inline filter

MagnaFuel's custom-machined In-line Fuel Filters keep your carburetor and engine free of harmful debris.

These handsome filters protect your investment for many years. All MagnaFuel filters have top-quality reusable elements. The medium filters are available with two different elements with different porosities.



- · Bodies, end caps made from anodized aircraft aluminum for superior strength and corrosion-resistance · End caps equipped with o-rings for leak-proof operation
- . Choose 10, 25, 74 or 150 micron filters (MagnaFuel recommends 74 for inlet, 25 for outlet before the carburetor/regulators)
- Stainless steel reinforced basket-shaped filter element (7009, 7008, 7010)
- · Works great for both gasoline and alcohol
- Easy to disassemble, clean and reassemble
- · High-flow, cleanable and replaceable elements
- Light, compact
- Virtually no loss of flow volume or pressure
- · Hard anodized coating
- · Cleanable, reusable and replaceable filter
- Gas and methanol/ethanol/oil compatible
- Female AN ports for a variety of fitting options





#### **Bulkhead Filter Kits**

MP-7025 Bulkhead Filter Kit 10 Micron Cellulose
MP-7025-BLK Bulkhead Filter Kit 10 Micron Cellulose
MP-7026 Bulkhead Filter Kit 74 Micron Stainless
MP-7026-BLK Bulkhead Filter Kit 74 Micron Stainless

#### **Replacement Elements**

MP-7026-74 Stainless 74 Micron Element for 7026 MP-7025-10 Cellulose 10 Micron Element for 7025

These install in the fuel cell for applications with minimal space. They are radius flow shaped for maximum uninterrupted flow. For a #12 connection.



Outlet Super Fine Cellulose (10 micron)



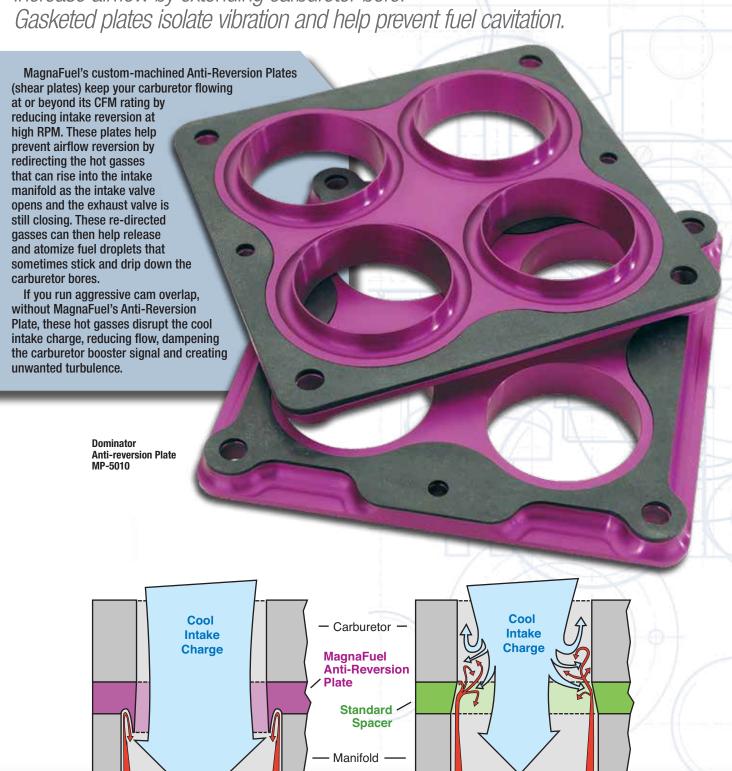


MP-7026-74 Replacement Element for MP-7026 Stainless 74 Micron

MP-7026 Fuel Cell Bulkhead Filter Kit MP-7025-BLK Fuel Cell Bulkhead Filter Kit

### ANTI-REVERSION PLATES

Increase airflow by extending carburetor bore.



