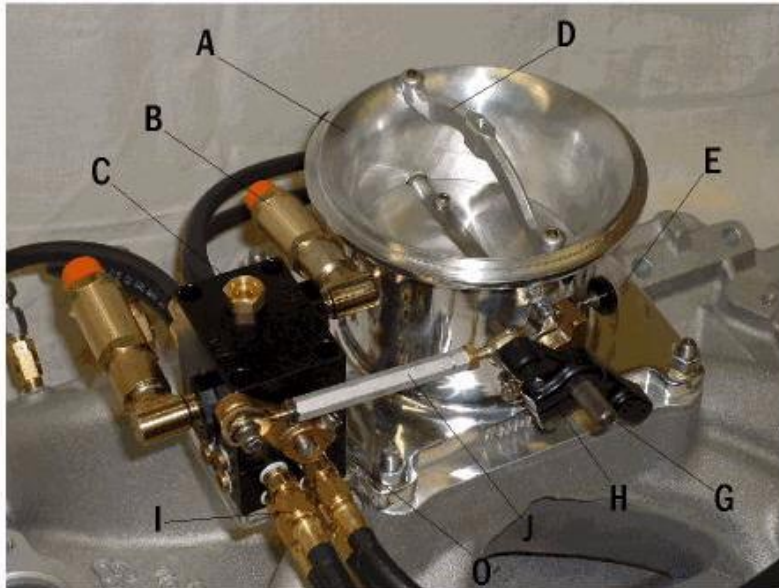


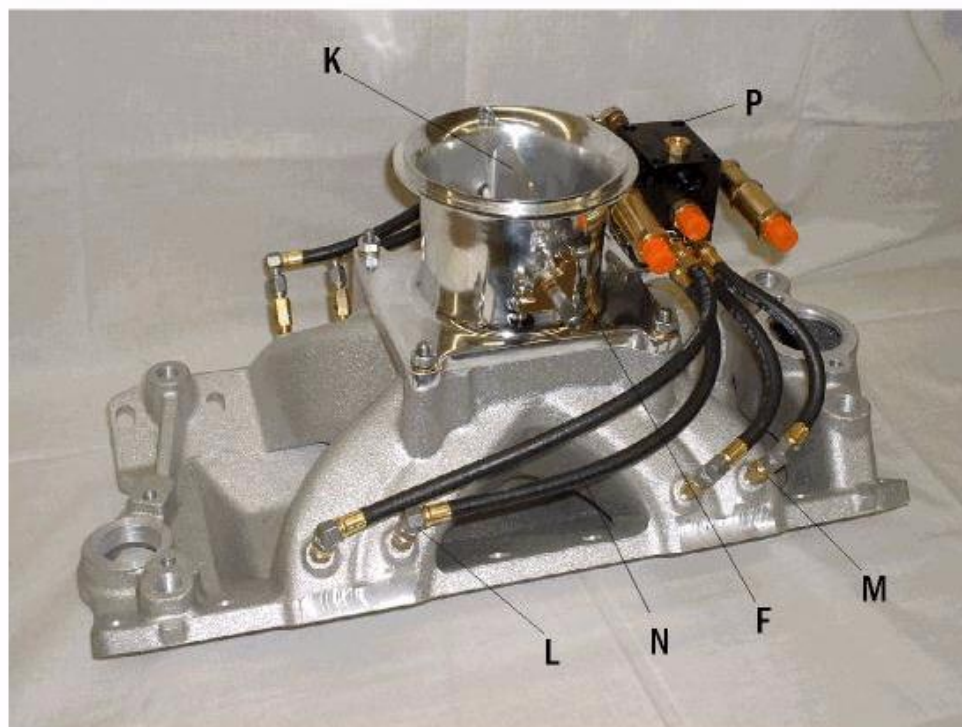


**LOWE Fuel Systems**  
**Box 180**  
**Rosewood, Q 4340**  
**Phone 0411-699 535**

**www.KenLowe.com.au**



#	PART	DESCRIPTION
A	4070-39	4" SINGLE BF INJ CAST
B	6002	#6 CHECK VALVE
C	814-4	#4 HEX PLUG
D		FILTER BRKT
E	10-24	THUMB SCREW
F	401237	3/8 THROTTLE STOP
G	4042-39	4" SINGLE BF SHAFT
H	4011A37	3/8 DOUBLE ARM
I	KFO-3	#3 HOSE NUT & BARB
J	4026	M/V LINKAGE
K	4074	4" SINGLE INJ BUTTERFLY
L	KFO3-90	#3 90 DEG HOSE END
M	7100	TR NOZZ BODY
N	4034B	HOSE W/ (1) 90 DEG END
O	4047	BRASS ARM
P	4045	UNBLOWN M/V ASSY





