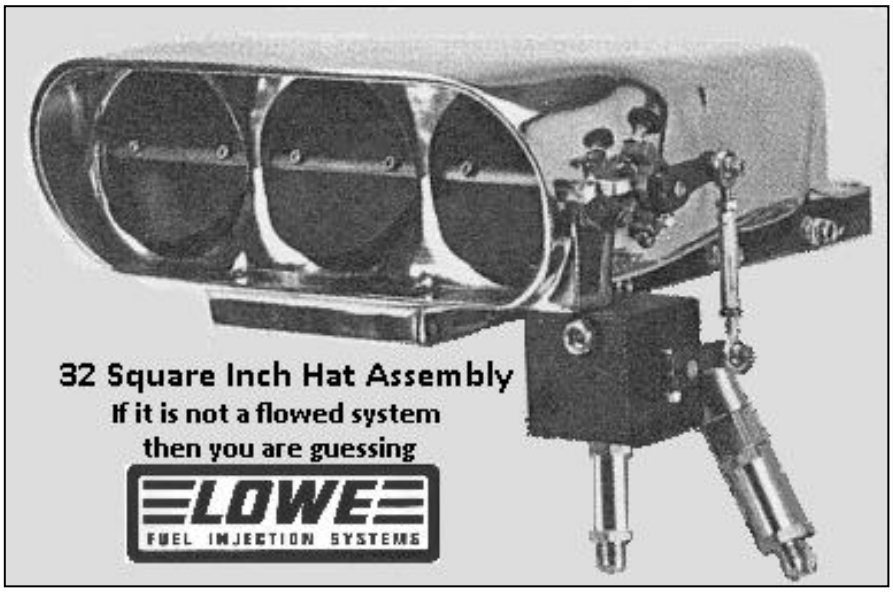
LOWE Industries
PO Box 180 Rosewood, Qld 4340 Australia
www.KenLowe.com.au
Phone 0411-699 535

Supercharged

Fuel Injector Kit

LOWE Fuel Systems



This injector is calibrated for supercharged applications.

Purchasing check list page 23

If you want to supply some or all the hardware and want us to flow and package it for a bolt on application this is perfectly ok for us as long as the hardware meets the needs of the application.

Complete Flowed bolt on system (32 sq inch)– $4411.00

Includes, Hat assembly with barrel valve, distribution block, hat nozzles and lines, correct fuel pump, fuel pump belt drive, fuel shut off valve with fittings, flowed system with 200 page 31 chapter fuel injection instruction book.

Hat assembly includes: Polished aluminum injector hat, metering valve, idle and secondary check valve where applicable, bypass pills, distribution block, nozzles and fuel delivery lines for the hat nozzles. Price includes flowing if purchased with fuel pump below $ 2566.00
Add for high flow barrel valve (recommended) $ 100.00

See controls section for cables and linkages to connect throttle levers to the throttle pedal.

We stock blower drive hubs, pulleys, belts, idlers, idler brackets.

Fuel pump PN 35571-30050 $ 1050.00

Constant flow fuel injection requires the correct size fuel pump for the application. Too large or too small both will create problems. For a fuel pump drive, select belt drive if you are using a stock type water pump. If you have an electric remote water pump or do not use a water pump you can use a cam drive otherwise a belt drive kit is an option.

EZ Start valves – Recommended

In all applications where you are using an on board starter to start the engine keeping the fuel primed to the nozzles is a problem. We have a special one way check valve for top of fuel pump or top of the fuel shut off valve. The EZ Start holds the fuel in the fuel system to prevent it from draining back into the tank. When the fuel drains back into the tank it pulls air in through the nozzles and the fuel system must refill the hoses before it will run making the engine more difficult to start as it has to purge the air from the system before it will run.

35774-10006 -6 Easy Start valve $ 79.00
35774-10008 -8 Easy Start valve $ 89.00

Fuel shut off valve

3 way Fuel shut off valve **1.295 body** –8 ports with -8 fittings
PN 35775-00602 $ 255.00

See control section for levers and cables to allow driver to operate this valve from inside the drivers compartment.

35090-35209 Over-center spring mount bracket & kit.
This kit holds the fuel shut off in the open position preventing it from moving closed while the engine is running, yet it allows you to close the fuel shutoff easily.
PN 35090-35209 $ 95.00

We make offset magneto drives as well – our FPMD drives from the front of the engine where the fuel pump goes and then the fuel pump just bolts to the front of the FPMD.

Fuel pump drives

With constant flow fuel injection the size of the fuel pump is critical and the fuel pump speed is directly related to engine rpm.

You have two ways you can drive the fuel pump. One is **belt drive** and the other is **cam drive**. The good point about belt drive is that it leaves the front of the engine free for other hardware and the fuel pump is mounted very low insuring the pump has easy access to the fuel. The downside is that the fuel pump is mounted low and is not very accessible. It is harder to get the fuel pump off and on with a belt drive. The belt and belt adjustment can cause problems as well.

Cam drive mounts the fuel pump on the front timing cover and drives the pump off the front of the cam as the name implies. Here the fuel pump gives easy access. Design of the fuel tank is important here as you want to make sure the tank is designed with the fuel level above the level of the pump.

Note: On the belt drive application the fuel pump is mounted backwards to the cam drive the fuel pump operating rotation is different. IF you do not change the operating rotation of the fuel pump it will not pump fuel to the barrel valve and your unit will not work.

Fuel pump hex drive adapter only

Some applications may allow you to make your own pump mount. For this situation we offer a fuel pump hex drive

PN 39225-00001 $ 95.00

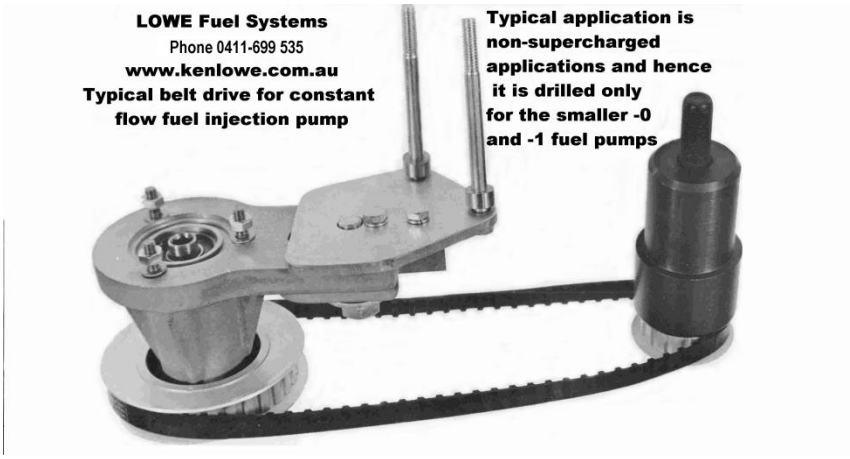
Thrust bearing and 4ea .032 spacer washers

PN 39225-00002 $ 45.00

Belt drive for fuel pump

Most Non Chevy fuel injection applications use a belt drive kit to drive the pump unless a cam drive front cover or gear drive is available for the engine application.

