

EnviroSpec News & Specials

Bonus Buck Program starts today

Bonu\$Buck\$

For the next 7 months get up to

25%

cash back on everything your buy!



FOR EVERY \$100.00 YOU SPEND WITH US WE PUT UP TO...



...IN YOUR PIGGY BANK



And if you buy elsewhere this is what your piggy will look like!



BETWEEN

JULY 1, 2010

&

FEBRUARY 28, 2011

UP TO 25%

of every dollar you spend with us will be put in your

BONUS BUCKS BANK ACCOUNT

WHERE DOES THIS MONEY COME FROM?

10% of all Parts (not equipment) and 25% of all Chemical purchased during this period will be set aside in your account.



This money must be used to purchase any of our **CATALOG ITEMS** during the month of **FEBRUARY 2011**



Just break the bank, pick up the phone and start saving!

Bonu\$Buck\$

Every item in our catalog qualifies!



\$50.00 MINIMUM ORDER



THIS WEEK... IN THE NEWS!



The Amazing Downstream Injector

Do you understand how it works? Don't take it for granted. When it stops working you certainly don't. The downstream injector works because of the venturi effect. As defined by Wikipedia: The Venturi effect is the reduction in fluid pressure that results when a fluid flows through a constricted section of pipe. The venturi effect is named after Giovanni Battista Venturi (1746–1822), an Italian physicist.

I don't know how he did it, but this guy figured out that a stream of water shot through the middle of a larger opening will create a vacuum around it. This principle was not only used in chemical injectors. It is also used in carburetors and sludge pumps.

When you look into a chemical injector you can see the small port (venture nozzle), that water is forced through. There is a larger diameter area that the jet of water is forced through. A hole enters this area; on the outside of the hole is a barb where you connect your chemical line. The suction created by the jet of water going through the larger area then sucks the chemical into the injector body where it mixes in with the water being jetted through and you get chemical. Understanding the principle behind the injector helps you to understand how external components downstream of the injector affect its operation. If the jet of water going through the injector body is slowed or impeded, the venturi effect is stopped and there is no chemical suctioned into the injector. So what impedes the chemical injector water jet? Anything attached after the chemical injector. The

hose, the trigger gun, the lance, and the nozzle. A certain amount of backpressure is tolerated before the venturi is shut down. The effect is reduced as more back pressure is applied and the jet is slowed. So the more hose you use the less chemical is suctioned into the injector. Beyond that, flow is restricted by the trigger gun because the water has to go through the valve inside, the lance because the inside diameter is small, and the nozzle because it restricts the water stream.

Armed with this knowledge it becomes easier to understand why and how things affect the injector. When you spray at high pressure it stops the suction in the injector body so you don't get chemical. When you reduce the back pressure on the injector by using a chemical nozzle with a large hole, the chemical flows. The larger the chemical nozzle hole is, the more chemical will flow. Friction encountered by the water flowing through the hose adds up as the number of feet of hose increases. The longer the hose, the greater the friction and the greater the back pressure. This results in less chemical flow. Isn't this fun. Add to this all the other things that you can encounter in the field involving the chemical injector, and other parts that affect its performance, injectors can really keep you on your toes.



Here is a list of other things to remember when the chemical just won't flow.

- The venturi nozzle wears out. As it gets bigger, the jet loses force and chemical draw reduces until it stops. Wear is normal; the friction of the water wears the hole bigger. Want it to last longer? Remove the injector when you don't need chemical. Have it quick connected in line for easy removal.
- Chemical filters get clogged, check and clean them.
- Chemical lines get crimped, get holes, or can leak air if they are loose on fittings. Check them; air leaks going in reduce your chemical draw without you seeing them.
- There is a seat and ball at the inlet of the chemical port that can get stuck together, that will keep the chemical from flowing also. If this happens a lot, run water through it when you finish your jobs. That actually is a good habit anyway, especially if you use acids or caustics that will corrode the injector components when left sitting in them.
- The smaller the venturi nozzle, the stronger the venturi action. The problem is that it reduces the water flow beyond the injector. This reduces the flow and pressure at the gun, so there is a trade off. Downsizing can also cause problems with flow actuated unloaders.
- Chemical thickness affects the flow. Like the difference between sucking soda or a milk shake through a straw. That milk shake is good, but you can only get so much to come through.

