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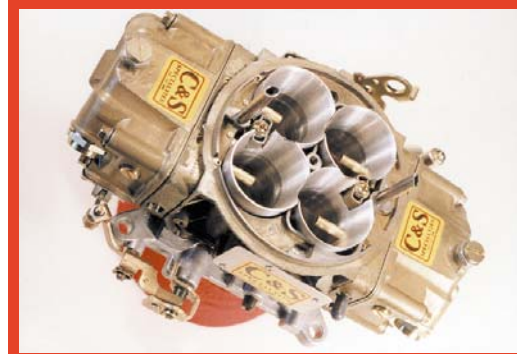
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**SPECIALTIES**

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## **Racing Carburetors Fuel Systems**

- Alcohol Carburetors
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- Rochester 2-Barrel Carburetors
- 890 C.F.M. 2-Barrel Carburetors



**THE BEST KEPT SECRET IN RACING**  
**3528 HIGHWAY B**  
**ST. CHARLES, MO. 63301**

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## **CARBURETOR AIR FLOW RATINGS: WHAT DO THEY REALLY MEAN?**

RATINGS ARE CONSTANTLY QUOTED AND COMPARED, BUT ARE ACTUALLY ONE OF THE LEAST UNDERSTOOD AND CONFUSING AREAS OF RACING

The basis for most cubic feet per minute (C.F.M.) air flow ratings such as those used by Holley® and other carburetor manufacturers was established long ago by the Society of Automotive Engineers (S.A.E.). Standard test vacuum was 1-1/2 inches of mercury for 4 barrel carburetors and 3 inches of mercury “Vacuum” for 1 barrel and 2 barrel carburetors. This was reasonable as it was about what a passenger car would develop. Of course, for the numbers to mean anything, tests would have to be run at a certain temperature and

barometric pressure. Or be corrected to standard temperature and pressure. If not otherwise stated, ratings in cubic feet per minute are at standard temperature and pressure.

This system is confusing for racing applications for several reasons. Some racing engines actually develop much more or less vacuum than these ratings, so are difficult to compare. For example, a Nascar 390, 4 barrel equipped car might have 3 times the 1-1/2 inches of mercury standard or a very large 2 barrel equipped car might have only 1-1/2 inches of mercury vacuum.

Even more confusing is the fact that most flow benches in the racing industry measure dry air at low pressure drops, commonly 10 inches of water column (W.C.), one bore or venturi at a time. This result is multiplied by a factor to arrive at what that bore would flow at a higher vacuum (i.e. 1-1/2 or 3 inches of mercury), then that figure is multiplied (by four, in the case of a 4 barrel carburetor) to get the C.F.M. rating. This rating is usually much higher than it actually is.

Besides previously mentioned airflow calculations, multiplying, reading and measuring errors, four bores will not flow four times what one bore will flow when they are close together, as in a 4 barrel carburetor. The bores are actually “fighting” for the same air. Another factor is no provision is made for fuel flow. The actual air flow will be 8% to 16% less “wet” than dry flow rating. Two reasons for this are, fuel takes up space so it uses up space for air. The second reason is fuel has more mass than air so “Hollow Cone” of vaporized fuel slows down flow velocity. This can be easily observed on large wet flow benches such as the custom C&S facility (shown in photo on page 4) which will flow wet or dry. Alcohol carburetors will lose more air flow than gas simply because there is more fuel to handle.

In order to properly specify or compare carburetors much more must be known than simply a number. Not to mention the dishonest practice of inflating ratings to increase sales.

Another common pitfall is using widely published carburetor size selector charts that use parameters such as engine size, lowest RPM at wide open throttle etc. Drawing a line across the selector indicates maximum recommended carburetor size. These calculations are for Street Cars. If used for racing, the engine would be expected to develop 1-1/2 inches of mercury vacuum at wide open throttle (W.O.T.) unless prohibited by rules, using a larger carburetor will result in much improved racing performance.

Engines that need a broad RPM range such as Road Racing or Circle Track currently work best generating about .8 to 1 inch of mercury. Heavy drag cars will work at .6 to 1 inch depending on weight to horsepower ratio. Some light drag cars such as Pro Stock and Dragsters have C&S carburetors so large they generate only .1 to .2 inches of mercury vacuum and work very well at the high RPM narrow RPM range for these cars.

In conclusion, the general trend is larger and larger carburetors for every application. The carburetor that wouldn't work several years ago for a certain application wasn't too big, it just wasn't good enough!

The C&S technical line is available to consult on your application free of charge. Call Mon. thru Fri 7:00 a.m. to 5:00 p.m. at (636) 723-4996.



## FLOW BENCH

Since 1974 C&S Specialties has designed and built specialized machines and test equipment to advance carburetor and fuel system performance.

We have accumulated over 15,000 hours of fuel system test data. Currently the C&S flow bench facility is one of the most comprehensive in the world.

Three turbine systems (7.5 HP, 20 HP and 30 HP) can be operated separately or combined to test carburetors, manifolds and other components from a Briggs & Stratton carburetor with a venturi the size of a dime to the largest internal combustion engines on the planet. While maintaining laboratory grade accuracy of one half of one percent or better.

Computerized wet flow measurement allows precise design of fuel flow as well as air flow. So air/fuel ratios can be accurately measured right on the flow bench. As well as real world testing of related components. Competitors who attempt to produce precision racing carburetors without comparable equipment can produce a product that looks good, but even they do not know if it will produce the desired results. If it were possible to determine performance by looks there would be no need for dynos or flow bench testing!

For the last 8 years we have offered a 30 day money back guarantee on our top of the line Aerosol Billet carburetor. Still none of the dozens of would be carburetor specialists dare to match our guarantee. Their products are simply too inconsistent for a money back guarantee to be possible.

We also offer contract research and development. Backed by winning experience in everything from aircraft engines, offshore power boats, Bonneville land speed record holders, Pro Stock drag racing, pulling tractors and trucks, many circle track and drag race championships and special events such as sand drags, swamp buggies and the high altitude Pike's Peak hill climb which C&S has dominated for over two decades.

Many variations of the products shown in this catalog are available for special needs— in many cases at no extra charge. Whatever your budget you can still afford the most valuable product we have:

because consulting the C&S Tech Hotline about your application is still FREE.

Call (636)723-4996 Mon thru Fri 7:00 am to 5:00 pm.

Fax data to (636)723-1277.



# C&S AEROSOL BILLET CARBURETOR

## MODIFICATIONS ADDRESS BASIC FLAWS IN THE 42 YEAR OLD CONVENTIONAL DESIGN

Stock Holley® discharge nozzles are very close to the throttle plates. This creates a fuel distribution problem at part throttle. Throttle plates direct fuel to center of intake manifold. This richens center cylinders and leans end cylinders. Even if total mixture was perfect. This reduces potential torque and smoothness.

The new C&S design fixes this problem. Location of the fuel delivery nozzle is raised one half inch allowing mixture to spread before reaching the throttle plates. A greater distribution improvement is gained with a new nozzle design.

The C&S Nozzle is machined not cast and does not “go rich” at high rpm and has only one fourth as much fuel delivery variation from low to high vacuum. It is called an aerosol nozzle because it works on the same principle as an aerosol spray can as high velocity air passes over the square cut tube end energy is transferred to the liquid, which is broken up into a very fine mist. A portion of fuel travels back the tube to be fogged off at the venturi lip to deliver highly vaporized fuel to the lean side of the throttle plates as shown in sketches. The result is a dramatic increase in torque at part throttle and a feel of smoothness. Top end power is increased due to better vaporization, less variable in air/fuel and higher air velocity through the venturi.

New C&S billet venturis will , size for size, outflow anything prepared by anybody. Period. The reason this is true

Is true are venturi location, venturi shape, and less nozzle restriction.

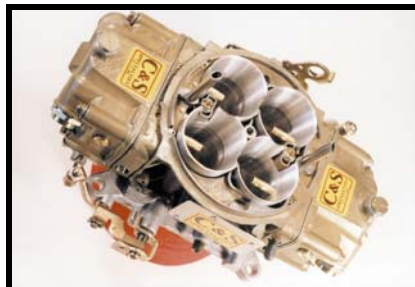
Air entry is at the highest point on the carburetor, in-taking “clean air” not “dirty air” that has bounced off 3 or 4 steps on the way to the venturi.

Latest fuel signal technology allows designing venturis with steep parabolic curve ideal air entry and steep exit angles to reduce turbulence and maximize air flow while fogging fuel to the lean side of the butterfly (throttle plate).

C&S designed venturi/nozzle system is continuous path CNC machined then bright anodized color.

Fogging fuel to the clean side of the throttle blades results in dramatic increases in horsepower in the one quarter to three quarters open throttle positions. This is the **most** important working range on the racetrack but it is usually not even tested in most dyno tests. “Throttle Stop” test techniques (i.e. limiting throttle opening to 1/2”, 3/4”, 7/8”, etc.) will show dramatic torque increases. This “off the corner” torque is a very important element of passing on a short track.

Air bleeds are located out of the air stream. On some conventional Holleys® at high air flows, fuel would actually come out of the air bleeds. Every aerosol billet carburetor is 100% wet flow tested to guarantee that all circuits are functioning correctly.



Aerosol billets are available in CFM ratings of 800-900-1000-1100-1200-1400 and 1500 CFM for gas or alcohol. Ratings are at standard 1-1/2 inches of mercury. Normally 800-900 and 1000 CFM are for circle tracks.

As always we are available to consult on dyno test setups, carb selection or other fuel system issues, free of charge.

The final new feature of the C&S Aerosol Billet 4150 isn't on the carburetor itself, but is a way of doing business. Our standard guarantee is to repair or replace the unit at our option. This is pretty much the industry standard.

Only the new premium Aerosol Billet 4150 (and the aerosol billet dominators) will feature a guarantee not available on other racing carburetors and a 30-day trial.