Complete belt drive kit $395.00



392 Belt drive fuel pump kit
PN 35225-80003 $ 395.00

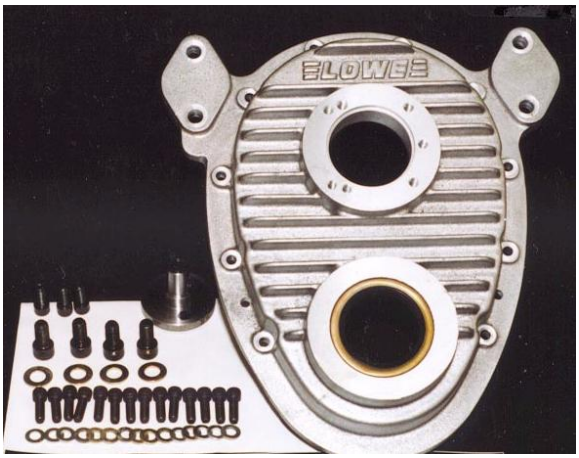
426 Belt drive fuel pump kit
PN 35225-0004 $ 395.00

Ford 351C/W Belt drive fuel pump kit PN 35225-80005 $ 395.00

Universal belt drive fuel pump kit
PN 35225-80009 $ 395.00

Engine Timing Covers (Chevy - Ford)

Small block Chevy



SBC Timing cover – Supercharged

Chevy cast alum timing cover kit - Supercharged application
- Includes water block off plates
- Includes fuel pump mounting flange drilled for 3 &4 bolt
- Includes fuel pump hex drive adapter
- 3 bolt pattern points the fuel pump at 2:30
- PN 39195-35000 List $ 295.00 + Racer Decal Discount $ 271.00 +

SBC Chevy cast alum timing cover only - Supercharged application
- Includes water block off plates
- Includes fuel pump mounting flange drilled for 3 &4 bolt
- 3 bolt pattern points the fuel pump at 2:30
- PN 39195-35001 List $ 225.00 + Racer Decal Discount $ 205.00 +

SBC Chevy cast alum timing cover kit - Supercharged application
- Does not includes water block off plates
- Includes fuel pump mounting flange drilled for 3 &4 bolt
- Includes fuel pump hex drive adapter
- 3 bolt pattern points the fuel pump at 2:30
- PN 39195-35003 List $ 285.00 + Racer Decal Discount $ 276.00 +

SBC Chevy cast alum timing cover only - Supercharged application
- Does not includes water block off plates
- Includes fuel pump mounting flange drilled for 3 &4 bolt
- 3 bolt pattern points the fuel pump at 2:30
- PN 39195-35004 List $ 245.00 + Racer Decal Discount $ 211.00 +

SBC Timing cover – Non supercharged

SBC Chevy cast alum timing cover kit - Non Supercharged application machined to clear a Romac balancer 6.25" diameter & 1.375" from the engine block to the timing case cover front. It is necessary to use a KLRC notched 2.5 fuel pump extension in this application to get the pump far enough forward to get it to clear the harmonic balancer. The notched fuel pump extension, bearing and driveshaft is part number part number 35225-25101

Includes water block off plates
Includes fuel pump mounting flange drilled for 4 bolt
includes fuel pump hex drive adapter
PN 39195-35010 List $ 315.00 + Racer Decal Discount $ 291.00 +

SBC Chevy cast alum timing cover only - Non Supercharged application machined to clear a Romac balancer 6.25" diameter & 1.375" from the engine block to the timing case cover front. It is necessary to use a KLRC notched 2.5 fuel pump extension in this application to get the pump far enough forward to get it to clear the harmonic balancer. The notched fuel pump extension, bearing and driveshaft is part number part number 35225-25101

Includes water block off plates
Includes fuel pump mounting flange drilled for 4 bolt
PN 39195-35011 List $ 265.00 + Racer Decal Discount $ 225.00 +

SBC Chevy cast alum timing cover kit - Non Supercharged application machined to clear a Romac balancer 6.25" diameter & 1.375" from the engine block to the timing case cover front. It is necessary to use a KLRC notched 2.5 fuel pump extension in this application to get the pump far enough forward to get it to clear the harmonic balancer. The notched fuel pump extension, bearing and driveshaft is part number part number 35225-25101

Does not includes water block off plates
Includes fuel pump mounting flange drilled for 4 bolt
Includes fuel pump hex drive adapter
PN 39195-35013 List $ 330.00 + Racer Decal Discount $ 311.00 +

SBC Chevy cast alum timing cover only - Non Supercharged application machined to clear a Romac balancer 6.25" diameter & 1.375" from the engine block to the timing case cover front. It is necessary to use a KLRC notched 2.5 fuel pump extension in this application to get the pump far enough forward to get it to clear the harmonic balancer. The notched fuel pump extension, bearing and driveshaft is part number part number 35225-25101

Does not includes water block off plates
Includes fuel pump mounting flange drilled for 4 bolt
PN 39195-35014 List $ 285.00 + Racer Decal Discount $ 245.00 +

Big Block Chevy – Front covers and pump drives

BBC Chev cast alum timing cover kit
- Includes Chev cast alum timing cover
- Includes water pump block off plates cast in cover
- Includes 3 hole and 4 hole fuel pump mount drilled and tapped in cover
- Includes fuel pump drive hex
- PN 39195-42700 List $ 340.00 + Racer Decal Discount $ 301.00 +

BBC Chev cast alum timing cover only
- Includes Chev cast alum timing cover
- Includes water pump block off plates cast in cover
- Includes 3 hole and 4 hole fuel pump mount drilled and tapped in cover
- PN 39195-42701 List $ 275.00 + Racer Decal Discount $ 231.00 +

BBC Chev cast alum timing cover only
- Includes Chev cast alum timing cover
- Includes water pump block off plates cast in cover
- Blank fuel pump pad, does not include fuel pump mount drilled and tapped in cover
- PN 39195-42702 List $ 255.00 + Racer Decal Discount $ 216.00 +

BBC Chev cast alum timing cover kit
- Includes Chev cast alum timing cover
- Does not includes water pump block off plates cast in cover
- Includes 3 hole and 4 hole fuel pump mount drilled and tapped in cover

Includes fuel pump drive hex
PN 39195-42703 List $ 370.00 + Racer Decal Discount $ 331.00 +