THIS WEEK... IN THE NEWS!



Adjustable or Fixed Injector?

There are pros and cons to both. Using a fixed type injector eliminates the adjustment knob. The adjustment knob on many injectors won't stay where adjusted due to vibration. A fixed design is generally slightly less expensive.

An adjustable injector allows the draw to be reduced. Reducing the draw of the detergent will save some money. Reducing the amount of detergent product reaching the surface that is being cleaned generally makes the job harder and reduces the quality of the end result. An adjustable injector can be operated fully open whenever detergent is desired, then it provides the option of using the pressure washer with low pressure and no detergent, by shutting the adjustment completely.

Chemical Tube

Generally a 1/4" chemical feed tube is attached to the nipple of the chemical injector. The length of this tube can vary depending on the distance at which one may want to store chemical products from the equipment.

The reduction of flow through the chemical line is increased with length; so shorter is better for percentage of draw. Another big factor in draw is how much lift is required. A chemical injector will have a much easier time pulling chemical through a horizontal chemical tube than pulling chemical up vertically. Any fittings, especially 90-degree turns will also inhibit chemical flow.

EnviroSpec

HOT DEALS

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Only \$2.49 each

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It's stock up time

Fits ST-1500 ST-2000 ST-601



Minimum order is \$50.00

Free freight minimum \$100.00 web or fax, \$200.00 phone

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Free Freight Program

EnviroSpec's free freight program has been in effect for 4 months now. It's time to take a look at how things are working. The most important measure of success or failure is the customer response to the idea. It has been overwhelmingly positive. So here is a look at what has happened since we started this in March.

The concept was to enable the customer to figure out how much an order was actually going to cost them. Our thought was that, like us, you would appreciate not having to worry about or guess at how much the freight charge would be and how much more your order would cost. To do this we had to create a pricing structure that would support free freight (or almost support it). The scary part of it was that we had to increase some prices to absorb the transportation expense. When you are selling something that customers buy repeatedly any price increase is bad. We counted on our customers to realize that the new price was about the same, or many times less than the old price because no freight charge was added.

There were bumps in the road. Customers reacted to what was perceived as higher prices. Personally, I have walked customers through their old orders to show them that the new deal was actually better for them. The biggest price adjustments were made to our cleaning chemical prices. That is because they weigh the most and shipping cost is highest for them. We cost averaged shipping expense on drum packs and priced the drum packs to cover most of that expense. Most our chemical drum packs currently have a delivered price per gallon of concentrate of a little over \$2.00.

You are able to wash a lot of surface with a gallon. I've recently received emails from people that pay 5 times or more than that for their cleaning chemicals.

The bottom line on the free freight program is that we have happy customers. I worry that there are still some out there that just looked at

THIS WEEK... IN THE NEWS!



the new price of chemical and didn't think about the fact the freight they once paid was no longer going to be there. I hope that now everyone understands this change.

There are of course, exceptions to every rule. Minimums for free freight must be met. Non-catalog items do not qualify for free freight. That is because if you order something we don't stock we need to ship it to you special from someplace else and we can't control that cost. Oh, and every once in a while we put something on sale, and the price is so crazy low that we can't pay to send it to you free. Anytime we do that it will be noted that you pay the freight.

July 4th

Happy Birthday America

The Declaration of Independence was adopted on July 4, 1776

Each year on July 4, Americans celebrate our freedom and independence cook-outs, picnics, and family gatherings. We gather to watch fireworks and hope storms don't wash us out. Try to take some time this weekend to have your own celebration. Take pride in your country.