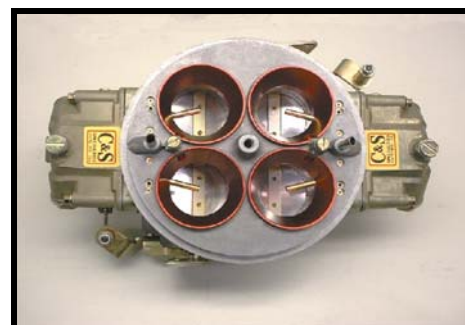
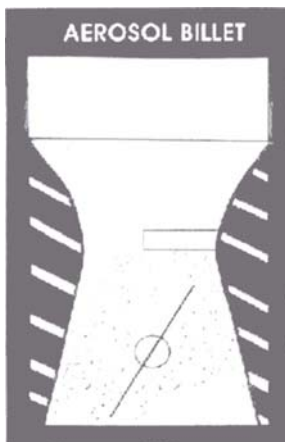
**If you don't like it we will buy it back. Period. You decide.**

Call for details.

As C&S Specialties approaches its 31<sup>st</sup> year as a carburetor and fuel system specialist, we feel this special Aerosol Billet warranty offers the serious racer an opportunity to try out the latest technology on his vehicle at no risk.

We repeat our unique offer:

**“I believe we have a faster carburetor than you are now using...would you like to try one with no obligation?”**



## AEROSOL BILLET CARBURETORS

Aerosol Billet Carburetors are the latest and the best carburetor technology available. Improved torque and throttle response results from improved fuel distribution to both sides of the butterfly, not one as on stock Holleys®. These new carbs are so good they carry "a guarantee no one else dares make" on a racing carburetor. A 30 day money back guarantee if not satisfied. Call for details. Available in a wide range of CFM styles in 2 and 4 barrel versions, for gas or alcohol, double pumper or vacuum secondary. The Aerosol Billet technology should be the first choice if rules allow. For special rules or applications the full line of traditional carburetors is available. Top of the Line Aerosol Billet Carburetors by C&S incorporates the knowledge gained in over 31 years of professional carburetor preparation. The characteristic qualities that set them apart are: high air flow, unequaled venturi velocity and fuel atomization, low end response and good looks. Features include: bored main bodies with CNC machined Billet venturis installed, Aerosol nozzle discharge, stainless vent tubes, streamlined throttle shafts and completely



For any class that has 1-3/8 Venturi rule that has no booster rule. Has 1-11/16 base. Specify 4, 6 or 8 cylinder.

052750 2 bbl 1.375 Venturi 1-11/16 base Gas \$649.00  
552750 2 bbl 1.375 Venturi 1-11/16 base Alc \$699.00



Unlimited, unrestricted 4 cylinders or V-8's required to run 1-11/16 base 2 barrel. This carburetor has all the features of our 4 barrel 800 in a 2 barrel version.

52800 2bbl 1.440 Venturi  
1-11/16 base Gas..... \$649.00  
552800 2 bbl 1.440 Venturi  
1-11/16 base Alc..... \$699.00



6 cylinders or V-8 required to run 1-3/4 base 2 barrel. This carburetor has all the features of our 4 barrel 900 in a 2 barrel version.

052900 2bbl 1.540 Venturi 1-3/4 base Gas..... \$699.00  
552900 2 bbl 1.540 Venturi 1-3/4 base Alc.....\$749.00



Split Billet Dominator unlimited 2 barrel 2" base for unrestricted V-8 2 barrel classes outflows 890 excellent power (Note: special spacer or adaptor required).

52110 Split Dominator 2 bbl  
2" base Gas.....\$949.00  
552110 Split Dominator 2 bbl  
2" base Alc.....\$999.00



The 650 Baby Billet has a wide torque curve and produces power over a wider range than other carbs. It adapts to different engine combinations and has excellent drive-ability. By far the best for Road Race, Street & Strip and Circle Track.

More information page 8.

054650 4150 650 Baby Billet Gas.....\$799.99



Vacuum secondary version of 800 aerosol billet. Secondaries have a pneumatic Jet System and Quick Change spring kit to adjust power for Slick Track or limited tires . Great for IMCA or Wisconsin Modified.

054800VS 800 Aerosol Billet  
Vac.Secondary Gas.....\$849.00  
554800VS 800 Aerosol Billet  
Vac Secondary Alc..... \$875.00



For any class that has 1-3/8 Venturi rule that has no booster rule. Has 1-11/16 base. Works well on 1/5 mile slow turn tracks with 300-350 CID. Specify 6 or 8 cylinder.

054750 750 Aerosol Billet Gas.....\$999.00  
554750 750 Aerosol Billet Alcohol.....\$1043.00



The 800 has a wide power band and produces more torque on limited motors than any other carburetor. It easily adapts to different engine combinations and has excellent drivability. By far the best carb for IMCA-Wissota

modifieds, Road Race, small block boats and small cubic inch heavy drag cars. Big V6 to 350 CID.

- 054800 800 Aerosol Billet Gas.....\$999.00
- 554800 800 Aerosol Billet Alcohol.....1049.00



The 850 retains all the features of the 800, except it has a 1-3/4 base for increased airflow on top. Good for applications where top end airflow above the 800 is required. 350-380 CID.

- 054850 850 Aerosol Billet Gas.....\$1025.00
- 554850 850 Aerosol Billet Alc.....\$1075.00



Billet venturi 900 has same qualities as 800 with higher flow Best Carb for bigger cubic inch small blocks 380 to 420 in late models, Road Race, heavy Drag Cars and Boats.

- 054900 900 Aerosol Billet (Includes new 1-3/4 base) Gas.....\$1025.00
- 554900 900 Aerosol Billet (Includes new 1-3/4 base) Alcohol.....\$1075.00



1000 Aerosol designed for Big inch Small block 410 and up. Has excellent mid and top end power without sacrificing all low speed response.

- 0541000 1000 Aerosol Gas.....\$1049.00
- 5541000 1000 aerosol Alc.....\$1099.00



**1000 Dominator** designed for Big cubic inch small blocks 400 and up. It has excellent throttle response and good top end flow for Drag Cars, circle track, pullers and Big Block Boats.

- 051000 1000 Billet Venturi Dom Gas.....\$1249.00
- 551000 1000 Billet Venturi Dom Alcohol....\$1349.00



**1100 Dominator** Best Carb for small cubic inch Big Blocks 420 to 520 in Drag Cars, pulling trucks and light boats.

- 051100 1100 Billet Venturi Dom Gas.....\$1249.00
- 551100 1100 Billet Venturi Dom Alc.....\$1349.00



**1400 Hi Flow** Carburetor has 2.125 Butterflies. For Big Cubic inch Big Blocks 500 and up in Drag Racing and Pulling call for recommendation.

- 051400 1400 Billet Venturi Dom Gas.....\$1599.00
- 551400 1400 Billet Venturi Dom Alc.....\$1699.00



**1500 Hi Flow** Carburetor has 2.187 Butterflies. For Big Cubic inch Big Blocks 500 and up in Drag Racing and Pulling . Call for recommendation.

- 051500 1500 Billet Venturi Dom Gas.....\$1899.00
- 551500 1500 Billet Venturi Dom Alc coming soon

## PRODUCTS NEW TO THE CATALOG

### S-T-R-E-T-C-H-E-D DOMINATOR



Better distribution by moving the venturis out over the runners. Aerosol Billet design atomizes fuel better. Crisp throttle response. Fits most single 4 barrel rules. Available in 1000, 1100, 1400 and 1500 CFM models. Custom built to any length for your application. Gas, ethanol or methanol. C&S billet venturis will, size for size, outflow anything prepared by anybody. PERIOD



**RANDY ROMANS**  
of Madison , Indiana running “**Barely Legal**”  
bolted it on, won six out of eight races  
and placed second twice.  
(He hopes to do better this year)



### *The Best Kept Secret in Racing* PREMIUM AEROSOL BILLET TECHNOLOGY

The 650 Aerosol Billet has a wide torque curve and produces power over a wider range than other carburetors. It adapts to different engine combinations and has excellent drive-ability. Aerosol Billet Carburetors are the latest and the best carburetor technology available. Improved torque and throttle response results from improved fuel distribution to both sides of the butterfly, not one as on a stock Holley®. These new carburetors are so good they carry “**a guarantee no one else dares make**” on a high performance carburetor. A 30-day money back guarantee if not satisfied. Call for details. Available in a wide range of CFM ratings in 2 and 4-barrel versions, for gas or alcohol, double pumper or vacuum secondary. Aerosol Billet Carburetors by C&S incorporates the knowledge gained in over 31 years of professional carburetor preparation. The characteristic qualities that set them apart are: high airflow, unequaled venturi velocity and fuel atomization, low-end response and good looks. Features include: bored main bodies with CNC machined Billet venturis installed, Aerosol nozzle discharge, stainless vent tubes, streamlined throttle shafts and completely reworked fuel metering. The 650 Baby Billet has a wide torque curve and produces power over a wider range than other carburetors. It adapts to different engine combinations and has excellent drive-ability. By far the best for Road Race, Street & Strip and Circle Track.



Baby Billet P/N 054650



## MAXIMUM FLOW CARBURETORS

Maximum Flow Carburetors are modified for unlimited engines with ported heads or intake high compression or higher working RPM range to take full advantage of the carburetor's potential, to achieve the engine's maximum torque and horsepower. All out racing applications where rules do not allow Aerosol Billets. Usually specifying only Holley® boosters allowed and type of fuel. Particularly effective on big cubic inch motors. Includes the following features: milled choke-horn, stainless vent tubes, matched and polished venturis, contoured or reworked entry angles for higher flow, reworked metering system, streamlined throttle shafts, balanced booster draw, and steel button-head butterfly screws.