## 4.0 THROTTLE BODY 1850 CFM



**LOWE Fuel Systems**  
**Box 180 Rosewood Q 4340**  
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## Racer Decal Discount Prices

Throttle body and butterfly assembly 4" for 4150 base PN 35744-4000 \$ 1150.00

Throttle body and butterfly assembly 5" for 4500 base PN35744-5000 \$ 1199.00

Includes throttle body assembly with housing and butterfly, barrel valve, distribution block, hoses, nozzles and nozzle holders. Does not include labor to install it on your manifold, installation costs can vary depending upon the manifold. Usually if no welding is required installation is \$150 to \$250.00 as it requires installing the nozzles in the port runners. If welding threaded bungs on the manifold the price will be higher.  
Price does not include GST or Shipping.

You may also need, if you don't already have one.

Flowed Fuel Pump – Normally aspirated Methanol Injection for engines 300cid to 600cid  
PN 35571-30030 \$ 645.00

Fuel Pump Belt Drive Kit \$ 425.00

PN 35225-80001 Fuel Pump Belt Drive Kit (SBC)

PN 35225-80002 Fuel Pump Belt Drive Kit (BBC)

PN 35225-80003 Fuel Pump Belt Drive Kit (SBF)

PN 35225-80004 Fuel Pump Belt Drive Kit (BBF)

PN 35225-80009 Fuel Pump Belt Drive Kit (Generic)

Fuel Shut Off Valve

PN 35775-00601 3 way Fuel shut off valve with –6 ports with fittings \$ 199.00

EZ Start Valve \$ 79.00

## Fuel Tank

Do not run the fuel back to the tank above the fuel pick up in the tank. The fuel must be returned to the tank as far away from the fuel pump pickup as possible. This gives any fuel returning to the tank that may be carrying air in the line to separate the air and the fuel. Any fuel return line that does not purge itself on the burn out or at the start of the engine must be returned to the tank and not the pump suction.

A lot of fuel tuners today are installing a nipple in the fuel pump inlet to return the fuel to so they don't agitate the fuel in the tank. This also reduces the fuel lines required on some cars. Also allow the complete fuel system to be installed on a flow bench so that when you flow the system the whole system is flowed much as it is on the car.

If your fuel tank is aluminum you can reduce the alcohol corrosion problem by getting your fuel tank anodized. This will coat and protect the tank. It won't stop the corrosion but it sure will slow it down.

Note: I do not recommend running any high pressure poppet line back to pump suction as it might not purge during the burn out and purge any air it may have during the run. If your poppet is before the barrel valve and set for over 50 psi run it back to the tank. If your poppet is after the barrel valve and set for over 30 psi run it back to the tank.

Fuel tank vents must deliver air to the tank to replace the fuel used by the engine. The more fuel the engine uses the larger the tank vent must be. I recommend a minimum 1/2" inlet on all non-supercharged engines and 3/4" on all small-



supercharged engines or with a 6-71 or 8-71 blowers. Use a 1" tank vent on large engines with large blowers up to Top Alcohol type engines. Vents must be designed to allow the tank to breathe the air in but not slosh the fuel out after a burn out. The rules state any car putting liquid on the racing surface will be disqualified. Although not always enforced by the officials if your car spills fuel it is a hazard for fire and the loss of a race due to disqualification.

If you are going to use the stock tank in the back of a sedan as the primary fuel tank then you have to make a surge tank in the front and feed the surge tank from the back tank with an electric fuel pump. See SURGE TANK on our web site for more information. The surge tank must be large enough to make one full pass down the race track. This is usually about two gallons or 8 liters. The tank must be vented with at least a 5/16" ID vent. Some racers will use a float bowl from a Holley mounted on the side of the surge tank to set the fuel level so the electric fuel pump will not over fill the tank. Get a Holley float bowl and a piece of 12mm plate large enough to mount the float bowl to. Drill and tap the plate to suit the float bowl so the float bowl will mount to the plate. Drill two more 1/2" or 12mm holes in the 12mm plate where the fuel from the float bowl can drain out near either end of the float bowl. You will need a vent hole through the 12mm plate at the top inside the float bowl as well. Once all this is fabricated (we supply them if you don't want to make one) disassemble the 12mm plate and weld it on the side of the tank you have fabricated to go in the front of your car. Locate it as high as possible in the tank and away from the outlet going to the fuel injection pump. Connect the float bowl to the electric pump in the rear of the car and this electric pump will keep the front tank full for you.