Hot Gasses from Combustion Chamber





**Split Dominator** Anti-Reversion Plate MP-5009

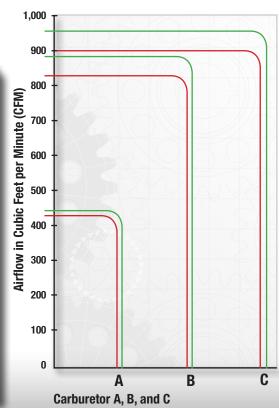
**Comparison of Carburetor Flow** With and Without

**MagnaFuel Anti-reversion Plate** With





Part No.	Bore Size	Description
MP-5005	1-11/16"	4150/4160 Holley w/ rubber gaskets
MP-5006	1-3/4"	4150/4160 Holley w/ rubber gaskets
MP-5007-00	2.000	ProRev Plate w/ two 0-rings
MP-5007-01	2.030	ProRev Plate w/ two 0-rings
MP-5007-02	2.060	ProRev Plate w/ two 0-rings
MP-5007-03	2.090	ProRev Plate w/ two 0-rings
MP-5007-04	2.120	ProRev Plate w/ two 0-rings
MP-5008-00	2.000	ProRev Plate 4500 Dominator
MP-5008-01	2.030	ProRev Plate 4500 Dominator
MP-5008-02	2.060	ProRev Plate 4500 Dominator
MP-5008-03	2.090	ProRev Plate 4500 Dominator
MP-5008-04	2.120	ProRev Plate 4500 Dominator
MP-5009-01	2.015	Split Dominator Set of 4
MP-5009-02	2.115	Split Dominator Set of 4
MP-5009-03	2.215	Split Dominator Set of 4
MP-5010-00	2.000	Dominator w/ rubber gaskets
MP-5010-01	2.030	Dominator w/ rubber gaskets
MP-5010-02	2.060	Dominator w/ rubber gaskets
MP-5010-03	2.090	Dominator w/ rubber gaskets
MP-5010-04	2.120	Dominator w/ rubber gaskets



# INFORMATION TIPS

#### Why do you need a high-output, high-pressure fuel system?

Today's race cars need more fuel system than ever before because of improvements in torque, RPM and horsepower. As carburetors, manifolds and cylinder heads improved in airflow capacity, the need for more efficient racing fuel systems grew substantially. More efficient chassis and tires created the need for more fuel in order to maintain the maximum output power of the engine. Simply put, the harder the race car launches, the higher the system pressure must be to overcome the effects of gravity that cause restriction to flow. Firemen plan for this restriction to flow by adding 5 psi to the fire hose pressure per floor above street level. Pilots flying in high-performance fighters must control their blood supply with exercises and special flight suits when in high g-factor maneuvers or they suffer "redouts" or "blackouts" because they can't control their blood pressure. Aircraft launched with catapults from aircraft carriers must take off with fuel systems in high boost or the engine will starve for fuel. High g-factor launches coupled with wheel stands increase the demands on fuel systems whether the application is for Pro Street, Stock, Bracket or Pro Stock.

#### How much fuel flow is enough?

The correct volume of fuel is that which is required to support the amount of horsepower that the engine can produce. Most engines that are using gasoline burn approximately .5 pounds per horsepower-hour. This is sometimes called BSFC (Brake Specific Fuel Consumption). What this means is that for each horsepower produced, it takes ½ pound of fuel. This is a general statement and sometimes engines can be a little more efficient than .5lb/hp-hr., but it is a good practice to plan and measure fuel system operation using this number. Carburetors must have a stable supply of fuel in order to maintain the correct liquid fuel height. This is most difficult with drag racing vehicles that sometimes have forward acceleration and wheel stand at the same time. Each time that a nitrous system is engaged, additional fuel supply demands must be met or melted parts may result from "system lean-out." The fuel required is in excess of the .5 lb/hp-hr. for normally aspirated conditions. The additional fuel requirements for nitrous system planning is about .7 lb/hp-hr.

#### How much fuel pressure is necessary?

First, the fuel system pressure (provided by the fuel pump) must be enough to oppose the effects of gravity during the launch and during the run for drag racers. The system pressure of at least 8 to 10 psi per g is generally adequate. MagnaFuel ProStar 500 Series pumps are factory set to 28 to 30 psi. They are field adjustable from 24 to 36 psi. The MagnaFuel QuickStar 300 Series pumps are factory set to 25 psi and field adjustable from 25 to 36 psi. The QuickStar 275 series pumps are factory preset to 18 psi (these units are not field adjustable). MagnaFuel regulators need to be adjusted to 6.5 to 7.5 psi WITH FUEL FLOWING at a rate of about ½ cc per second (that's about 10 drops per second). Higher fuel pressure will generate more foam in the float bowl.