Billet technology in a Rochester 2 bbl. 1.50 Venturi, 1-3/4 base. Highest flow available in a Rochester 2 bbl.

05BR150 Billet Roch 2 bbl 1.50 venturi  
1-3/4 base gas.....\$749.00



For modified engines that require OEM 2 barrels with no size restrictions.

05R112 1-1/2 Bored Rochester 1-3/4 base  
Gas.....\$575.00  
55R112 1-1/2 Bored Rochester 1-3/4 base  
Alcohol.....\$625.00



For Modified 4 cylinder engines that need low end and have no restrictions on venturi or baseplate size.

057448 7448 350 2 bbl 1-11/16 base  
Gas.....\$649.00  
557448 7448 350 2 bbl 1-11/16 base  
Alcohol.....\$699.00



For modified 6 cylinder and V-8 engines that are required to run 500 2 barrels with no restrictions on venturi or baseplate size.

054412 4412 500 2 bbl, 1-3/4 base  
Gas.....\$649.00  
554412 4412 500 2 bbl, 1-3/4 base  
Alcohol.....\$699.00



The ultimate for classes limited to a 2 barrel with no restrictions. Excellent low end response and unmatched top-end power make this the best 2 barrel in the country. Works great on modified 6 cylinders and all cubic inch V-8's.

05C890 4412 C&S 890 2 bbl 2" base  
Gas.....\$849.00  
55C890 4412 C&S 890 2 bbl 2" base  
Alcohol.....\$999.00



For high horsepower small blocks 330 to 420 cubic inch has wide power and torque curve with good top-end. Good choice for Pro-street, drags, dirt or asphalt late model, and unlimited, dirt or asphalt

modified. New HP core with symmetrical bores and 1-3/4" base.

0580496 80496 750 HP 1-3/4 base  
Gas.....\$825.00  
5580498 80498 750 HP 1-3/4 base  
Alcohol.....\$925.00



For big cubic inch small block or smaller cubic inch big blocks 400 to 450 to get maximum mid-range and top-end power on drag cars, pullers and boats.

054781      4781 850 4 bbl 1-3/4 base  
                  Gas.....\$949.00  
 554781      4781 850 4 bbl 1-3/4 base  
                  Alc.....\$999.00



For Drag and Puller use only where the 0541000 is outlawed. Retains Holley Boosters. Uses 1.700 Venturi's with 1.850 base for maximum airflow from a modified Holley design.

0541100      1100 4 bbl 1.850 base  
                  Gas.....\$1599.00

## MODIFIED FLOW CARBURETORS

Modified flow carburetors are improved in airflow and metering areas to increase horsepower and torque on modified engines which cannot use the full potential of a maximum flow carburetor. Because of restricted head or intake sizes, lower working RPM range, smaller cubic inch engines and cams or compression which are not all-out. Where rules allow modification, bores are slightly enlarged to match up airflow. Features include: balanced booster draw, milled choke-horn, optional stainless vent tubes, matched and polished venturis, reworked metering and stainless steel button-head butterfly screws.

### TECH TIP:

**90% OF ALL "CARBURETOR" PROBLEMS ARE IGNITION RELATED. PLEASE CONSULT OUR TECHS ABOUT YOUR IGNITION SYSTEM.**



For 4 cylinder engines that need good low-end.

037448      7448 350 2 bbl  
                  Gas.....\$575.00



Street Stocks, Hobby Stocks, and Pro Stocks which require OEM intakes and carburetors.

03R138      1-7/16 Rochester 2 bbl  
                  Gas.....\$499.00  
 53R138      1-7/16 Rochester 2 bbl  
                  Alcohol.....\$599.00



Modified 4 cylinder engines or 6 cylinder and V-8 that are required to run 500 2 barrels that can have modified venturis.

034412      4412 500 2 bbl  
                  Gas.....\$575.00  
 534412      4412 500 2 bbl  
                  Alcohol.....\$675.00



Modified 6 cylinder engines with 4 barrel intakes and small cubic inch V-8's 280 to 350 which require extremely good low-end and throttle response.

034777 4777 650 4 bbl  
Gas.....\$749.00

534777 4777 650 4 bbl  
Alcohol.....\$849.00



For limited V-8 cars 340 to 410 cubic inch. Carburetor has an exclusive "pneumatic vacuum secondary jet system" and quick change spring kit on secondaries. This allows a wide tuning range to meet horsepower and traction demands on varying track conditions. Good for IMCA & Wisconsin Modifieds.

033310 3310 750 4 bbl vac. secondary  
Gas.....\$699.00

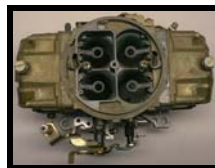
533310 3310 750 4 bbl vac secondary  
Alcohol.....\$799.00



For Econo limited V-8 engines 340 to 410 cubic inch for overall performance increase. Good choice for modified street or drag cars, Econo dirt late models, IMCA or Wisconsin modified.

034779 4779 750 4 bbl  
Gas.....\$725.00

534779 4779 750 4 bbl  
Alcohol.....\$825.00



For modified big cubic inch small block or smaller cubic inch big blocks 400 to 450 for overall performance increase on drag cars, pullers and boats.

034781 4781 850 4 bbl  
Gas.....\$925.00

534781 4781 850 4 bbl  
Alcohol.....\$975.00

## BALANCED FLOW CARBURETORS

Balanced Flow Carburetors are for restricted classes which require unmodified, stock appearing or unaltered venturi and base plate/bore sizes. They have balanced and aligned boosters and reworked metering for improved power throughout the RPM range. Use carburetor number you are required to run, such as 014412 for a 4412 500 2 barrel, which will pass local or NASCAR style plug gauge checks of the venturi and base-plate bore.



Street Stocks, Hobby Stock and Pro Stock which require OEM intakes and carburetors.

01R114 1-1/4 Rochester 2 bbl  
Gas.....\$425.00



Street Stocks, Hobby Stock and Pro Stocks which require OEM intakes and carburetors.

01R138 1-3/8 Rochester 2 bbl  
Gas.....\$425.00



For limited V-8 cars 340 to 410 cubic inch. Carburetor has an exclusive "pneumatic vacuum secondary jet system" and quick change spring kit on secondaries. This allows a wide tuning range.

- 013310      3310 750 4 bbl vacuum secondary Gas.....\$649.00
- 513310      3310 750 4 bbl vacuum secondary Alcohol.....\$725.00



For 4 cylinder engines that need good low-end.

- 017448      7448 350 2 bbl Gas.....\$525.00



Modified 4 cylinder engines or 6 cylinder and V-8 that are required to run 500 2 barrels that cannot have modified venturis

- 014412      4412 500 2 bbl Gas.....\$549.00
- 514412      4412 500 2 bbl Alcohol.....\$649.00



Old style NASCAR rules 390 4 bbl. Very precise. Use where rules require or small cubic inch displacements such as 4 cyl or V-6.

- 016895      6895 390 4 bbl Gas.....\$699.00



Newest style NASCAR rules 390 HP casting. All the precision, all the tricks necessary to compete at a far lower cost than competitors are offering.

- 0180507      80507 390 4 bbl HP series Gas.....\$999.00



Moderate cost and precision for smaller engines. Recently won Pikes Peak Hill Climb in a 4 cyl Fontana powered open wheel car. Nice moderate cost 2-4 drag set up for small V-8 powered

- 014776      4776 600 4 bbl Gas.....\$599.00



Modified 6 cylinder engines with 4 barrel intakes and small cubic inch V-8's 280 to 350 which require extremely good low-end and throttle response.

- 014777      4777 650 4 bbl Gas.....\$625.00
- 514777      4777 650 4 bbl Alcohol.....\$725.00



For Econo limited V-8 engines 340 to 410 cubic inch for overall performance increase. Good choice for modified street or drag cars, Econo dirt late models, IMCA or Wisconsin modified.

- 014779      4779 750 4 bbl Gas.....\$649.00
- 514779      4779 750 4 bbl Alcohol.....\$749.00

## CARBURETOR ACCESSORIES

We are constantly adding to our carburetor accessory inventory. Some of the more popular items are listed. Can't find what you are looking for? Give us a call or email us at [info@candsspecialties.com](mailto:info@candsspecialties.com).



- 1306 Dom 1" open spacer \$46.99
- 1313 Dom 1" 4-hole spacer \$46.99
- 1314 Dom 1" 4-hole spacer (bored 2.125) \$96.99
- 1315 Dom 1" open phenolic (for 1400) \$96.99
- 1322 Dom spacer 1/2" open \$29.99



- 1327 4 bbl 1/2" 4-hole phenolic \$34.99
- 1328 4 bbl 1/2" open phenolic \$34.99
- 1301 4 bbl 1" open spacer \$34.99
- 1303 4 bbl 1" 4-hole spacer \$34.99
- 1326 4 bbl 1" open phenolic \$72.99
- 1302 4 bbl 2" open spacer \$42.99
- 1329 4 bbl 2" 4-hole spacer \$42.99
- 1308 2 bbl 1" 2-hole phenolic \$36.99
- 1331 2 bbl 2" 2-hole phenolic \$79.99
- 1317 2 to 4 bbl quadrajert phenolic \$95.99



- 1309 Dominator 2 bbl to 4 bbl adaptor \$169.99

- 1937 2 bbl to 2 bbl adaptor \$19.99
- 1304 2 bbl to 4 bbl adaptor universal \$24.99
- 1307 2 bbl to 4 bbl phenolic slider adaptor \$89.99
- 1310 2-4 slider w/exit radius \$99.99
- 1311 2-4 slider Rochester w/ exit radius \$99.99



- 1305 2-4 adaptor machined for 890 aluminum \$49.99

- 1312 2-4 slider for 890 \$119.99
- 1334 2-4 slider for 890 w/ exit radius \$129.99