A large electric fuel pump is not necessary as it only has to keep the tank full and you have enough volume in the tank for one complete run. As you idle back to the pits the electric pump is working away refilling the surge tank. When possible make the surge tank as tall as possible with a -12 fitting on the bottom rear corner. Additionally add three -6 return ports to the tank in the opposite corner of the tank from the pump supply line.

I would recommend adding a filler cap as well so if you want to remove the factory tank later you can fill the surge tank between rounds. Don't forget to add a drain port on the bottom of the tank.

## Surge Tank Information

Constant Flow Fuel Injection needs a fuel tank up front near the fuel pump. Making a tank large enough for the application can be a challenge and often there is fuel tank in the rear of the car that cannot be used for constant flow fuel injection.

The answer is a surge tank in the front of the car near the fuel pump. This tank does not have to be all that large as often in most situations only 5-10 litres is all that is necessary.

The original tank in the rear of the car and the electric fuel pump you already have back there can be put to good use just keeping the front mounted surge tank full or at least replenishing what the engine is consuming.

Let's do the math on consumption. Let's take worst case scenario like a Top Door car that is putting 14 GPM in the engine (that is 52 litres per minute). Now this car is wide open throttle for less than six seconds but let's round it off to six seconds. Divide 6 into 52 and that is only 8.6 litres of consumption per run while under power. If you had a 10 litre surge tank in the front it would feed even a Top Door car. There is every chance in the world that your car would use much less.



If you consider that the surge tank is being constantly refreshed with a supply from the rear tank and pump, you can see how the surge tank volume necessary, is not all that large.

Attached is a recommended sketch for your surge tank.

To shut the fuel supply from the rear tank off we have made a surge tank valve assembly by using a Holley float bowl assembly and making a weld on mounting plate that you can simply weld on to the side of your surge tank, and then drill through the mounting plate holes to allow the fuel to enter the tank.

Your front mounted surge tank must be made as tall as possible, or at least as tall as practical.

Return the fuel from the constant flow fuel injection as far away and on the opposite side of the fuel fitting that feeds the fuel pump. We make a whole range of billet weld on port for this. I always recommend to put at least one more port in the tank than you think you need. Even if you plug it up and don't use it today there is every chance that you will use it in the future.

Be sure to vent this tank and install a separate filler cap and bung.

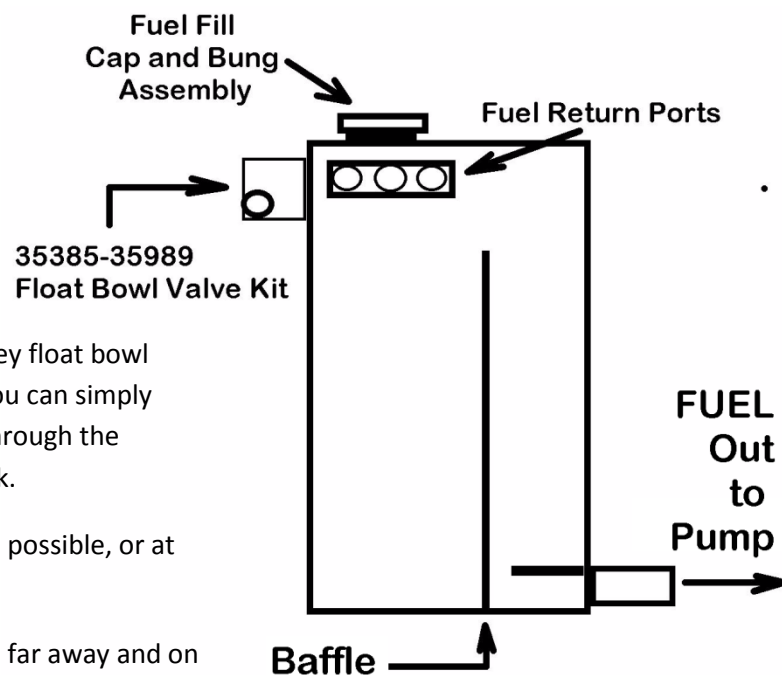
Tank placement – often space is at a premium in the front of the car and placing the tank out of the way is a good idea should you need to service the engine. One neat place I have seen tanks mounted in inside the front fender behind the headlight with a filler neck going into the engine bay.