BBC Chev cast alum timing cover only
Includes Chev cast alum timing cover
Does not includes water pump block off plates cast in cover
Includes 3 hole and 4 hole fuel pump mount drilled and tapped in cover
PN 39195-42704 List $ 301.00 + Racer Decal Discount $ 251.00 +

BBC Chev cast alum timing cover only
Includes Chev cast alum timing cover
Does not includes water pump block off plates cast in cover
Blank fuel pump pad, does not include fuel pump mount drilled and tapped in cover
PN 39195-42705 List $ 285.00 + Racer Decal Discount $ 235.00 +

Fuel Pump Hex Cam Drive - 3/8" Hex

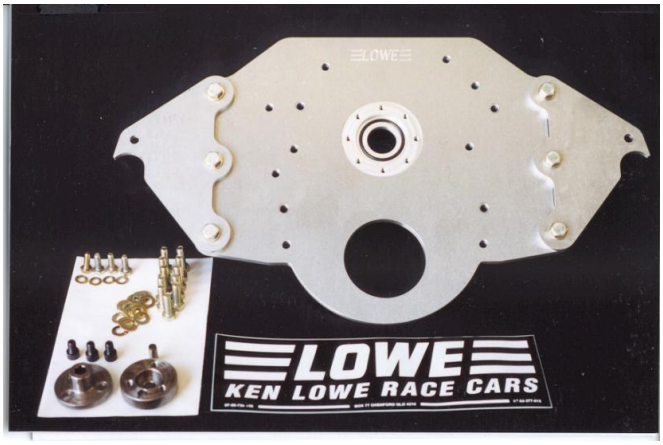
Chevy cam bolt pattern

Hex Drive Only

PN 39225-00001 List Price $ 95.00 + Racer Decal Price $ 75.00 +

Fuel Pump Cam Drive Thrust Bearing Kit
"A must for all roller cam Chevy engines"
1 ea Thrust Bearing
4 ea Hardened bearing races / shims .032" thick – shim to set cam end play
PN 39225-00002 List Price $ 50.00 + Racer Decal Price $ 45.00 +

NOTE: It is recommended that all supercharged Chevrolet applications use a crank support on the front.



Small Block Ford

Front Timing Cover
Fuel Pump Drive
* Cleveland
* Fontana
* Windsor

Engine mounts shown in photo are available
Highly recommended that for supercharged Ford applications that you incorporate the crank support into the front cover assembly.

Cleveland --

351C Ford Front plate only
CNC machined billet alum-no fuel pump mounting
PN 39195-69449 List $ 285.00 + Racer Decal Discount $ 235.00 +

351C Ford Front plate only but plate has pump provisions and mount holes
CNC machined billet alum-includes fuel pump mounting
PN 39195-69440 List $ 295.00 + Racer Decal Discount $ 265.00 +

351C Ford Front plate with pump provisions, mount holes and pump drive kit.
CNC machined billet alum-includes fuel pump mounting and cam drive fuel pump drive kit
PN 39195-69441 List $ 495.00 + Racer Decal Discount $ 430.00 +

Fontana -----

351F Ford Front plate only
CNC machined billet alum-no fuel pump mounting
PN 39195-69479 List $ 285.00 + Racer Decal Discount $ 235.00 +

351F Ford Front plate only but plate has pump provisions and mount holes
CNC machined billet alum-includes fuel pump mounting
PN 39195-69470 List $ 295.00 + Racer Decal Discount $ 265.00 +

351F Ford Front plate with pump provisions, mount holes and pump drive kit.
CNC machined billet alum-includes fuel pump mounting and cam drive fuel pump drive kit
PN 39195-69471 List $ 495.00 + Racer Decal Discount $ 430.00 +

Windsor -----

351W Ford Front plate only

CNC machined billet alum-no fuel pump mounting

PN 39195-69479 List $ 285.00 + Racer Decal Discount $ 235.00 +

351W Ford Front plate only but plate has pump provisions and mount holes

CNC machined billet alum-includes fuel pump mounting

PN 39195-69470 List $ 295.00 + Racer Decal Discount $ 265.00 +

351W Ford Front plate with pump provisions, mount holes and pump drive kit.

CNC machined billet alum-includes fuel pump mounting and cam drive fuel pump drive kit

PN 39195-69471 List $ 495.00 + Racer Decal Discount $ 430.00 +

Windsor JESEL on following page

Windsor or Fontana with a JESEL Belt Drive

351J Ford Front plate only

CNC machined billet alum-no fuel pump mounting

PN 39195-69489

List $ 310.00 + Racer Decal Discount $ 275.00 +

351J Ford Front plate only but plate has pump provisions and mount holes

CNC machined billet alum-includes fuel pump mounting

PN 39195-69480

List $ 325.00 + Racer Decal Discount $ 305.00 +

351J Ford Front plate with pump provisions, mount holes and pump drive kit.

CNC machined billet alum-includes fuel pump mounting and cam drive fuel pump drive kit