- 1358 K&N 2 bbl stub stack \$24.99
- 1359 K&N 4 bbl stub stack \$24.99



- 1320 Carb Stud Kit 1-1/2" \$5.99
- 1324 Carb Stud Kit 2" \$5.99
- 1325 Carb Stud Kit 2-1/2" \$5.99
- 1321 Carb Stud Kit 3" \$5.99



- 1445 5-1/8 flange 14x4 drop base air cleaner w/ washable element \$69.99
- 1441 14x4 air filter element \$39.99



- 1446 5-1/8 flange 14x6 drop base air cleaner w/ washable element \$79.99
- 1461 14x6 air filter element \$49.99
- 1480 K&N cleaning kit \$ 6.99
- 1493 2-4 o-ring air cleaner spacer \$11.99
- 1451 14x5 air cleaner element only \$44.99



- 1447 7-5/16 flange 14x4 air cleaner w/ washable element \$84.99
- 1441 14x4 air filter element \$39.99
- 1467 7-5/16 flange 14x6 air cleaner w/ washable element \$89.99
- 1461 14x6 air filter element \$49.99



- 1477 7-5/16 flange 16x14 custom drop base air cleaner w/ washable element clearance for mag \$169.99
- 1478 aluminum top & bottom \$84.99
- 1462 16x4 air filter element \$84.99
- 1480 K&N cleaning kit \$6.99
- 1479 unmodified top & bottom only for 1477 \$69.99



- 1492 Dominator o-ring air cleaner spacer \$45.99

- 1489 spun aluminum carb cover \$13.99
- 1490 o-ringed billet carb cover spun aluminum \$29.99

































- 1491 o-ringed air cleaner flange adaptor \$39.99

- 1495 Carb Hat Dominator Blow-thru \$199.95

## CARBURETOR SMALL PARTS

WE ARE THE MIDWEST 'S LARGEST HOLLEY® PERFORMANCE CARBURETOR REPLACEMENT PARTS DEALER. WE CARRY OVER 2800 PART NUMBERS IN STOCK. DON'T SEE WHAT YOU ARE LOOKING FOR? Give us a call. \*\*

	22R40 Holley Jet Pair #57 thru #100 Use part number followed by number of jets needed. Example: 22R40-83 for #83 Holley			59R91 Vent Baffle Set: 2 baffles, 2 drive pins	\$4.99
	18R-135A .110 Needle & Seat Assy	\$7.99		15R40 Idle mixture screw set: 2 screws, 2 cork seals	\$4.99
	150-1CS .150 Needle & Seat Assy	\$14.99		5R854 Accelerator nozzle screw set gas: 2 screws and gaskets	\$7.99
	130-1CS .130 Needle & Seat Assy Viton	\$9.99		5R854K-CS Accelerator nozzle screw set Alcohol: 2 screws and gaskets	\$9.99
	34-7 Needle & seat Hardware: 2 adj. Nuts, 2 lock washers and gaskets	\$7.99		21R572 Accelerator nozzle (straight type): specify size when ordering	\$4.99
	8C621SN-CS Nylon needle and seat gasket set: 2 nut gaskets, 2 screw gaskets	\$3.99		21R726 Accelerator nozzle (anti pullover type): specify size when ordering	\$6.99
	108-31 6425 2 bbl metering gasket	\$1.99		1597N Nylon power valve gasket	\$1.99
	108-32 6425 2 bbl fuel bowl gasket	\$1.99		7R225-CS Sight plug set: 2 sight plugs, 2 gaskets	\$4.99
	8R1907K Double pumper 4 bbl and 500 2 bbl metering gasket	\$1.99		5-239-243 Vacuum tube cap set: 2-3/16, 1-1/4, 2-3/8	\$4.99
	8R1911K Double pumper 4 bbl and 500 2 bbl fuel bowl gasket	\$1.99		5R552 Fuel bowl screws: 2-1/2" 4 pcs.	\$8.99
	25R591-35 Powervalue 3.5 HG	\$6.99		34R11341-1 Primary fuel bowl	\$24.99
	25R591-45 Powervalue 4.5 HG	\$6.99		34R11361-1 Secondary fuel bowl	\$24.99
	25R591-50 Power valve 5.0 HG	\$6.99		34R4652 Secondary fuel bowl: fits 3310	\$24.99
	25R591-65 Power valve 6.5 HG	\$6.99		34R2183-CS 30cc pump assembly: housing spring diaphragm & screws	\$12.99
	25R591-85 Power valve 8.5 HG	\$6.99		34R2774-CS 50cc pump assembly: housing spring diaphragm & screws	\$19.99
	25R595-65 Hi Flow power valve 6.5 HG	\$6.99		63R741A 30cc pump arm	\$7.99
	25R595-85 Hi Flow power valve 8.5 HG	\$9.99		63R833A 50cc pump arm	\$14.99
	35R342A 30cc diaphragm	\$3.99		41R664 664 pump cam 50cc	\$3.99
	35R1074A 50cc diaphragm	\$9.99		41R330 330 pump cam 30cc	\$3.99
	23R468 Accelerator pump check valve 2 pc.	\$4.99			
	8C657N-CS Nylon fuel bowl screw gasket set 8 pc.	\$4.99			
	8R657-CS Standard fuel bowl screw gasket set 20 pc.	\$9.99			
	21-760A Rochester 2 bbl float	\$9.99			
	16R420A Holley Float brass	\$9.99			
	16R587A Holley Float duracon	\$6.99			
	16R451A Holley Float nitrophyl	\$9.99			
	16R451A-N Holley Float nitrophyl notched	\$12.99			

\*\* \$15.00 MINIMUM ORDER REQUIRED



- 9R215 1-11/16 butterflies: 2 pcs. \$9.99
- 9R172 1-11/16 butterflies: 2 pcs. \$9.99
- 9R173 1-11/16 butterflies: 2 pcs \$9.99
- 9R180 1-3/4 butterflies: 2 pcs. \$9.99



- 10R1808A 500 2 bbl throttle shaft\*\* \$29.99
- 10R1795-6AM 390 4 bbl throttle shaft\*\* \$39.99

- 10R2264-3AM 650 850 throttle shaft set\*\* \$39.99
- \*\* Milled shafts extra



- 112-2 500 2 bbl base-plate assy\*\* Gas \$ 89.99
- 112-2A 500 2 bbl base-plate assy\*\* Alcohol \$ 89.99
- 112-23 390 4 bbl base-plate assy\*\* Gas \$139.99

- 112-23A 390 4 bbl base-plate assy\*\* Alcohol \$139.99
- 112-18 650-800 4 bbl base-plate Assy\*\* Gas \$129.99
- 112-18A 650-800 4 bbl base-plate Assy\*\* Alc. \$129.99
- 112-19 850 4 bbl base-plate assy\*\* Gas \$139.99
- 112-19A 850 4 bbl base-plate assy\*\* Alc \$139.99

\*\* Milled shafts extra



- 20-59 Vacuum secondary diaphragm spring quick change kit \$9.99
- 20-13CS Vacuum secondary spring pak \$9.99
- 35R235AK Vacuum secondary diaphragm \$ 6.99



- 8902ML Micro switch 890 alc 2 bbl \$9.99
- 8902S2 Solenoid C&S 890 alc 2 bbl \$59.99



- 1901-CS Secondary Drag Link Progressive \$4.99
- 1902-CS Secondary Drag Link 1 to 1 \$12.99

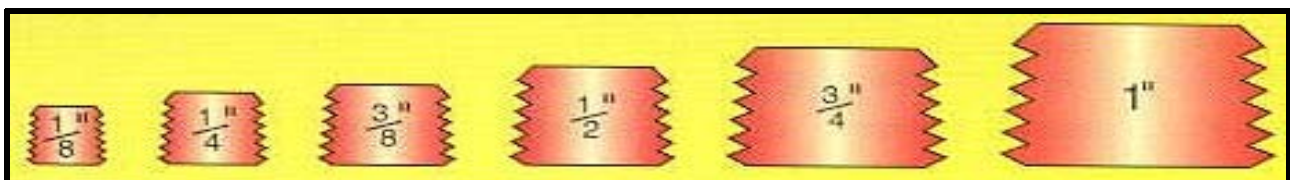


- 1949 2 bbl to manifold gasket \$1.99
- 1954 4 bbl to manifold gasket (open) \$1.99
- 1955 4 bbl to manifold gasket (4 hole) \$1.99
- 1958 Dominator to manifold gasket (open) \$1.99



C&S is a full service Earl's® plumbing dealer. Most sizes in stock. Please call for competitive prices. Let our tech guys design a winning fuel system for you.

The charts on the following page have been added to help you in determining you're AN & NPT size needs.



**“AN” Thread Sizes**

AN (Army-Navy) Sizes were established by the Aerospace industry years ago and were designated O.D. of the rigid metal tube that each size fitting is used with. (The chart to the right will clarify this point.)

The numbers assigned equate to the O.D. (outside diameters) of the tubing in 1/16”. Since tubing and hoses are to be found with assorted wall thickness we can now understand that the designated size number does not necessarily tell you how large the inside diameter will be. (For example, the inside diameter of an Earl’s size 6 hose end is nearly as large as the inside diameter of some manufacturers’ -8 hose ends.)

Each AN size number has its own standard thread size which can be seen in column three of the chart. Again, these are the same thread sizes that have been used in aircraft and industrial applications for many years.

