WA Technology

Installing Splash/Stone Guards

Having owned a 1988 and 1993 40th Anniversary Corvette I was very upset when the apron behind both the front and back wheels was pocked with small stone chips! It happened very soon after the cars were purchased. In addition, road tar was a common item that had to be removed with harsh chemicals when washing the Corvettes.

Determined not to have the C6 suffer that same fate, Splash Guards were purchased before the car was delivered! There are several options to the type of guards available including clear plastic cover. The one that appealed most was the contoured and painted products manufactured by Altec. You can get them in black and if you have a black Corvette that may be fine (although they are not the painted black like the rest of the Corvette.) However on a Yellow car the painted look far better and less like an afterthought! The ZO6 includes something similar to make up for the wider tires and they are black. The Altec product is made from ABS, similar to your Corvette body.

We purchased through Eckler's who offer a good price when purchased as front and rear sets: http://www.ecklers.com Eckler's uses PPG base and clear coat finish. Not an absolutely perfect match to the three step, Base, Clear Tint, Clear Coat that comes with the Velocity Yellow Tintcoat paint on the Vette but a good match. Plus where they are located it's hard to see a difference. Believing in "Form Follows Function," they look great!

INSTALLATION:

Tools Needed:

You'll need a:

1. **Powered drill,**
2. **1/16 inch and 9/64 inch drill bits**
3. **Powered screw driver helps**
4. **Short level**
5. **Stack of small scraps of wood (you'll see why below)**

Picture Installation Sequence:

You'll need to jack up the Corvette. Low ramps are needed to get a jack under the "GM Preferred Lifting Points."	
After the car is on Ramps you can push a jack under one end and jack it up sufficiently to install Jack Stands to support that end of the car. You'll need a cross brace to assure your lifting on the "GM Preferred Supports." **DO NOT WORK ON THE CAR WITH A WHEEL REMOVED WITHOUT JACK STANDS.**	
Use Jack Stands to support only one end of the car at a time. Use wheel chocks on the end on the ground or on Ramps. We'd recommend using "Jacking Pads" in the slots on the car where GM indicates the car can be supported. Follow all Cautions that come with the Jack Stands and GM instructions for lifting the Corvette.	

This is a photo of the rear Splash Guards being installed. Note the stack of scrap wood. Stack up enough pieces to just fit below the Splash Guard. Then use a level to check that the stack is level. Clean the area and put masking tape under where the holes will be drilled in the fender. Note, one is on the inner fender well. Now you can position the Splash Guard very accurately to assure the bottoms are level.	
However we found that the best fit on the sides (where it is important) may require the bottom to be "slightly" off perfect level. Recommend you get a friend who has a critical eye to look at the gaps while you fiddle with the fit! When satisfied, use a sharp wood pencil to make a circle through the screw hole on the masking tape.	
Now the toughest part- psychologically – drilling the first hole in your Corvette! Start with a 1/16 inch drill bit and center it in the circle hole made. Then use the 9/64 inch bit. Don't have one? Go purchase it; most drill bit sets have that size!	
The front Splash Guards installs the same as the rears. However unlike the rears which have a notch helping to assure the proper alignment, the front must rely on the level, stacked wood and a friend with a critical eye! There is also a metal tab that will be screwed on the bottom of the fender. It is easily installed and bent to fit flat.	

Have a MIG (Wire) Welder?

A Friend with a MIG Welder? Know Someone with a Fabrication Shop?

Do Them a Big Favor and Have Them Review the Shielding Gas Saving Information on Our Web Site:

www.NetWelding.com

If You Have a Home Shop - Have You Run Out of Shielding Gas on a Saturday or Sunday? We Have a Solution:

How Much Gas Can Be Saved??

The best way to show the savings is with an example from one of our industrial customers who tested the system then bought them for all 35 of his MIG welders.

A Texas Truck Box manufacturer evaluated the system on a repetitive job, welding doors. With their standard gas delivery hose they welded ***236 doors*** with a full cylinder of shielding gas. Just substituting their gas hose with our patented ***GSS*** maintaining the same flow settings they welded ***632 doors***! That's a 63% reduction in shielding gas use.

Weld Performance Improvement

A small shop owner provided this feedback after he purchased a 3 foot ***GSS*** for his small MIG welder. Al Hackethal reported these findings:

"Well, I can't believe it. I never thought a hose could make that much of a difference. I had a small job that's been waiting for a while. The weld quality, and even penetration is considerable better. Almost no spatter! The weld seemed to be hotter and I turned my MIG down a notch.

Initially thought that my imagination had kicked in, but then realized that the gas I'm buying is actually working the way it's supposed to. Glad I found your website. This is one of the few things that really works better than any info could suggest. I understood the theory, though in practice I understood much better after the first couple of welds. Now I have better looking welds and almost no spatter, which means less grinding and finish work! In addition, the tip was cleaner after the job I just did.

This will provide savings in time, labor and maybe even consumables too. As a one man shop there's never enough time for anything.

Al also has a TIG welder with 300 amp water cooled torch and bought one of our Leather Cable Covers. His email said this about it!

Oh, the leather wrap for my TIG hoses worked very well and fits perfectly. I'd just replaced the hoses and was looking for something to protect them that was better than the nylon wrap that's available around here. Now I'm "TIGing" again too, and much safer. It's good to know the coolant hoses are well protected. Much better than using a 300 amp TIG and then realizing that I was standing in a puddle of coolant, which is what recently happened. Can't pay the bills if I electrocute myself!