GARY WAMBOLDT -

2013 MagnaFuel Super Series-Super Comp Champion 2013 NHRA Division 5 Super Comp Champion

Photo by SRA Photo

### INFORMATION

#### How can you plan your racing fuel system?

Use a handheld calculator and plan on .5 lbs/hp-hr. (gasoline). Methanol alcohol requires about 1.0 lbs/hp-hr. Use .7 lbs/hp-hr when planning a gasoline system for nitrous assist.

EXAMPLE: You have a 650 hp engine. 650hp x .5 = 325 lbs/hr. (gasoline). Although you need to know how much your fuel weighs, assume for this example that it weighs 6.2 lbs/gal. 325 lbs/hr.  $\div$  6.2 = 52.42 gal/hr. Dividing by 60 (minutes per hour) yields .847 gal/min (GPM).

Check the graph and specification information for a pump selection for your application. Note that this flow number is what your engine needs at the float bowls. So you also need to check out the graphs and specs for a MagnaFuel regulator.

Is it necessary to plumb your system for a return line to the fuel tank?

Yes, because all MagnaFuel pumps are equipped with external bypass system. We don't think that any wellengineered racing fuel system should use internal bypasses because all they do is heat up and add foam (bubbles) to the fuel.

#### Should you use a fuel filter?

All fuel systems are dirty and need to use a filter in the system. The filter should be located on the suction side (between tank and pump) of the pump. The filter cartridge is washable. Replacements are available.

#### How important is the size of the tank vent?

Attention to this detail may make the difference between winning and losing. It should be equipped with a filter so that trash and dirt cannot enter the fuel system. Absolute minimum size vent is -6 AN, but -8 AN is preferred for any application over 600 hp. Some specialty applications actually need a -10 AN. MagnaFuel rollover/vent (MP-3125) is -8 AN and provides some safety benefits if the vehicle flips over.

#### How can you check a system for flow and pressure?

Free-flow ratings of racing fuel systems are a joke, so MagnaFuel stresses that the only way to test a system is AT RATED PRESSURE. MagnaFuel rates all its systems at FLOW vs. PRESSURE.

Have a fire extinguisher handy. Observe safe practices when dealing with fuel. NO Smoking. You will need an accurately scaled jug (semiclear polypropylene is ideal) of at least one gallon capacity. One gallon = 128 fluid ounces. One gallon = 4 quarts. One gallon = 231 cubic inches. You need to test the complete fuel supply system, so this measurement will be after regulated control. You will need a stop watch or a watch with a second counter. You will need to provide a variable orifice (brass draincock or petcock works well) for attachment to the end of the fuel line.

Run the test at various fuel pressures (regulated flow) and you will learn what your system can do.

Use the previous example under fuel system planning.

This is particularly important for nitrous enrichment fuel applications so that you will know the result of changing the fuel pressure 1/4 psi at a time.

#### **General Notes:**

**Proper Electrical Supply:** The DC electric motors in electric fuel delivery systems are dependent on consistent electric supply. They require good battery voltage, solid connections, proper wire gauge, good ground and a properly operating alternator.

**Debris in System:** Fuel delivery systems are composed of valves, seals, diaphragms and orifices. Dirt and other debris can disrupt the proper operation of these components. A clean system is imperative. Clean or change your filters often, and periodically check the system for debris. If you are about to install a new system, make sure you clean all installation trash out of the fuel lines. Pay close attention to stainless steel lines.

Voltage Step-down Devices: Never use step-down devices (voltage reduction boxes) on MagnaFuel fuel pumps. Never operate any electric motor on lower voltage than the motor was designed for. Low voltage can cause motor fluctuation and excessive amp draw. MagnaFuel recommends 12.5V and higher

Gauges: Gauges are tuning tools only, and should be removed from vehicle during racing conditions.

Air in System: Any air going into fuel pump on the intake side causes the fuel to foam. Foam will create fluctuation in regulated pressure, oscillation in the pump motor and lean air/fuel mixture. Poor seals on the inlet side fittings, poor placement of the fuel pickup and/or return lines can cause this problem. Return line to fuel cell should be as far as possible from the pick up line fitting.

Fuel Cell Vent Size: If the fuel cell vent is too small, it can cause excessive load and heat in the pump. You should run a minimum of a #8 vent for all applications.