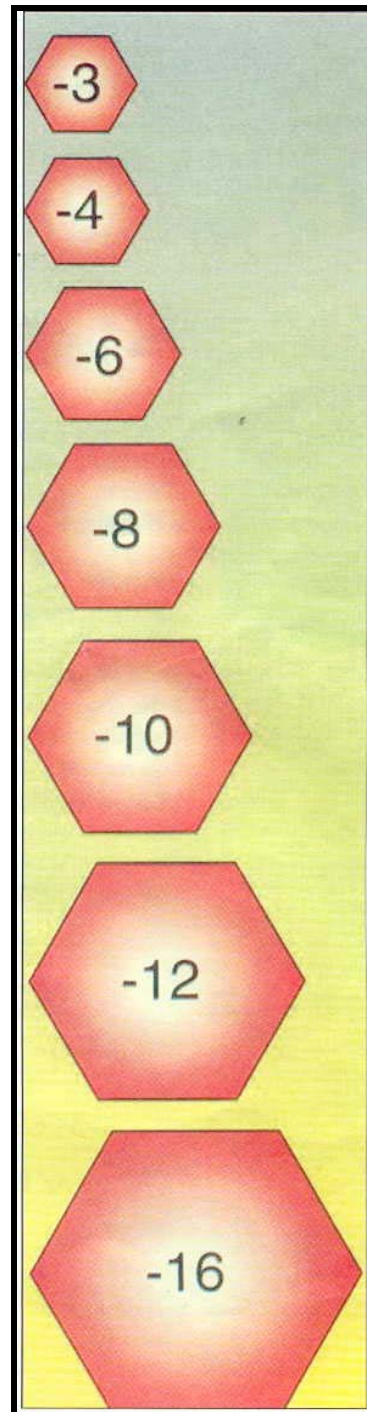
AN Size	Metal Tube O.D.	Thread Size
2	1/8	5/16-24 SAE
3	3/16	3/8-24 SAE
4	1/4	7/16-20 SAE
5	5/16	1/2-20 SAE
6	3/8	9/16-18 SAE
8	1/2	3/4-16 SAE
10	5/8	7/8-14 SAE
12	3/4	1-1/16-12 SAE
16	1”	1-5/16-12 SAE
20	1-1/4	1-5/8-12 SAE
24	1-1/2	1-7/8-12 SAE
28	1-3/4	2-1/4-12 SAE
32	2”	2-1/2-12 SAE

Pipe Thread Size	Threads Per Inch	Theoretical I.D. of Ftg.	Closest AN Ftg. Size
1/16”	27	1/16”	
1/8”	27	1/8”	4
1/4”	18	1/4”	6
3/8”	18	3/8”	8
1/2”	14	1/2”	10
3/4”	14	3/4”	12
1”	11-1/2	1”	16
1-1/4”	11-1/2	1-1/4”	20
1-1/2”	11-1/2	1-1/2”	24
2”	11-1/2	2”	32

**“NPT” Thread Sizes**

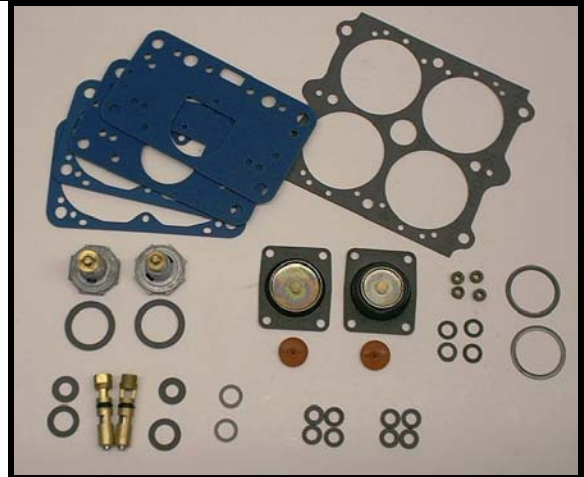
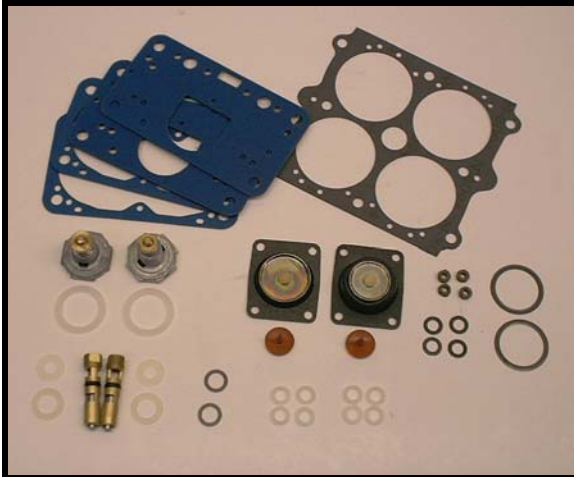
Some of the most popular adapter fittings shown in their catalog are AN to NPT adapters. While many variations are offered, column four in the chart shows which AN size corresponds to each NPT size when inside diameters (flow dimensions) are considered.

All Earl’s Swivel-Seal hose ends are designed to provide little or no restriction when used with the corresponding AN fitting size. We also offer a number of Metric and British Standard Pipe threads to AN fitting adapters.





## CARBURETOR REBUILD KITS



R41850	1850	600 vacuum secondary	\$39.99
R4600	4776	600 4 bbl	\$44.99
R4750	4777	650 4 bbl	\$44.99
	4778	700 4 bbl	
	4779	750 4 bbl	
	4780	800 4 bbl	
R4850	4781	850 4 bbl	\$49.99
	8082	1050 Dominator	
	7320	1150 Dominator	
R41053	8896	3 circuit Dominator	\$49.99
	9375	3 circuit Dominator	
	9377	3 circuit Dominator	
R4A750	4777	C&S Alcohol 650 4 bbl	\$69.99
	4778	C&S Alcohol 700 4 bbl	
	4779	C&S Alcohol 750 4 bbl	
	9645	Holley Alcohol 750 4 bbl	
	4780	C&S Alcohol 800 4 bbl	
R4A850	4781	C&S Alcohol 850	\$69.99
	9646	Holley Alcohol 850	
R4A1050	8082	C&S Alcohol 1050 Dom	\$69.99
	7320	C&S Alcohol 1150 Dom	
R4A1053	8896	3 circuit Dominator	\$69.99
	9375	3 circuit Dominator	
	9377	3 circuit Dominator	

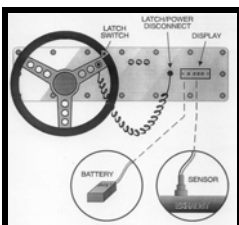
15464B	C&S	Roch 2 bbl 1-3/8 or bored 625	\$29.99
R2350	7448	350 2 bbl	\$29.99
R2500	4412	500 2 bbl C&S 890	\$29.99
R2650	6425	650 2 bbl C&S 890	\$29.99
R2A500	4412	C&S Alcohol 500 2 bbl C&S Alcohol 890 2 bbl	\$39.99
	9647	Holley Alcohol 500 2 bbl	
R2A650	6425	C&S Alcohol 650 2 bbl C&S Alcohol 890 2 bbl	\$39.99

## MISCELLANEOUS



R2J04 Jet change kit fits all  
double pumper 4 bbl &  
500 2bbl \$29.99

70080	Patented Universal Piston Machining Fixture	\$289.99
70081	Additional Sleeve any size	\$9.99
8610	Howe Carburetor Case Black Plastic	\$32.00
8611	Dominator Carburetor Case Black Heavy Plastic	\$39.99



70194	Rich Lean Indicator Single- Complete	\$199.99
70195	Rich Lean Indicator Dual- Complete	\$239.99
70198	WELD Bung Only	\$7.99
70199	Oxygen Sensor Only	\$29.99

## **BELT DRIVE FUEL PUMP**

DESIGNED TO BE USED WITH CARBURETORS

Belt driven fuel pumps were developed to solve fuel delivery problems of high horsepower engines burning alcohol. However they can work very well on race engines burning gasoline. They have several important features that make them ideal for gasoline or alcohol racing applications. First because pressure and flow are directly related to how fast the pump is spinning. At low RPM such as idle or caution flags, fuel pressure and flow will be low. Conversely when engine RPM and load is high, under maximum power situations, the pump spins faster and fuel flow and pressure increase proportionately. This combination of low pressure at low speeds and much higher pressure at high speed is absolutely necessary for high horsepower engines on alcohol. High efficiency positive displacement alcohol unit will pump 850 pounds per hour at 10 psi. Compact billet aluminum body and brackets, stainless steel main shaft, low friction ball bearings, high pressure, precision injection molded aluminum housing. All parts are anodized or gold dichromate cadmium plated. No rough sand castings. Complete system consists of pump and bracket assembly, engine mount bracket, pump pulley, crankshaft pulley, crank drive mandrel, belt, bolts and hardware. Plus for a limited time you will receive with pump purchase a C&S pressure sensitive belt drive bypass at no charge (regularly \$71.00) and the new C&S billet check valve at no charge (regularly \$49.00).



P/N 4000-HO Pump Only \$379.99 Mounting Kit additional



## **Another New Design from The Fuel Systems Experts at C&S Specialties C&S SLIDER FUEL LOG**

### **A Better Design**

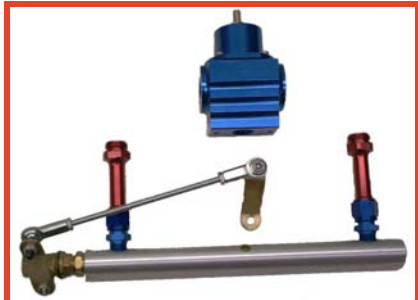
The **C&S Slider Fuel Log** allows the front or rear fuel bowl to be removed and re-installed without removing the log. Our new telescoping design allows the **Slider Fuel Log to adjust to fit "any carburetor"**. The C&S Slider Log is available in two sizes. P/N 4604-S fits any 4150, 4160 or Demon Carburetor and P/N 4605-S fits Dominators and King Demons. The price of \$129.99 includes carburetor fittings and an extra o-ring.

