

# Concept Of Using An LS Gun

The concept of this gun is to spray a thin film coverage with a relatively high viscosity, 2-component elastomer at high psi and high temperature. While the mil coverage applied by this gun is higher than that of a “paint” gun, the concept is somewhat the same.

Keeping the concept in mind we must realize that the gun will generally perform best when the materials (A&B) are brought down to the lowest viscosity possible, achieved with heat and most often a higher than normal set point. Further more, at these higher temps we also aim to equal the viscosities to prevent “cross over”.

An example of this as referenced in material manufacture publications shows that a standard isocyanate with viscosity of 700 cps at 70° F will be 175cps at 150° F.

Always consult with material supplier before adjusting temperatures. Hybrid & urethane systems contain catalysts that can be “cooked” out at extreme temperatures, cause material integrity failure.

Once we overcome the viscosity issue we need to continuously move the material at high pressure for consistent mix of material.

The second issue is maintenance of gun.

Keeping the gun clean is important, to keep free flow of material to the module, cleaning of the filter on a regular basis is important. Dependant on the condition and environment of the material and equipment it may be necessary to utilize auxiliary filters.

After spraying, every day it is necessary to remove the tip, module and housing. Clean the head, face of head and all forward parts using the proper drill bits (ref. page 5 of manual for #23700-xx, GC-1331). Rinse all parts with suitable solvent, if possible use a fine tip squirt bottle to rinse the ports of the module #23724-00 and sleeve #23722-00. The needle needs to be kept polished with a very fine scotch brite.

A very useful technique is to use a paste wax, apply to the following parts with a light film; ring cap – #23730-00, air ring – #23729-00, & spray tip – #23726-xx (front side only)

In between spray applications times it will most likely be necessary to remove the ring cap and air ring (#23730-00 & #23729-00) to clean the spray tip (#23726-xx), but if you utilize a paste wax, you can take a clean razor blade and cut the material off the face of the tip and clean out the counter bore of the tip.

The third issue is technique; this is an issue that must be addressed carefully by the equipment manufacturer. While it is not our place to tell an applicator how to spray his sub-strate with a third party’s material, but with this gun, additional education and important pointers will help all parties with the successful performance of this gun.

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The most important of two issues is that the Delrin module, #23724-00 is the soft part of the gun, the slide action of the needle through the module is the “on”/”off” action of the gun and the tip/module purge.

Every time the gun is actuated the needle (#23709-00) slides through the module, causing wear. Therefore, the less number of actuations of the gun, less wear on the module. This will increase service life of module, eliminating premature failure of module seal. This helps keep the gun head clean and makes daily maintenance much easier.

Of course the type of material being sprayed will greatly affect service life of the module, a heavily filled material will wear quicker than a light viscosity, unpigmented, unfilled system.

The second side of this issue of trigger actuation, deal with the purge affect of the needle when the needle is returned forward it forces mixed material clear of the module bore and back counter bore of the tip.

This force can be strong enough to possibly clear the through port of the tip, but not forcefully enough, creating high velocity of material movement, to move past the face of the tip.

On fast gel-time, quick cure material this small amount of material will set up the face of the tip.

Keeping the above in mind, every time the trigger is released from spraying, it is possible for the material to set up on the front side of the tip. If this action is repeated several times over a spray application, a large build up/blockage can occur.

An example would be as follows; spray for 30 seconds, release for 8-10 seconds, spray for one minute, release. By this time there is a build up that affected the last minute of spray.

It is best to spray for 2 minutes release. If the gun sets idle for a period of time, remove the ring & air ring, clean tip off, re-install ring and air ring, continue spraying.

By understanding the gun, maintenance and technique examples the LS can be a very user friendly, reliable gun.