PN 39195-69481 List $ 535.00 + Racer Decal Discount $ 470.00 +

SBF Fuel Pump Drive Kit

FORD 351 Windsor, Cleveland, Fontana

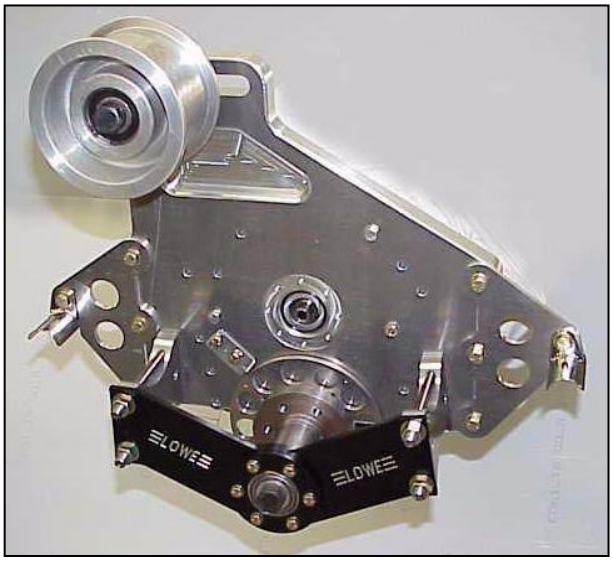
1 ea Camshaft Adapter

1 ea Fuel Pump Hex Drive

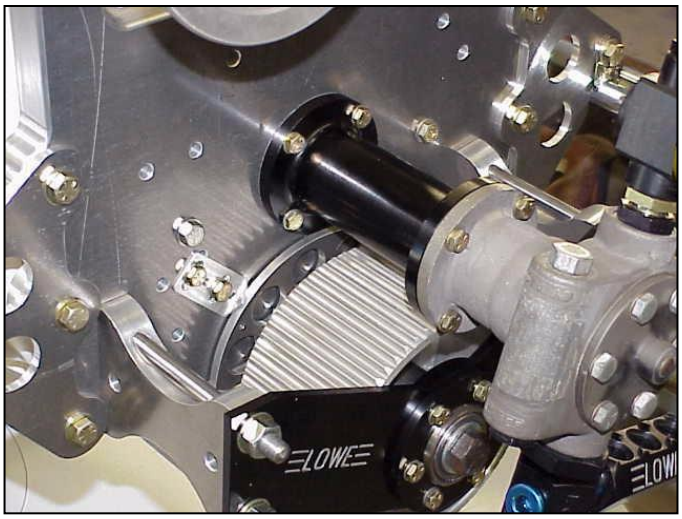
3 ea 5/16" x ¾" UNC Allen Bolts

PN 39225-00009 List Price $ 185.00 Racer Decal Discount $ 165.00 +

Front Crank Support – Small Block FORD

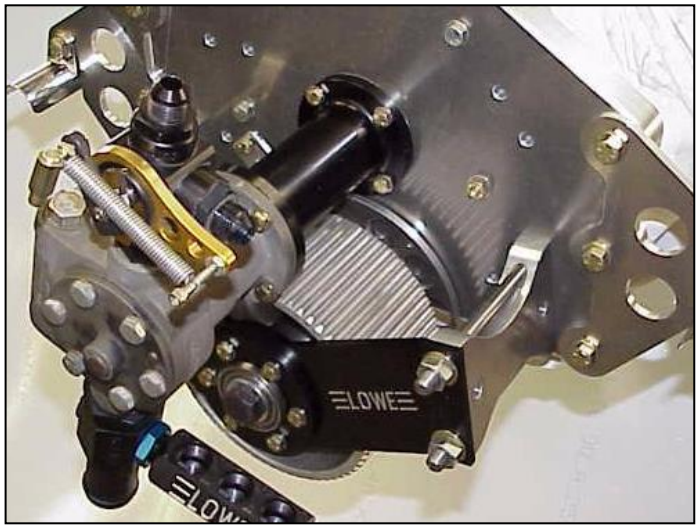


When your engine was originally designed the manufacturer they designed it to take up to 20 horsepower off the front of the crankshaft to drive the water pump, fan, power steering and the air conditioning and the alternator. For this power load the front of the crankshaft does well. Now you want to drive the supercharger off the front of the engine. The front of the crankshaft on a supercharged engine takes a lot of strain from the pull of the belt turning the supercharger. On some applications it takes up to 400 horsepower to just turn the blower at full boost. The front of the crankshaft was never designed to take this type of load. As the crankshaft pulley pulls down on the belt to turn the blower pulley the side load on the crankshaft is massive. The belt load is trying to lift the front of the crankshaft up and this load will cause the crankshaft to fail prematurely at the radii on the front of the first rod journal. On a supercharged engine it is not **if** the crank will fail it is **when.** A crank support will drastically extend the life of a crankshaft in your race car. This is even when everything to going good. How bad is it for your crankshaft if you back fire the engine for some reason and nothing happens except you just break the belt ask yourself what amount of energy did it take to break this belt and how did this energy manifest itself in the crankshaft. The belt broke because the engine kept turning when the supercharger stopped (or wanted to stop) because of a spike of excessive pressure in the manifold (from the backfire). What did it do to the front of the unsupported crankshaft? What you did not realize is that although you do not see the damage you probably just cracked the crankshaft on the number one rod journal. Though it will still run (probably) the crankshaft just had over half of its normal life eliminated. Now what did that cost? A KLRC crank support will usually double the life of a crankshaft making the LOWE crank support on of the best investments you can make. If you crankshaft costs $2000.00 (or more) and lasts 40 runs before it cracks beyond safe use and you can get 70 or 80 runs with a LOWE crank support then the LOWE crank support should be worth $2000.00.(or more) **JUST THE FIRST TIME THAT YOU USE IT.**



The LOWE crank support attaches to the lower four bolt holes in the front of the engine block with studs. The crank support side plates slide on the studs and the front bearing plate goes on after the side plates. The crank spindle attaches to the centre of the crankshaft and the bearing that rides in the front bearing plates goes on the end of the spindle. The LOWE Race Car Hardware crank support has adjustment built into the design to allow for differences in crank tunnel bore but once the adjustment is set you

can disassemble and reassemble the engine with out having to readjust the crank support. The LOWE crank support comes anodised with a complete set of instructions to install the kit correctly.



Check list of items you may need.
* Front cover - select application
* Crank support kit
* Fuel pump hex drive
* Fuel pump hex drive adapter
* Crank hub
* Crank hub timing ring
* Idler pulley
* Engine mounts
  (if needed, with or without saddles)

Crank Support Kit

Ford Cleveland/Fontana - This kit fits all the SBF front base plates shown below and includes side plates and mounting studs, front plate with bearing clamp rings, crank support bearing spindle, bearing, and center bolt. This kit requires the use of the correct front cover (base plate) listed below.
PN 39725-35100 List price $ 995.00 + Racer Decal Discount $ 850.00 +

Engine Base Plates (for crank support mounting)

Base plate machined for fuel pump mount, blower belt idler pulley mounting bracket, front engine mount holes provided. CNC machined billet aluminum. Includes timing pointer and mounting holes drilled and tapped.

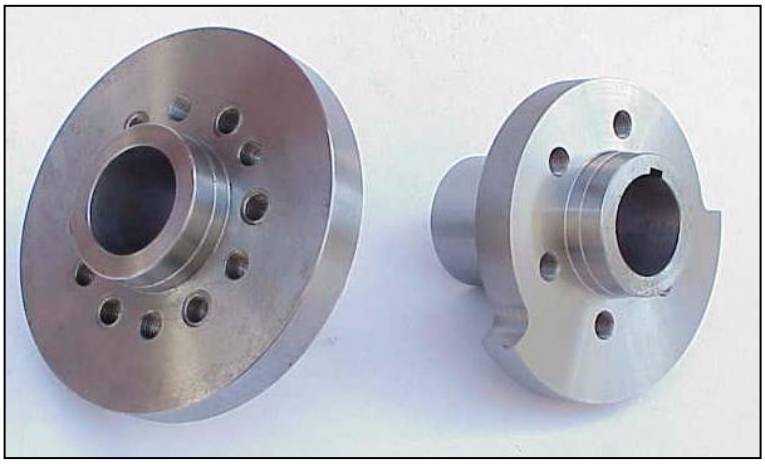
351 Ford Windsor – JESEL PN 39725-69950	List price $ 1150.00 + RDD $ 950.00 +
351 Ford Fontana – JESEL PN 39725-69980	List price $ 1050.00 + RDD $ 895.00 +
351 Ford Windsor – Standard timing chain PN 39725-69981	List price $ 1050.00 + RDD $ 895.00 +
351 Ford Cleveland PN 39725-69990	List price $ 1050.00 + RDD $ 895.00 +

Note: Some blower hub manufacturers make their counterweighted hubs with the counterweight on the rear of the hub. This will interfere with the crank support base plate. The LOWE counterweighted blower hubs the counterweight is moved forward to clear any hardware that may be close to the front of the engine.