You may notice that in the tank sketch the fuel cap and bung assembly is located near the Float Bowl Valve Kit and the Fuel Return Ports so that the cap may be removed to observe the fuel flow as it enters the fuel tank.

You can use your own Holley float bowl and get just the weld on plate or get the complete kit.

**Float Bowl Mount – weld on mount PN 35385-35980 RDD \$ 95.00**

**Float Bowl Mount Kit Complete PN 35385-35959 RDD \$ 210.00**



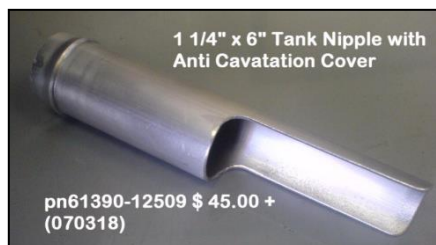
## Tank Hardware

Most fuel tanks for constant flow fuel injection need several ports to return the fuel back to the tank. There is usually a minimum of two ports required. As a racer you have several options. One you can weld on two separate bungs but for a

tidy appearance you must be sure to keep them in line. Installing the minimum quantity will allow you to provide for your needs, today. Many times later there is a desire to add an extra port or two for more returns as your fuel system gets a little more complicated. If you install the minimum number required then you have no expansion room without removing the tank and adding more ports. If you add at least one more port than is necessary today and just plug it up



until it is needed. We have made several different size billet weld bung blocks. We make both three and four hole and both dash 6 and dash 8 sizes plus blank threaded ones that allow you to drill and tap the sizes you want. For appearance sake we make both the profiled and the straight side billet weld bung blocks to suit any customer's needs.



A lot of supercharged race car fuel tanks use the 1 1/4" supply hose. This size is used because it has flows that are adequate for everything up to Top Fuel and at 1 1/4" common radiator hose which is methanol compatible is inexpensive and readily available. Below is a weld nipple for your fuel tank that has an anti cavitation plate made into the top of the nipple. When this nipple is used in the tank it provides a certain amount of protection to prevent cavitation from when the pump draws the fuel from the tank it can also create a low pressure area in the fuel that can vortex into a path for the pump to draw air.



### Big (2 1/2") Aluminum cap and aluminum bung assembly

pn 61246-25011 \$ 99.00 +

### "Econo" aluminum cap and aluminum weld bung assy (1 1/2")

pn 61246-15001 \$ 63.00 +

### "Econo" aluminum cap and aluminum weld

bung assy (2") pn 61246-20001 \$ 73.00 +



### Weld Bung (female thread weld in tank fittings)



Dash 6 AN female weld bung	9/16" x 18 thread	pn 61125-60006	\$ 19.95
Dash 8 AN female weld bung	3/4" x 16 thread	pn 61125-60008	\$ 22.95
Dash 10 AN female weld bung	7/8" x 14 thread	pn 61125-60010	\$ 25.15
Dash 12 AN female weld bung	1 1/16" x 12 thread	pn 61125-60012	\$ 28.15
Dash 16 AN female weld bung	1 5/16" x 12 thread	pn 61125-60016	\$ 34.75
Dash 20 AN female weld bung	1 5/8 " x 12 thread	pn 61125-60002	\$ 39.50

## Port Nozzle installation

Since they were originally meant for carburetors all tunnel ram manifolds come stock undrilled for port nozzles. On most manifolds the port wall is too thin to support a threaded nozzle holder so a threaded ring or block must be welded to the port runner for the nozzle holder to thread into.

Supply port nozzle weld bungs for thin wall port runners \$ 165.00

Install port nozzle weld bungs for thin wall port runners \$ 195.00

Install port nozzles in thick port runner walls \$ 125.00

The nozzle holders shown are for a special application with an option for nitrous nozzles. Note: On some manifolds the port wall is thick enough to support the threaded nozzle holder so all you have to do on that manifold is just drill and tap to suit.