See part number listings on page 22 ★

**C&S SPECIALTIES, INC. 3528 Highway B, St. Charles, Missouri 63301**  
 636-723-4996 636-723-1277 fax [www.candsspecialties.com](http://www.candsspecialties.com)

To Order Call: 636-723-4996 or visit us at  
www.candsspecialties.com

## DUAL PRESSURE BYPASS FOR METHANOL



SIMULATES BELT DRIVE FUEL PRESSURES

\*\*

PROVIDES 1-3 P.S.I. @ IDLE

9-12 P.S.I. @ WOT

\*\*

REDUCES OVER FUELING WHILE DECELERATING

\*\*

ALWAYS HAVE COOL FUEL AT THE CARBURETOR

\*\*

REDUCES NEEDLE AND  
SEAT FLOOD OVER

P/N 4515 Dual Pressure Bypass for Methanol-4150 \$399.95

P/N 4516-S Dual Pressure Bypass for Methanol-Dominator \$447.94

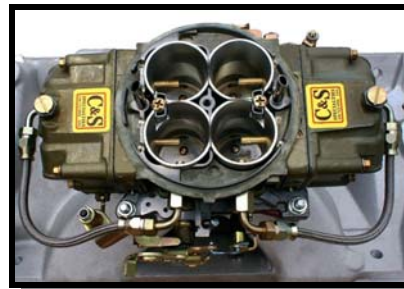
**Fuel is already moving, so system is not affected by launch G-forces.**

**Significant performance increase in engines over 500 horsepower.**

## 6 JET/ 8 JET CONVERSION P/N 0021

**C&S Developed Technology to equalize air fuel mixture in four barrel racing manifolds.** Chevy small blocks run lean on #3 and #5. Small block Fords and big block Chevy's run lean on the four corner cylinders.

The 6 Jet Modification allows jetting each cylinder. It is no longer necessary to run entire motor too rich to avoid burning lean pistons. Drive-ability and off the corner throttle response is dramatically improved, combined with top end dyno observed horsepower. Although this problem is caused by the manifold, the solution is totally in the carburetor, which is never included in an engine claim.. Can be considered cheap engine insurance. Any Holley®, BG ®or Demon® can be converted. Aerosol Billets can be converted for \$225.00 or combined with a rebuild for 10% off both until 03/01/05.



## CRANKCASE EVACUATION KIT P/N 4315AK

Finally a product that will extend usable life and increase power on budget and clamer engines at an affordable price. **Horsepower gains of 22 to 30 HP** are well documented in other forms of motor sports.\*\*

Two years of track testing has resulted in an engineered **COMPLETE** Circle Track package that will deliver additional benefits such as a cleaner engine with **less oil dilution**. **Eliminate blow-by and extend usable engine life**. Complete package is **\$395.00**. Call for more detailed information. \*\*Delivers slightly less gain on high dollar engines including dry sump.

Our first product, the largest Holley® 2 bbl. on the market, is still in production and holds the records, where ever it is allowed. A usually unadvertised special is the custom big Rochester 2 bbls and radical Motorcraft 2 bbls, that can be built to the limit of local rules and beyond. **C&S KNOWS 2 BBLs. CUSTOM REBUILDING OF ALL BRANDS.** Castings are dichromate dyed and all steel parts are gold cadmium plated. Your used carb will look better and run like new. Send them in early, please.

## PRODUCTS NEW TO THE CATALOG

### TOOL STEEL PREMIUM QUALITY MECHANICAL FUEL PUMPS

#### C&S DESIGN ADDRESSES PROBLEM AREAS OF PREVIOUS 6-VALVE PUMPS

**HIGH STRENGTH CASTINGS:** Exclusive casting design adds material 7 places to eliminate cracking, breakage, waviness and leakage.

**CORROSION RESISTANCE:** Castings are bead blasted and alodine treated. Then color coded with baked catalyzed coating.

**VALVES:** 6 C&S High Flow pumping valves, combined with internal porting are proven to deliver twice the fuel flow.

**DIAPHRAGM:** All other pumping diaphragms are stamped from flat sheet stock. The convoluted (stepped) replacement doesn't require stretching, eliminating leaks and elongated bolt holes. Less stress to the diaphragm itself means much longer life.

**DRIVE SPRING:** Single spring replaced with two stainless alloy springs to lower stress and improve reliability.

**INTERNAL PUMP ARM:** CNC milled from high strength 0-1 tool steel, then hardened and ground. All other brands use stamped low strength steel with no precision milling or grinding.

**PUMP ARM BUSHING:** Low strength bushing prone to breaking replaced with a A-2 high strength tool steel precision part.

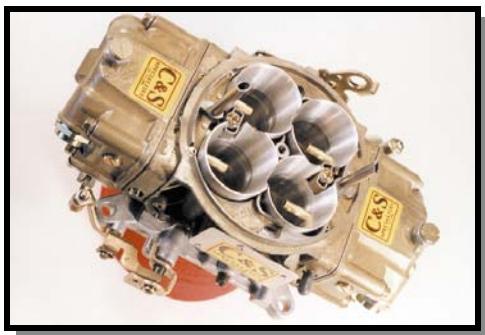
**VERTICAL PUMP SHAFT:** Premium A-2 air hardening tool steel, Swiss CNC machined, smooth center less ground shaft. Creates an ideal surface for the new double lipped oil seal.

On the pivot end a hardened and ground pin pivots in a precision pocket. Previously two raw stamped steel edges created pivot point. Rough shaft made oil seal prone to leak.

**NEW!!!**



**FACTORY TESTED P/N 4230S-HD**  
**\$229.99**  
Pump Only



### BLOW-THRU AEROSOL CARBURETOR

**GAS OR ALCOHOL**

**HORSEPOWER INCREASES  
WITHOUT CHANGING YOUR MOTOR**

**NO INTERCOOLER REQUIRED**

**SIMPLE BOLT-ON INSTALLATION**

**POWER INCREASES OF 30 TO 150%  
EASILY ATTAINABLE**

**WORKS WITH HIGH COMPRESSION ENGINES**

### COMPLETE BLOWER/FUEL SYSTEMS AVAILABLE

Cost is far less than injected gas with intercooler and just as consistent as naturally aspirated alcohol.

**Call for pricing**

## HOT NEW PRODUCT

### PUMP PAN EVACUATION KITS

Keeping an engine clean is actually just a by product of the C&S complete vacuum pump package.

Horsepower is increased several ways. One way is that as the crank spins in a partial vacuum, less air density means less resistance to rotation.

The proper amount of vacuum will improve ring seal. C&S research indicates you can have too much. About 10" to 14" of vacuum at 7000 RPM yields the highest power gains. This agrees with tests done by Bill Jenkins. Besides losing power "too much" vacuum consumes more power and can collapse oil pans, cause oil leaks and suck gaskets.

How much power gain? That depends on the size of the motor. Commonly small block Chevy's will pickup 20-22 HP. Big blocks 30 HP or more. Very impressive for a bolt on!

An unusual feature is low price economy engines benefit more than high dollar engines! Perhaps because bore preparation and ring seal is better to start with on more expensive engines. Another nice bonus is motor oil will stay clean and clear far longer because of reduced contamination.

C&S Air Pump kits include breather hose, C&S designed collection canister that can be emptied without tools. Bolts, belt, air pump, air pump pulley, either low friction cog belt or v-belt pulley, crankshaft drive spud and matching cog belt or v-belt drive pulley comes with kit. Various mount plates and tensioners are available. Pump can be driven off water pump pulley, but care should be taken to run 1/2 of engine speed or less. Air pump RPM should never exceed 5000 RPM.

3 years of testing indicate air pump itself should be replaced after a full season.

To guarantee at least a full season of usage the serial numbered C&S air pump carries a full 1 year replacement guarantee. Just return pump for a free replacement. Others claim reliability. C&S guarantees it!

#### 4315AK Standard Pan Evacuation Kit

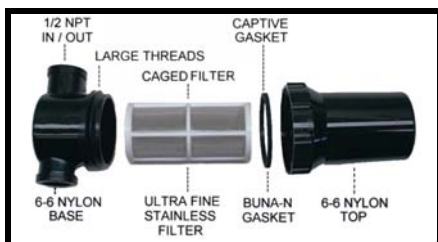
Includes Bracket, Drive and Mounting Hardware

\$395.00



Standard setup is on front of engine. This setup with or without C&S belt drive fuel pump is for a Bert or Brinn transmission mount on a circle track car.

### ULTRA LIGHT FUEL FILTER



Universal- can mount in any position. Can be used on suction or pressure side of pump. Low pressure loss. Large effective screen area, over 19 square inches. Less than 1/4 lb. Pressure loss at sufficient flow for 1000+ horsepower. No tools are required and fuel line fittings need not be disconnected to check filter or to remove it for cleaning. Large buttress threads on top bowl connection prevent cross threading. Threads cannot be stripped out. Has captive gasket. Material: Buna-N is standard. Entire unit is fully compatible with gas or alcohol fuels. Working pressure rating is up to 80 PSI. Filter is stainless steel.

Material of housing and bowl is 6-6 nylon. Note: 6-6 nylon is used for injector fuel rails and other high pressure under hood fuel systems. Weight of 166 grams is less than 1/3 the weight of competitive units. Modern materials, design and production techniques result in consistent high quality and lower cost.