Thanks for making products affordable".

Another Home Shop Writes About GSS System

Perry Thomasson has a very well equipped home shop. He uses a 175 amp MIG welder. However the small welder cart only held a medium size shielding gas cylinder and Perry wanted to reduce the number of times he had to have it filled.

He purchased the largest cylinder his distributor offered for sale and chained it to a wall in his shop. He needed a much longer gas delivery hose so he added a 50 foot conventional 1/4 inch ID hose. He found he was using a lot of gas.

He purchased a 50 foot long ***GSS*** and saved a significant amount of shielding gas while improving his weld starts by reducing the starting gas surge. Since his regulator/flowgauge had a hose barb on the output, we supplied Perry with a splice connection on the supply end of the ***GSS***. He simply cut the existing gas delivery hose close to the regulator and spliced in the ***GSS*** hose. The welder end uses a standard CGA fitting that is supplied with the system.

Perry emailed a picture and said;

" The system works great. Thanks for the professional service and a great product."

A Professional Street Rod Builder Had This to Say About the GSS*:*

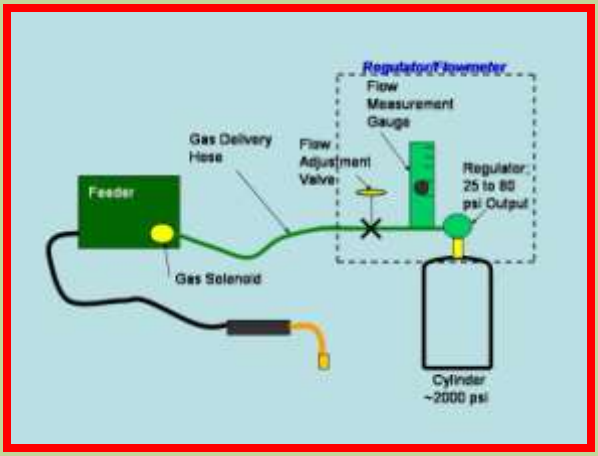
They use a 250 amp MIG welder with built in feeder and a 6 foot gas delivery hose. With their standard gas delivery hose the peak shielding flow at weld start was measured at 150 CFH, far more than needed and enough to pull air into the shielding stream. Air is then sucked into the gas stream causing poor weld starts and possibly weld porosity.

With the ***GSS*** replacing their existing hose, the peak flow surge at the weld start was about 50 CFH and it quickly reduced to the 25 CFH setting. With the many short welds made and frequent inching of the wire, they used less than half the gas and had better starts.

Kyle Bond, President, indicated a big benefit is the reduced time and effort changing cylinders since it's required less frequently. He quickly saw the improvement achieved in weld start quality as a significant advantage! Kyle, an excellent automotive painter, was well aware of the effects of gas surge caused by pressure buildup in the delivery hose when stopped. He has to deal with the visible effects in the air hose lines on the spray gun in his paint booth! It's too bad we can't see the shielding gas waste as Kyle can the effects of excess pressure when he triggers his spray gun! The paint surge is visible and creates defects unless the gun is triggered off the part being painted! Kyle can manage the surge by triggering the paint gun off the part; unfortunately we can't start our weld with the MIG gun off the part ! The ***GSS*** has a built in surge flow limiting orifice that keeps the peak flow from becoming excessive. So you not only save gas you improve your weld starts!

How Does The GSS Work?

Gas waste occurs every time you pull the MIG torch trigger even if it's only to inch the wire to cut off the end.



To keep flow at the preset level the gas pressure in the cylinder regulator will be between 25 and 80 psi. Flowgauge regulators (those with a flow calibrated pressure gauge) operate in this pressure range as well.) However to flow shielding gas though the welder and torch typically requires 3 to 5 psi depending on restrictions. Therefore every time welding stops the pressure in the gas hose raises to the regulator pressure of 25 to 80 psi. That stores up to 7 times the hose volume of gas in the hose. This is similar to your shielding gas cylinder which holds about 150 times the volume of gas as the physical volume of the cylinder due to the high pressure!

The patented ***GSS*** stores over 80% less gas then typical shielding gas hoses. In addition to the wasted gas (which you can hear when you pull the torch trigger) the high flow also causes air to be pulled into the turbulent shielding gas stream! This is like starting with the gas cylinder shut off! You have probably experienced that before when you forgot to open the valve!

It takes a short time for the shielding gas flow to return to a smooth less turbulent (laminar) flow even when the start gas surge flow reduces. That can take several seconds so when making short welds or tack welds you're not getting all the benefits of the shielding gas you're purchasing!

SUMMARY:

The ***GSS*** can cut your gas use in half or more. It also has a surge restriction orifice built into the fitting at the welder- wire feeder end. That limits peak flow (*but not your set flow*) to a level that avoids excess turbulence for better starts. It allows a controlled amount of shielding gas to quickly purge the weld start area.

All you need to do is replace the exiting gas hose from cylinder regulator to welder with our patented *GSS*. *It is available in various lengths at* www.NetWelding.com .

There are more testimonials at:

http://www.netwelding.com/production_test_results.htm

Have more questions? See:

http://www.netwelding.com/Overview_GSS.htm

Or email us at:
TechSupport@NetWelding.com