# INFORMATION TIPS **Questions and Answers** Q. Why does my fuel pressure vary from one pass to the next? A. Faulty fuel pressure gauge can cause fuel pressure fluctuation. If your gauge is a few years old, test it. Under-hood heat can affect gauge accuracy. Dirty regulator. Clean it or send it in. You should always set the regulator in a flowing condition. The engine should be running at about 1,700 to 2,000 RPM. Battery low. Check voltage. Low pump pressure. Look for inlet line obstructions such as fuel-cell foam. Q. Why is my fuel pressure too low, or I have no pump pressure? A. Check the voltage to the pump, relay switch. Could be faulty. They can be bad without going out. Weak relay reduces voltage. Replace them. Check wiring, look for an improper ground. Check the battery voltage. Check the filter and inlet line for obstructions. Look for leaks on inlet side. Adjust bypass. Is there debris in pump bypass (poppet). The bypass valve could be stuck open. Clean filter. Replace deteriorated fuel-cell foam. If no pressure, the pump may be operating in reverse. Check the wiring diagram. No fuel in fuel cell, or fuel cell improperly vented. Q. Why does my pump seem excessively hot? A. Note that normal operating temperature can reach 137 degrees Fahrenheit. Anything below this is OK. If the pump is warmer than this, look for low voltage. If there is excessive pressure, there could be debris in pumping mechanism causing too much load. Check to see if the bypass is obstructed. Check instructions for proper pressure setting. Q.Why won't my pump run at all? A. This is most likely a low- or no-voltage problem. Check battery condition. Check for a bad fuse or bad relay. Look for improper ground. Check diagram, make sure you have wired everything correctly. Check any in-line switches for proper operation and voltage rating. Q. Why is my fuel pressure too high? A. The return line could be too small. The voltage could be too high. JOHN MONTECALVO Photo by Auto Imagry

# INFORMATION

TIPS

### **Questions and Answers**

#### Q. Why does my regulated pressure seem to creep higher and higher or go to full pump pressure?

A. Debris in fuel system has contaminated the valve-to-seat seal. Disassemble per regulator exploded view. Wash with brake cleaner or similar cleaner and reassemble. Be sure you reassemble correctly. CAUTION: Do not over-tighten cartridge. Check fuel filter. Make sure to flush lines before using a newly installed fuel system. A common problem of new systems when there is debris left over from cutting fuel lines and other installation trash.

#### Q. What could cause my pump to operate noisier than usual?

A. Aeration, or air in the system, can cause excessive noise. Check for poor inlet side sealing, check 0-rings, fittings, damaged sealing angles on fittings. We recommend rubber isolator between pump and frame mounting surfaces. Mounting the pump solid to the frame of the vehicle can accentuate the noise. If the fluid level in the tank/cell is too low, the pump can suck a vortex and induce air into the system. Check pump mounting brackets for tightness. If the fuel cell return line dumps fuel near the suction line, it can cause air to enter the system also. Keep this return line's fuel input as far away from the supply line as possible.

#### Q. Why is my regulator noisy when I first start the engine?

A. Vibration or chatter is common when then engine is first started due to air in system. This is amplified due to the metal-to-metal valve/seat assembly. Should go away in less than a minute. Regulators used for Nitrous are "dead-headed" to the solenoid. MagnaFuel suggests you use an air-bleed system to purge trapped air from the system.

#### Q. What can I do about a leaky pump?

A. Leaks are almost always caused by a worn or damaged pump seal. You need a new one. Return to factory. Seal should be replaced every two years under heavy use or if it sets unused for a long time. Return pump to factory for service. If pump leaks from vent hole, you need a new seal. Return pump to factory for service and bench flow testing.

#### Q. Why does my car seem to slow halfway through a quarter-mile run?

A. Not enough fuel volume. If it falls off in high gear, it is a pump volume issue; pump may be too small. If it falls down during launch, it is a fuel-pressure issue.

#### Q. Why does my fuel system pressure seem to drop throughout the day?

A. Heat can effect liquid-filled gauges. Voltage drop can also cause this problem (battery, ground, connections, and incorrect wire gauge. Avoid mounting fuel system close to heat sources.

#### Q. Why does my regulator's pressure fluctuate?

A. MagnaFuel considers excessive fluctuation to be over 1-1/2 pounds of pressure. Vibration, aeration, faulty gauges, or sharp changes in supply/pump pressure usually cause this. You should isolate the regulator with rubber mounting to tame vibration.

#### Q. Why am I getting pressure spikes?

A. Poor gauges, too high or too low pump pressure, or sharp drops in system pressure could cause large pressure spikes at the regulator.