#### 2150-CS Ultra Light Fuel Filter

\$ 49.99

Replacement Parts:

2150-FS Ultra Fine Stainless Steel Filter Screen

\$ 8.75

2150-OR O-Ring Buna-N Gasket

\$ 1.25

**FUEL PUMPS & PARTS**

4000-HO C&S Belt Drive Pump only  
(Choose one of the following mounting kits)  
(based on your application)

4001-BBC	Big Block Chevy Mtg Ki	\$119.00
4001-BERT	C&S -Bert	\$119.00
4001-BERT2	Mt & Drive-Fuel Pump & Air Pump	\$295.00
4001-BERT3	Mt & Drive-BERT_Air Pump	\$295.00
4001-BM	SBC Block Mount Kit	\$119.00
4001-BMC	Block & Drive Kit-Block Mt Chevy	\$119.00
4001-CHRY	C&S Belt Drive Pump Kit-Mopar	\$119.00
4001-SBC	C&S Belt Drive Pump Kit-SBC	\$119.00
4001-SBF	C&S Belt Drive Pump Kit-SB Ford	\$119.00
4000A-BD	Belt Drive Brkt for 4000-HO	\$59.99
4000A-BP	Pump Backing plate w/out hole	\$9.99
4000A-BPH	Pump backing plate w/hole	\$12.99
4000A-MR	Minor rebuild kit belt drive pump	\$ 29.99
4000A-R	Rebuild belt drive pump	\$49.99

4021	Pump Pulley 32 Tooth	\$34.99
4022-AP	Air Pump Pulley 32 Tooth	\$34.99
4022	24 tooth Pulley-C&S-3-1/8	\$33.00
4023	36 Tooth Ron's	\$33.00
4023-AP	36 Tooth Modified Ron's Pulley	\$39.00
4024	14 Tooth Crank-Gilmer Pulley 1"	\$46.50
4013	Crank mandrel bolt & washer SB Chevy	\$39.99
4015	Crank mandrel bolt & washer Ford	\$49.99
4019	Crank pulley 18 teeth	\$39.99
4020	Crank Pulley 16 teeth	\$34.99
4021	Pump Pulley 32 Tooth	\$34.99
4025	SB pump mount (high)	\$34.99
4026	SB pump mount (low)	\$34.99
4027	BB pump mount (high)	\$34.99
4028	BB pump mount (low)	\$34.99
4029	Ford pump mount (universal)	\$34.99
4030	Fuel pump drive	\$89.99
320L	Ford belt 320	\$16.99
322L	SB belt 322	\$16.99
345L	BB belt 345	\$16.99



4001-SB	SB Chevy belt drive kit	\$119.99
4001-LM	SB Chevy Late Model belt drive kit	\$119.99
4002	SB belt drive fuel pump only	\$389.99
4003	BB belt drive fuel pump only	\$429.99
4006C	Chrysler belt drive fuel pump kit	\$699.99
4006F	Ford belt drive fuel pump kit	\$699.99
4006H	SB Chevy belt drive fuel pump kit (high mount)	\$699.99
4006L	SB Chevy belt drive fuel pump kit (low mount)	\$699.99
4007H	BB Chevy belt drive fuel pump kit (high mount)	\$749.99
4007L	BB Chevy belt drive fuel pump kit (low mount)	\$749.99



4120S	SB 6 valve mech. pump	120 GPM	\$74.99
4120S-HD	SB 6 valve mech. pump	120 GPH Heavy Duty	\$149.99
4120B	BB Chevy mech. Pump	120 GPH	\$74.99
4120B-H	BB Chevy mech. pump	120 GPH HD	\$149.99
4120F	Windsor Ford mech. pump		\$74.99
4230S	C&S mod 6 valve mech. Pump alcohol		\$174.99
4230S-HD	C&S mod 6 valve mech. Pump alcohol HD		\$229.99
4230B	C&S 6 valve mech. pump alcohol		\$174.99
4230B-HD	C&S 6 valve mech. pump alcohol Heavy Duty		\$229.99
4230F	Windsor Ford 6 valve mech. pump alcohol		\$199.99
4230M-HD	Mopar 6 valve mech pump alcohol Heavy Duty		\$239.99

**Replacement Parts**

4401	Diaphragm seal kit	\$19.99
4402	Rebuild kit 6 valve 120 GPH	\$ 29.99
4403	Rebuild kit C&S mod 6 valve pump	\$79.99

**112-02-BF Aeromotive Fuel Pump \$329.99**

Free flows over 350 GPH, flows enough at 20 PSI to support 2000HP, specially designed motor to reduce current draw and heat, utilizes a true convoluted diaphragm by-pass, pumping mechanism is constructed of aerospace composites and stainless steel vanes, inlet -10 AN (O-ring) & outlet -10 AN (o-ring) & outlet -10 AN..



**4510 1/2" Blue Bypass \$199.99**  
Designed to handle today's highest flowing electric pumps. 500 GPH

4301	Light Fuel Pump rod	\$29.99
4302	Light Fuel Pump rod (1/16 longer than stock)	\$29.99



4501	Pressure Sensitive Fuel Bypass Mech. or 6-valve	\$64.99
4502	Pressure Sensitive Fuel Bypass Belt Drive	\$69.99
4404	Pressure Sensitive Fuel Bypass Rebuild kit	\$19.99

**Another New Design from the Fuel Experts at C&S Specialties**  
**C&S SLIDER FUEL LOG**



- 4505-S Mechanical Bypass w/fittings, with Slider Log \$257.98
- 4506-S Mechanical Bypass w/fittings with Slider Log \$267.98
- 4508-S 1/2" Mechanical Bypass Assy. with Slider Log \$447.94
- 4509-S Dom-1/2" Mechanical Assy with Slider \$287.89
- 4515-S Dual Pressure Bypass- Methanol 4150 Slider \$447.94
- 4516-S Dual Pressure Bypass- Methanol Dom Slider \$447.94
- 4604-S 4BBI Slider Fuel Log \$ 92.00
- 4605-S Dominator Slider Fuel Log \$ 92.00



**C&S Standard Fuel Logs**

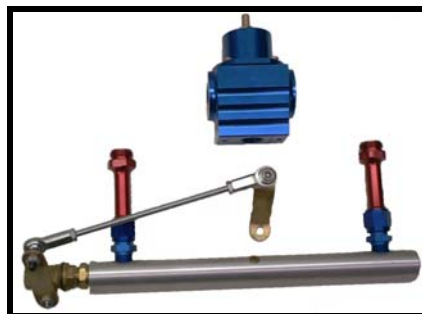
- 4602 2 bbl fuel log \$ 29.99
- 4604 4 bbl fuel log \$ 44.99



- 4505 Mechanical Bypass with Fittings & Log \$209.99
- 4506 Mechanical Bypass with fittings & Log \$219.99
- 4508 1/2" Mechanical Bypass Assembly \$229.99
- 4515 Dual Pressure Bypass for Methanol \$399.95
- 4503 Mech. Bypass 3/8" Ball valve \$129.99

**Replacements:**

- 4503L Mech. Bypass linkage only \$119.99
- 4503LAC Mech. Bypass linkage arm/carb for 4503&4505 \$ 13.99
- 4503LAV Mech. Bypass linkage arm/valve for 4503&4505 \$ 13.99
- 4503 L&H Mech. Bypass linkage & heim end \$119.99



**DUAL PRESSURE BYPASS FOR METHANOL**

- 4515 Dual Pressure Bypass for Methanol \$399.95
- 4516-S Dual Pressure Bypass for Methanol- Dominator with slider fuel log \$447.94



- 4700 1 Qt. fuel lube \$8.99
- 4700 1 Qt. C&S 25% Alcohol 75% Fuel Lube Blend \$ 9.99
- 4704 1 Gal. fuel lube \$ 30.99
- 4705 1 Gal. C&S 25% Alcohol 75% Fuel Lube Blend \$ 34.99

## AIR FUEL RATIO MONITOR (RICH-LEAN INDICATOR) TELLS YOU WHEN TO CHANGE JETS IN YOUR CARBURETOR.

The air/fuel ratio monitor measures the air/fuel ratio of a running engine. It is made up of two major components—an oxygen sensor and a display unit. The oxygen sensor must be mounted in the exhaust system slightly downstream of where all manifold runners merge. This location gives the highest exhaust temperatures and provides a sampling of all the cylinders on that manifold.

The monitor will work on all types of fuels. It has been used on engines fueled with gasoline, gasohol, methanol and ethanol—all with good results. The monitor works on all types of engines from the smallest motorcycle engines, to 500+ cubic inch alcohol engines. The monitor is calibrated to work on any engine to indicate maximum power, not maximum economy.

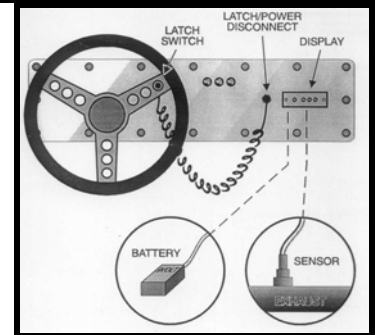
This air/fuel ratio monitor will allow an engine to be tuned to optimum performance very quickly. This is of particular interest for race and performance vehicles. Changes to the engine will affect the breathing and fueling characteristics of the engine can be made to perform to the optimum without costly dyno time and/or many trial and error attempts. Even changes in ambient air temperature, pressure and humidity can be adjusted for to obtain the best performance. This new technology is much more accurate than exhaust gas temperature equipment. And of course, light years better than “reading” plugs.

The oxygen sensor produces a voltage proportional to the lack of oxygen in the exhaust once it is up to operating temperature. What this means is the sensor is tuned to the optimum air/fuel ratio for an engine, that is all the fuel is consumed by all of the available air in the combustion chamber. This is called stoichiometry. This condition produces the most power out of an internal combustion engine. When the air/fuel ratio is lean of stoichiometry the engine has to pump air that produces no useful work in the combustion process. This extra air appears as free oxygen in the exhaust. As the air/fuel ratio goes richer than stoichiometry the engine again loses power (to a lesser degree than going lean) because the excessive fuel displaces air that could be used to consume fuel. The excessive fuel also tends to cool the combustion reducing efficiency as well.