SBF Fuel Pump Drive Kit

FORD 351 Windsor, Cleveland, Fontana
1 ea Camshaft Adapter
1 ea Fuel Pump Hex Drive
3 ea 5/16” x ¾” UNC Allen Bolts
PN 39225-00009 List Price $ 185.00 RDD $ 165.00 +

Ford small block blower drive crank hub – 351 Cleveland, Windsor, Fontana



Our blower hubs are a little different. First, we start with tougher steel. All of our blower hubs are made from 4140 steel which is much stronger than the steel most other blower hubs are made from. We do this to give you the best product possible. Blower hub failure will manifest itself by either the keyway failing or the hub itself cracking, or both. Usually, when the blower nub keyway fails it does so because the key starts to roll over in the key slot because of the load. We try to stop this first, with tougher steel, and second a better fit on the keyway and the crankshaft nose.

The Lowe Ford 351 Cleveland Windsor blower hubs are either counterweighted or neutral balance. If your engine is externally balanced you must use a counterweighted hub and that hub must be balanced to the engine combination. Failure to do so will result in an unsatisfactory outcome.

Keyways

When the automobile engine manufacturer made the engine for the original application they never intended to take several hundred horsepower off the front of the engine. Their intention was to drive the water pump, fan, alternator, power steering, air conditioner and such. This would consume at the most 20-30 horsepower even in the worst of conditions. In a race application with a supercharger, often we ask several hundred horsepower to come off the front of the crankshaft to drive the supercharger. We do this and ask the keyway to take the entire load. Not a great design but it is the one we are stuck with today. In my opinion the best design would be to get the crankshaft manufactures to spline the ends of the crank and then supply a broached hub to suit. Kind of like an axle and spool situation. That would be the better design, but we don't have that right here right now. So how do we make what we have live longer?

First the keyway and key must fit properly. Often I see the width is ok but the hub is broached too deep and the key has room to start the "roll over" under hard load. I don't broach our keyway that deep and want you to fit the key to the slot so there is a minimum of room over the key. Second the stronger 4140 hub will not distort as easily as the softer steels this makes it harder for the key to fail since it takes more energy to distort the hub in the roll over process.

Many decades ago when blower hubs keys failed the first (but not the best answer) was to add a second keyway to double the strength. Initially adding a second key sounds like a good idea but I want to remind you that you are removing material from the nose of the crankshaft and the hub. On smaller crankshaft noses like Cleveland's and Small Block Chevys the nose is not that big anyway and removing material only makes them weaker. I believe you are addressing the symptom and not the problem. I also suggest that the double keyway process is flawed as since putting the two keyways in the crank and hub is not a spline process, minor machining error with this process makes one of the keys take most, if not all the load anyway. We don't recommend the process but we do supply the service if a customer wants it. Cleveland's, Windsor's, Big Block Chevy's, Small Block Chevy's all use a 3/16" keyway in the stock harmonic balancer which for the stock applications is completely adequate. We do not recommend the two keyway combination but we do broach a 1/4" keyway in our hubs. To take full advantage of the larger keyway the crankshaft must have a 1/4" keyway slot milled in it. You must fit the key stock to the hub and crankshaft combination is such a way as to minimize the space on the top or the bottom of the key stock. A snug fit is preferred with a maximum of .005 clearances on the top of the key stock. The Cleveland and Windsor

both use a 5/8” unf bolt as a center bolt which is adequate. The Big Block Chevy uses a 7/16”unf, which if you are using a crank support should be re drilled and tapped to 3/4" unf.

Special Seal for a stronger hub

On the Ford hubs the standard seal diameter is 1.875” this makes the hub a little weak since it is not very thick. This is adequate for a harmonic balancer but not a blower hub. We have increased this dimension to 2.00” or about 25% stronger with just this modification, add in the 4140 steel and now you have a hub that is almost twice as strong as “standard blower hub”. You do have to replace the front seal with a seal number **CR19852** this is the same outside diameter as the stock seal but with a larger inside diameter to accommodate the larger diameter seal area on the LOWE hub.

Hone finish

The LOWE blower hubs are CNC turned and milled to exacting specifications. In order to create a better product we bore the center of the hub slightly undersize as this allows us to hone fit the inside diameter of the hub. We do this to get a better fit by controlling the dimensions. Although the CNC boring process is very accurate there are still tolerances that we feel are not adequate for the fit of the hub to the crankshaft. It is more work to final hone the inside dimension for the crank nose but by doing so we insure that there is a minimum opportunity for the key to do the roll over.

On a Cleveland or Windsor crankshaft the nose dimension is 1.3745” we hone fit the hub to 1.3740” to give a half of a thousands press fit. This makes for a snug fit going on the crankshaft, so installation with a hub installer not a hammer is a requirement. This snug fit insures the keyway has a better chance of survival driving that big supercharger of yours. Use antiseize lubricant to coat the surfaces between the hub and the crank snout (nose).

We have measured several of our competitor’s blower hubs. Since they are just bored and not honed we find they often have a taper in the center hole of up to nearly .002” Due to manufacturing techniques and processes we find that the start of the hole will be close to size while the other end (where the key is located) will be loose. Before installing the blower hub, check the diameter of your crankshaft nose and insure there are no burrs or imperfections that would impede the installation of the blower hub.

Bolt Pattern

The bolt pattern to hold the blower pulley to the hub is a six hole pattern on a 2.8” diameter. Our standard is an even space pattern. Some blower pulleys use one hole offset slightly while most blower pulleys have both even space and an offset hole by “slotting” the one hole concerned. There is no good reason to use an offset bolt pattern in this application. How it got started goes back to the early 50’s Oldsmobile engines. This engine was one of the first engines to get a supercharger installed by hot rodders and initially everyone just use the factory harmonic balancers to drive the pulley. On the early Old’s engines the timing mark was on the pulleys not the harmonic balancer so in a factory application when the pulleys were installed on the harmonic balancer the offset hole insured that the pulleys could not be installed in the wrong place. By using the stock harmonic balancer initially there was a lot of pulleys made with the offset hole. Later when the stock harmonic balancers started to fail and everyone started making hubs to replace them to use the pulleys they had they just offset the one hole. This carries on even today. The offset hole pulleys or hubs are difficult to install as locating the offset hole in the hub and the pulley at the same time is difficult. Today most pulleys are even spaced or dual pattern Ken Lowe decided to just have an even space pattern on the hub. If you want an even space pattern and the offset pattern both on your hubs please specify this when ordering.

The Lowe blower hub has a 1.99” spigot to align the center of the blower pulley. The standard blower pulley has a 2.00” center hole.

Ignition Timing Marks

Accurate ignition timing on a supercharged engine is a requirement. Get it wrong and you are picking up parts off the race track. Ignition timing accuracy is increased by increasing the diameter of the wheel where the timing is read. A six inch diameter wheel is significantly more accurate than a three inch diameter wheel. We have available a timing ring that is shrink fit to the blower hub. Since we do not know where your TDC is we have left the wheel blank allowing you to set your TDC and install your timing marker then using some marking tools mark the TDC on the timing ring. While you are doing this you are probably doing your camshaft degree at the same time so you have your degree wheel set up on the engine, go ahead and make the marks at 90-180-270 for setting the valves. Make a mark at 30 degrees BTDC as a base line for your ignition timing. Decide where you want the ignition timing to be and set some marks there as well. One more thing, if you want make it more useful and you know what your cam centerline is, and you use the lobe center method for setting your cam location go ahead and mark there as well. That will usually be somewhere between 108 and 114 degrees ATDC number one.

Timing Ring – 6.375” diameter PN 36600-63750 $ 89.00

LOWE blower hub features

* Tougher Steel 4140
* Hone finish you get a better fit on the crankshaft nose
* Dual patterns available
* Available in both counterweighted and neutral balance.
* Thicker (stronger) main body and use of a larger seal.

Blower drive crankshaft hub 4140 steel - 302,351 Windsor, 351 Cleveland
Counterweighted (External balance) - Single bolt pattern
PN 36335-01500 List price $ 535.00+ Racer Decal Discount $ 435.00+

Blower drive crankshaft hub 4140 steel - 302,351 Windsor, 351 Cleveland
Counterweighted (External balance) - Dual bolt pattern
PN 36335-01501 List price $ 550.00+ Racer Decal Discount $ 465.00+

Blower drive crankshaft hub 4140 steel - 302,351 Windsor, 351 Cleveland
NON - Counterweighted (Internal balance) - Single bolt pattern
PN 36335-01510 List price $ 450.00+ Racer Decal Discount $ 390.00+

Blower drive crankshaft hub 4140 steel - 302,351 Windsor, 351 Cleveland
NON - Counterweighted (Internal balance) - Dual bolt pattern
PN 36335-01511 List price $ 480.00+ Racer Decal Discount $ 410.00+

Fuel pump extensions

Some applications require a fuel pump extension. On some cam drive applications the fuel pump has to be moved forward to clear some items. In supercharged applications the pump has to be moved forward to clear the blower drive belt. This application requires a 5" extension. Some can use a 2.5" extension. On some non supercharged applications you may have to move the fuel pump forward to clear the harmonic balancer. This requires a special 2.5" notched extension as the harmonic balancer fits very close to the timing cover on a small block Chevy.

Four different configurations

A. **2.5" – no notch – PN 35225-25100 Price $ 315.00 +**
B. **2.5" – notch – PN 35225-25101 Price $ 335.00 +**
C. **5" – no notch – PN 35225-50100 Price $ 345.00 +**
D. **5" – notch – PN 35225-50101 Price $ 360.00 +**

All fuel pump extensions are drilled on the mounting flange for a standard 4 bolt mounting. Small fuel pumps are all the asymmetrical three bolt mount and the extension of your choice may have to be drilled and tapped to ¼"UNC after the correct rotation has been determined upon installation.

Fuel System instruction book 99344-02001 (31 Chapter / 212 page)$ 99.95

Pinch Valve and Jet Holder

Many racers find the high speed function of constant flow fuel systems frustrating. On constant flow fuel systems the high speed poppet opens once the system pressure is high enough to push the poppet off the seat allowing some of the fuel to return to the fuel tank to maintain the air fuel ratio they desire at the higher engine revolutions.
As the racer chases the main jet up or down the system pressure changes and this changes the opening point of the high speed jet. Often this is not something the racer wants. The solution to this is the electric high speed valve. By using a rpm set point and a rpm switch to activate the pinch valve to open or close as the racer desires. To limit the amount of fuel being returned installing a jet holder provides the racer with a place to put the jet they want to use to limit the amount of fuel flow. One end of

the jet holder is threaded to BSP or NPT as required by the pinch valve of choice, the other end is threaded to a standard 9/16”-18 thread of a Dash 6 fitting. You could even install a poppet in this end as well if that is what a racer wanted to do.
First decide on the largest size of the jet you wish to use. This jet should be at least 15% smaller than the orifice of the pinch valve. Remember you want the jet to be the metering device not the valve itself. Pinch valves with larger orifices are always more expensive. If you are using your own pinch valve be sure it will operate in the pressure range that your fuel system will create and that the elastomers (rubber bits) are methanol compliant. The valve action is either normally open or normally closed. The normally closed means that the valve is closed until you apply the 12 volts to open the valve. These valves have mounting provisions on the bottom side to allow the racer to mount them on their car.

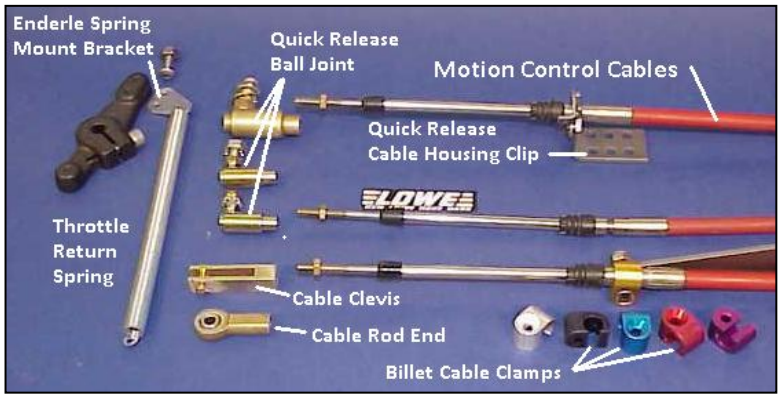
Pinch Valve - Normally CLOSED - ¼”Female BSP thread - .312 orifice – 145 psi rating
PN 35775-00127 Pinch Valve NC 12VDC ¼”BSP female ports - .312 orifice
List Price $ 250.00+ Racer Decal Discount Price $ 210.00+