The monitor receives the oxygen sensor signal output and turns on light emitting diodes (LED) to indicate the air/fuel ratio of the engine. If the air/fuel ratio is very lean, the red LED's will be on. When the air/fuel ratio is in the safe but lean condition, both the red and green LED's will be illuminated. As the air/fuel ratio gets near optimum or stoichiometry, only the green LED is on. As the air/fuel ratio goes richer still, both the yellow and green LED's will be on. When only the yellow LED is displayed, this is a very rich air/fuel condition. The air/fuel ratio range for the green LED (all three conditions) is very narrow. The range from the red and green LED's illuminated to yellow and green LED's illuminated is +/- 0.15 air/fuel ratio. The range for the green only LED is +/- 0.05 air/fuel ratio. During warm-up of the oxygen sensor, the signal from the sensor is low in strength. During this time the monitor will have the yellow LED on. As the sensor warms up due to the engine operating, the yellow LED will go out unless the engine is truly rich. If the sensor wire is open (disconnected), the same condition will appear.

The driver's favorite feature of the C&S Air/Fuel Ratio Monitor is the telltale/latching capability. The telltale/latching feature allows the driver to lock-in a reading at any place on the track, without looking at the LED display, by simply pushing a button. The air/fuel ratio reading at that instant will stay latched in memory until the button is pushed again which unlatches the display. This allows a reading to be retained for the crew chief in the pits. When the latch switch contact is closed, the data is locked on the display and an orange LED is illuminated. Opening the contact will return the display to normal, real time mode and the orange LED will extinguish. This is important in racecars to latch information when the driver's attention needs to be on driving rather than data retrieval. It is also helpful on “catching” a transient operating condition such as heavy acceleration, braking or cornering.

Although the C&S Rich-Lean Indicator (Air/Fuel Monitor) contains a small computer, NO computer knowledge is required to install or use. Latest technology that is rugged enough for dirt track cars but as easy to install as any other gauge. A technical brochure is included. And, as always, C&S Tech. Hotline is available at (636)723-4996.





## PRELIMINARY TUNING OF A NEW RACING CARBURETOR

All C&S custom carburetors are factory set to the usual settings for the intended application. Normal starting point on idle screws is one turn out.

The following tuning information will not be needed if the standard settings are correct for the customers motor.

The idle and throttle response adjustment of the C&S product is much greater than a stock carb.

Install carb on motor and bring engine up to operating temperature (at least 180 degrees F).

Check fuel level in float bowl. Float level is preset at factory, but will be affected by fuel pressure of customers motor. Correct setting with motor running is fuel should barely run out of sight plug hole on side of float bowl. To adjust, loosen slotted screw slightly on top of float bowl, then turn nut clockwise to lower level and of course, counter clockwise to raise level. One flat on nut (1/6 turn) will raise or lower fuel level 1/32 of an inch so less than one full turn will bring fuel to proper level. A shop towel around nut will catch any fuel that squirts out.

Don't skip this adjustment. Fuel level affects main circuit startup and has a small effect on wide open throttle air/fuel ratio. On rare occasions a slightly higher or lower setting will solve problems. But, unless you are an expert tuner, stick with the standard setting. It will almost always result in greater performance.

You are now ready to tune idle/transition settings.

All C&S carbs start with throttle position as shown in sketch "A". The front throttle butterflies are never changed from this position. Disregard anything you may have heard to the contrary.

Adjust idle screws on side of metering blocks one by one (most have 4 screws, some only 2). They are very sensitive. Adjust to get the highest possible idle RPM even if this results in a higher RPM than you want. If RPM is too high, shut off engine, then open carburetor wide open. This will expose a small headless allen stop screw on the right side of the rear throttle linkage, see photo "D".

While holding the throttle wide open turn screw in (clockwise) about 1/6 turn to reduce RPM about 200 RPM. And of course, turn screw out to increase RPM. Stop screw has a nylon patch to keep it where it is set.

Then go through the process again until the desired RPM is reached.

You will not only have the best mixture at that RPM. But it can be read-justed if major conditions change or carb is installed on a different motor.

Take time to do this right!

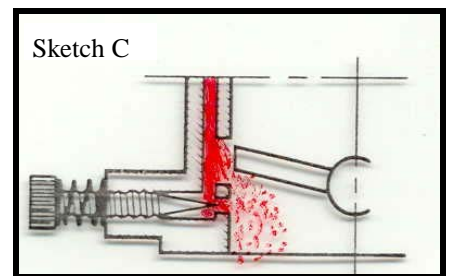
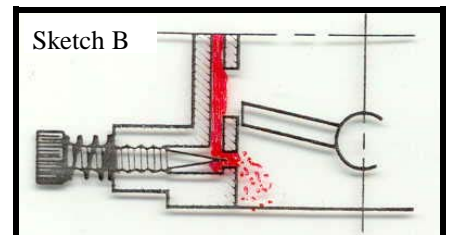
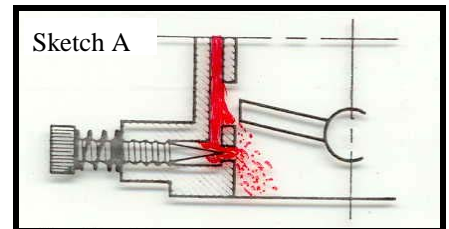
Proper adjustment is critical to sharp throttle response.

Sketch "C" shows primary butterflies set too high. This is usually done to get desired idle RPM. This will result in a stumble off idle.

Sketch "B" shows butterflies set too low or most likely no idle.

There is only one correct position of front butterflies as is shown in Sketch "A". No exceptions. More or less air is delivered by adjusting REAR Butterflies.

**Free Tech Help is available on all C&S products at  
 636-723-4996.**



## **C&S SPECIALTIES, INC.**

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### **PRICES**

All prices listed are quoted F.O.B. our warehouse, St. Charles, Mo.

### **TERMS**

All orders will be shipped C.O.D., certified check or money order, unless other arrangements have been made previously. At least a 50% deposit will be required on any parts made to order. We offer credit via Visa, MasterCard or Discover.

### **SHIPPING**

Most orders are processed and shipped within 24 hours after receipt of order. All orders will be shipped United Parcel Service unless other means are specified by the customer. Estimated delivery time on customer orders will be quoted at time of order. NOTICE: Any shipping damage must be reported to C&S Specialties within one day of receiving shipment. Damages to merchandise shipped to us must be referred to the shipping carrier. C&S cannot be responsible for damages due to the carrier's negligence.

### **RETURN OF MERCHANDISE**

No merchandise may be returned for any reason without permission from C&S Specialties. A copy of the original invoice must accompany all approved returns. All shipments approved for return must be shipped pre paid insured. At least a 15% restocking charge to cover handling will be made on all returned merchandise, except in the case of factory error. No refunds or exchanges will be issued on special ordered or customer altered merchandise.

### **RIGHTS RESERVED**

C&S Specialties reserves the right to make changes in design, materials and specifications, or to make product changes without incurring liability or obligation with respect to similar products previously manufactured.

### **LIMITED WARRANTY ON ALL C&S PRODUCTS**

We guarantee for 60 days from date of shipment to replace, or at our option, repair, any products or parts thereof, which are found to be defective in material or workmanship. There are no warranties beyond the warranty stated above (except C&S Aerosol Billet Carburetors), which does not include actual or alleged labor costs, or other incidental charges or consequential damages incurred by use of such products. Products must be returned in like new condition.

### **SPECIAL AEROSOL BILLET GUARANTEE**

The top of the line Aerosol Billet has a customer satisfaction 30 day money back guarantee. This is superior to the standard C&S material and workmanship repair or replace at our option guarantee. It is simply the best guarantee in the industry. The only extension allowed is for winter purchases, then warranty would expire 30 days after opening day at customer's local track. Shipping is not covered. All merchandise must be returned in like new condition. Damaged carburetors will not be refunded.

### **C&S SPECIALTIES, INC.**

**3528 Highway B St. Charles, Missouri 63301**

**(636) 723-4996 Fax # (636) 723-1277**

**www.candsspecialties.com**

## HOW TO ORDER

When sending carburetors or other products to C&S Specialties to be modified or rebuilt the most convenient method is to include a note listing name, address and phone number. Please specify if phone number is day or evening and a brief description of work to be performed. Or you can go to our web site at [www.candsspecialties.com](http://www.candsspecialties.com), click on the Rebuilds and Modifications tab, click on the word "form" complete, online, print and include with your carburetor.

This should include general specifications of intended use, because many C&S products are custom built to customer's application. Generally the most important specifications are ; type of racing, i.e., drag, oval track, short track, super speedway, road racing, tractor pull, etc., approximate weight of car, size of engine, RPM range, and type of transmission. Extremely detailed information is usually not required.

This form stays with your order as it progresses through the system. Allowing easy contact with the customer if there is a question or problem.

Most C&S products are shipped U.P.S./C.O.D., unless other arrangements have been made. Payment is cashiers check or money order . Our central location means most orders will reach the customer within 2 or 3 days. United Parcel Service (U.P.S.) Blue Label (2 days guaranteed delivery) or U.P.S. Red Label (1 day guaranteed delivery) or Red Label Saturday Delivery.

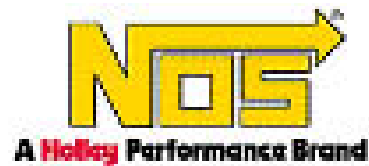
Unless otherwise specified, products will be shipped regular U.P.S.

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THE BUYER UNDERSTANDS AND RECOGNIZES that racing parts, specialized street rod equipment, and all parts and services sold by C&S are exposed to many and varied conditions due to the manner in which they are installed and used. C&S shall bear no liability for any loss, damage or injury, either to a person or to property, resulting from the direct or indirect use of any C&S products or inability by the buyer to determine proper use or application of C&S products. With the exception of the limited liability warranty as set forth above, C&S SHALL NOT BE LIABLE FOR ANY CLAIMS, DEMANDS, INJURIES, DAMAGES, ACTIONS OR CAUSES OF ACTION WHATSOEVER TO BUYER ARISING OUT OF OR CONNECTED WITH THE USE OF ANY C&S PRODUCTS.

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