Pinch Valve - Normally CLOSED - ¼”Female BSP thread - .094 orifice – 145 psi rating
PN 35775-00262 Pinch Valve NC 12VDC ¼”BSP female ports - .094 orifice
List Price $225.00+ Racer Decal Discount Price $ 175.50+

Pinch Valve - Normally OPEN - ¼”Female BSP thread - .094 orifice – 130 psi rating
PN 35775-10262 Pinch Valve NO 12VDC ¼”BSP female ports - .094 orifice
List Price $ 312.50+ Racer Decal Discount Price $ 271.50+

Pinch Valve - Normally OPEN - ¼”Female BSP thread - .125 orifice – 188 psi rating
PN 35775-10261 Pinch Valve NO 12VDC ¼”BSP female ports - .125 orifice
List Price $ 285.00+ Racer Decal Discount Price $ 249.00+

Jet holder – ¼” NSP male thread x 9/16”-18 SAE O-Ring thread PN 35020-00050
Jet holder – ¼” BSP male thread x 9/16”-18 SAE O-Ring thread PN 35020-00051
List Price $ 59.00+ Racer Decal Discount Price $ 45.00+



Controls and levers -

Connecting Everything – we have available a complete range of cables, brackets, clamps and hardware to connect the throttle, fuel shut off or other controls you may need.

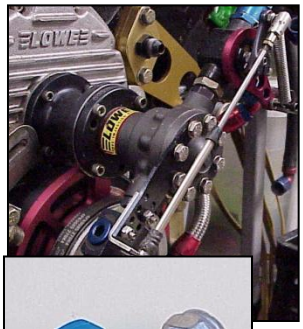
Motion Control Hardware

Cables measured from tip to tip Racer Decal Discount - Save $20.00 off every cable

Motion Control cable 39" or 3'3" Part Number 53140-00100 List $ 106.00+ Racer Decal Discount = $ 86.00+
Motion Control cable 49" or 4'1" Part Number 53140-00125 List $ 107.00+ Racer Decal Discount =$ 87.00+
Motion Control cable 59" or 4'11" Part Number 53140-00150 List $ 108.00+ Racer Decal Discount =$ 88.00+
Motion Control cable 69" or 5'9" Part Number 53140-00175 List $ 109.00+ Racer Decal Discount =$ 89.00+
Motion Control cable 79" or 6'7" Part Number 53140-00200 List $ 112.50+ Racer Decal Discount = $ 92.50+
Motion Control cable 89" or 7'5" Part Number 53140-00225 List $ 115.00+ Racer Decal Discount = $ 95.00+
Motion Control cable 101" or 8'5" Part Number 53140-00250 List $ 117.50+ Racer Decal Discount = $ 97.50+
Motion Control cable 108" or 9'0" Part Number 53140-00275 List $ 118.00+ Racer Decal Discount = $ 99.00+
Motion Control cable 118" or 9'10" Part Number 53140-00300 List $ 124.00+ Racer Decal Discount = $ 104.00+
Motion Control cable 128" or 10'8" Part Number 53140-00325 List $ 126.00+ Racer Decal Discount = $ 106.00+
Motion Control cable 138" or 11'6" Part Number 53140-00350 List $ 128.00+ Racer Decal Discount = $ 108.00+
Motion Control cable 148" or 12'4" Part Number 53140-00375 List $ 135.00+ Racer Decal Discount = $ 115.00+
Motion Control cable 158" or 13'2" Part Number 53140-00400 List $ 142.00+ Racer Decal Discount = $ 122.00+
Motion Control cable 167" or 13'11" Part Number 53140-00425 List $ 145.00+ Racer Decal Discount = $ 125.00+
Motion Control cable 177" or 14'9 " Part Number 53140-00450 List $ 149.00+ Racer Decal Discount = $ 129.00+
Motion Control cable 187" or 15'7 " Part Number 53140-00475 List $ 155.00+ Racer Decal Discount = $ 135.00+
Motion Control cable 197" or 16'5 " Part Number 53140-00500 List $ 161.00+ Racer Decal Discount = $ 141.00+

Cable housing quick release clip

Stainless steel
Part number 53155-01000
List Price $ 39.00 +
Racer Decal Discount Price $ 29.00 +



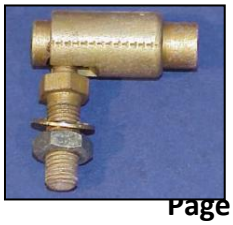
Cable Housing Billet Clamp

Comes with stainless steel countersunk Allen head capscrew and nylon lock nut to bolt to the bracket.

Part number 53155-32621 List Price $ 42.00 +
Racer Decal Discount Price $ 29.75 +

Quick Release Ball Joint

3/16” thread (10-32tpi)
Part Number53347-10100 List $45.00+ Racer Decal Discount $ 35.00+



Spring Mount - Enderle Throttle Lever

Includes: 2 ea 10-24 threaded screws 1 ea spring mount plate
Part number 53385-13020 List Price $ 15.00 +
Racer Decal Discount Price $ 12.50 +

Throttle Spring

Often a trip to the hardware store is time consuming and gets you a spring that is too short, too strong or too weak. Here is a spring that works on most throttle return applications, and it is stainless so rust is never a problem. 4" (100mm) long Part number 53680-12390
List Price $ 18.00 +
Racer Decal Discount Price $ 12.50 +

Bellcrank 1.75"

Pivot bearing ¼" id
Linkage holes are 1.75" and 1.25" from the pivot center and threaded to 10-32 thread.
CNC billet aluminum with sealed ball bearings.
List Price $ 120.00 +
Racer Decal Discount Price $ 95.00+
Wholesale (purchase 3 at $ 85.00ea +)

Throttle cable mount – Supercharger / Fuel Injection

Cable housing quick release clip
(stainless steel)PN 53155-01000
List Price $ 39.00+ Racer Decal Discount $ 29.00+
Quick Release Ball Joint 3/16 Male thread
(SAE) 3/16" Cable end
Part Number 53347-10100 List Price $45.00+
Racer Decal Discount $ 35.00+

Enderle throttle arm return spring mount
PN 53385-13020
List Price $15.00+ Racer Decal Discount $ 12.50+

Spring,throttle return 3/8" x 4" (100mm)
PN 53680-12390
Price $18.00+ Racer Decal Discount $ 12.50+

List

Throttle cable mount, Roots supercharger-Enderle Bug hat (use with 53155-01000 stainless steel clip)
Part Number 53090-13336 List Price $85.00+ Racer Decal Discount $ 69.00+

Throttle cable mount, Roots supercharger-Enderle Bird hat (use with 53155-01000 stainless steel clip)
Part Number 53090-13349 List Price $95.00+ Racer Decal Discount $ 79.00+

Throttle cable mount, Roots supercharger-Enderle Buzzard hat (use with 53155-01000 stainless steel clip)
Part Number 53090-13356 List Price $105.00+ Racer Decal Discount $ 89.00+

Throttle cable mount adapter kit Enderle Bug/Bird/Buzzard and roots blower with a **426 Chrysler** spacer bolt kit 1.5" long - This allows the throttle cable to clear the magneto.
PN 53130-13330 List Price $ 45.00+ Racer Decal Discount $ 31.00

PN

PSI (large hat) throttle mount bracket
(use with 53155-01000 stainless steel clip)
53090-13526 List Price $175.00+
Racer Decal Discount $ 145.00+

Quick Release Ball Joint 3/16 Male thread (SAE) 3/16" Cable end
Part Number 53347-10100 List Price $45.00+

Racer Decal Discount $ 35.00+

We accept Master Card and Visa. Prices are in AUD (Australian Dollars) + GST (if applicable) Price does not include shipping. All prices are subject to change without notice. Prices must be verified at time of purchase.

Fuel Shut Off - cable mount at pump

Cable housing quick release clip
(stainless steel)PN 53155-01000
List Price $ 39.00+ Racer Decal Discount $ 29.00+

Quick Release Ball Joint 3/16 Male thread
(SAE) 3/16" Cable end
Part Number 53347-10100 List Price $45.00+
Racer Decal Discount $ 35.00+

Cable mount bracket – Pump mount
Enderle 80A and Hilborn 150A
(use with 53155-01000 clip)
PN 53090-35073 List Price $85.00+
Racer Decal Discount $ 65.00+

Cable mount bracket – Pump mount - Enderle 110. 990, 1100, 1200 (use with 53155-01000 clip)
PN 53090-35113 List Price $95.00+ Racer Decal Discount $ 85.00+

Cable mount bracket – Pump mount – Hilborn 175-2, 175-3 175-4
PN 53090-35113 List Price $65.00+ Racer Decal Discount $ 55.00+

Cable mount bracket – Pump mount – LOWE 100 series pumps (use with 53155-01000 clip)
PN 53090-35113 List Price $95.00+ Racer Decal Discount $ 85.00+

Enderle fuel shut off over center spring mount

(BLUE) Dash 6 fuel shut off body - 1.010"dia PN 53090-35204
(RED) Dash 8 fuel shut off body - 1.295"dia PN 53090-35205
(GOLD) Dash 10 fuel shut off body - 1.480"dia PN 53090-35206
(Does not include quick release ball joint or fuel shut off)
List Price $ 95.00 + Racer Decal Discount $ 79.00 +
Wholesale (purchase 3 for 70.00ea +)

Fuel Shut Off - cable mount at control lever

Fuel Shut off lever – Chassis mount
PN 53360-22126
List Price $45.00+
Racer Decal Discount $ 35.00+
Weld Stud for Fuel Shut off lever includes lock nut and washer.
PN 53360-22127
List Price 4.00+
Racer Decal Discount $ 2.00+

Quick Release Ball Joint
3/16 Male thread (SAE) 3/16" Cable end
Part Number 53347-10100 List Price $45.00+ Racer Decal Discount $ 35.00+

Billet Aluminum Cable Housing Clamp
Comes with stainless steel countersunk Allen head capscrew and nylon lock nut to bolt to the bracket.
Part number 53155-32621 List Price $ 42.00 + Racer Decal Discount $ 29.75+

Weld bracket – Steel – hold the cable housing mount or can be used for mounting the fuel shut off lever.
3” long x 1” wide x 3mm steel with 3/16” hole for the cable clamp lock bolt
Part Number 11735-21500 List Price $15.00 + Racer Decal Discount $ 9.00+

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.

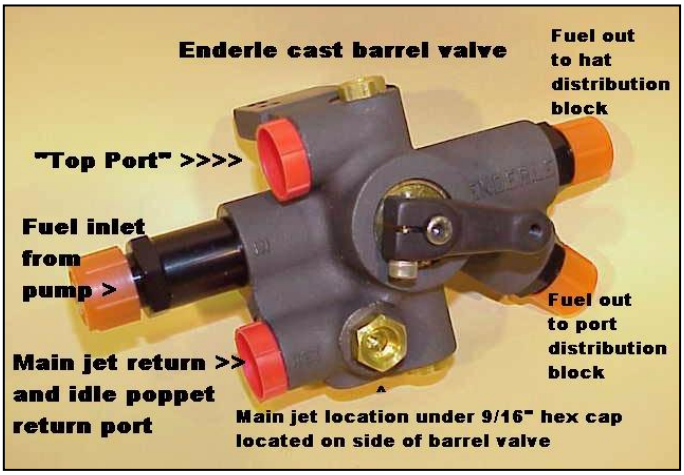
Fuel tank vents must deliver air to the tank to replace the fuel used by the engine. The more fuel the engine uses the larger the tank vent must be. I recommend a minimum 1/2" inlet on all non-supercharged engines and 3/4" on all small-supercharged engines or with a 6-71 or 8-71 blowers. Use a 1" tank 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. 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 Holly mounted on the side of the surge tank to set the fuel level so the electric fuel pump will not over fill the tank. A large 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 as well.

Prices are in AUD (Australian Dollars) + gst (if applicable)

All I need to ship your order is your credit card details and a shipping address.
We accept Master Card and Visa.
There is a printed number on the back of your credit card on the signature line. Would you give us the last three digits of that number.
Please include your phone number as well.

High flow barrel valve (recommended)



Purchasing Check List

List of items you may need to complete your Fuel Injection for your car.

Hat assembly with barrel valve, distribution block, hat nozzles and lines	
Port nozzle set (if applicable)	
Fuel Pump of correct size	
Fuel pump drive (Belt or Cam drive)	
Fuel pump extension to clear the blower belt	
Fuel Shut off valve – correct	
Fuel Shut off overcenter kit to prevent engine damage	
Magneto that is adequate for race application	
Magneto Drive to allow the mag to clear the supercharger	
Flowing the Fuel System to insure not only the best performance and also insures I don't damage my engine	
Connections for the throttle pedal	
Connections for the fuel shut off	
Crank Support to double the life of my crankshaft	
Blower of correct application for what I want to race	
Blower manifold that fits the engine and the blower	
Correctly designed and mounted fuel tank	
Start Line Control system to insure consistent launches and consistent performances.	
Top blower pulley	
Drive hub for blower	
Bottom blower pulley	
Crankshaft drive hub for blower	
Idler pulley	
Idler pulley bracket (with or without water ports)	
Blower Belt of correct length and width	