

# AIRCRAFT SPECIALTY

4-7-2020 COMPANY UPDATES AND  
NEW PRODUCT ANNOUNCEMENTS



## FLIGHTLINES

Tom and I wanted to take this opportunity to first and foremost THANK all of you for your continued loyalty and allowing us to be a small part of your projects. We feel like we get to go on first flights on a daily basis, and it's very exciting to us when we see one of our fellow builders achieve that milestone. We also want to provide an update to the experimental aircraft community about the current state of our company, and what we are working on to create a very exciting 2020 and beyond.

But first, we need to look backward to 2019. It was a year filled with incredible highs, but some deeper lows. Tom lost his wife and partner in life and someone who was an ardent believer in what we do. Suzanne provided unwavering support and she is greatly missed. We know that wherever she is, she is smiling down on us and happy that Tom and I are fortunate enough to be able to do what we love on a daily basis.

Tom and I often receive the question "What's the difference between TS Flightlines and Aircraft Specialty." The truth of the matter is that from a customer standpoint, there is no difference. We collaborate on all projects and will eventually merge everything into our joint ASFLIGHTLINES website. For now, [www.aircraftspecialty.com](http://www.aircraftspecialty.com) shows our complete line of products. However, all the items can be purchased online or by calling Tom or Steve.

Last year, we completed our joint production facility in Wisconsin. This was a huge investment in our future as it allows Tom and I to step back from daily production and shipping and focus on development. On that note, we each updated our prototype shops to be able to quickly develop and work on bringing new products to market. This investment included adding a multitude of additional CNC machines to our shops from Haas and other manufacturers. These

investments were significant, but we are in this for the long term and committed to providing all of you with the absolute best products for your aircraft.

We also would like to take this opportunity to THANK the many OEMs and retail partners that we work with. We appreciate the trust you and your customers place in us.

Though we do a multitude of other things, (Headset and tool sales, Custom instrument panel fabrication, and custom cnc parts) our CORE business remains custom Hose and Rigid tube assemblies as well as development of new kits around these product lines. The machinery and equipment all directly or indirectly support these endeavors. We mean it when we say that we couldn't do it without the help of awesome beta testers around the world. While we would love to have a fuselage for every experimental aircraft in our shops, it is not feasible, so we rely heavily on the help of other builders.

The good part of this is that WE DESIGN WHAT YOU ASK FOR. Nearly every product line we have is the result of a builder coming to us looking for a solution to something that they wanted to accomplish. Tom and I do not believe that "Good is good enough." Nor are we scared to tackle the projects that we have been told are "impossible." We relish the challenge.

Our company has become large enough that we can handle pretty much any project that we come across. But, the more important thing is that we also remain small enough that we are able to change direction quickly, prototype rapidly, and provide a very personal level of customer service. This is our commitment to you and we have no intention of changing that.

With that in mind, the following pages will show a rundown of significant changes to our product lines that we have made over the past 6-12 months. The end of this letter will show some of the new and existing equipment that we have been using in support of our product lines. In addition, we have some fabrication videos located at <http://aircraftspecialty.com/howwemake.html> Some of them are outdated as we have updated some of our equipment since they were made.

- 1. Introduction of Premium Integral Firesleeve Hose Assemblies:** ASF has introduced an optional premium silicone integral firesleeve hose assembly for a 15% cost premium over our standard AS1072 firesleeve assemblies. The standard firesleeve has been our core product line for the last 10 years and will remain as our core product. However, we have had customers request Integral firesleeve assemblies. The issue with these is normally that they have traditionally not been cost effective. We have been able to leverage our volume with our hose manufacturer to have them extrude a silicone firesleeve over our hose to offer this option to our customers.



In addition, our firesleeve is very flexible which allows us a tighter bend radius than some of the stiffer options that are available.

2. **DATA TAGGING OF HOSE ASSEMBLIES:** This is something that our customers asked for. With the introduction of the dedicated manufacturing shop, we use laser etching technology to etch a part number, manufacture date, and pressure test data on our hose assemblies. This allows easier reordering down the road for a future owner of the aircraft, or a quick way for us to tell exactly what you have based on the part number on the hose. In addition, the technology we utilize allows us to build these tags quickly so that we can keep our lead times extremely fast. For AOG aircraft, we are often able to accommodate same day or next day shipment.



3. **HOSE FITTINGS AND COLLARS:** Tom and I wanted even more control over our components. We have transitioned to taking a more direct role over the design/manufacture of our fittings so that we are able to ensure the utmost in quality as well as provide Milspec fitting hose assemblies at an incredible value proposition. This allows us to offer the best assemblies in the industry with NO compromises and also to build custom hose ends for custom applications.



4. **-10 and Larger Size Hoses:** One issue with large diameter hoses is flexibility. Large hoses also typically are utilized in inverted oil system type applications and warbirds where flow is of utmost importance. We introduced a new line of hoses several months back for -10 and -12 combi assemblies. The outside of the hose is convoluted (much like scat tubing) which allows extreme flexibility. The inside of the hose is smooth for flow. In addition, the hose is conductive Teflon and is true bore, meaning that a 5/8 hose is .625" diameter for maximum flow. These assemblies are available in -10 and -12 sizes. We utilize aluminum Stems and Nuts for weight, but stainless collars for maximum strength. These hoses are pressure tested to 750PSI (-10) and 500PSI (-12). Like all our other hoses, they are conductive Teflon, which means they are not on a set replacement interval, but rather "Replace on condition." They carry a 10 year warranty.

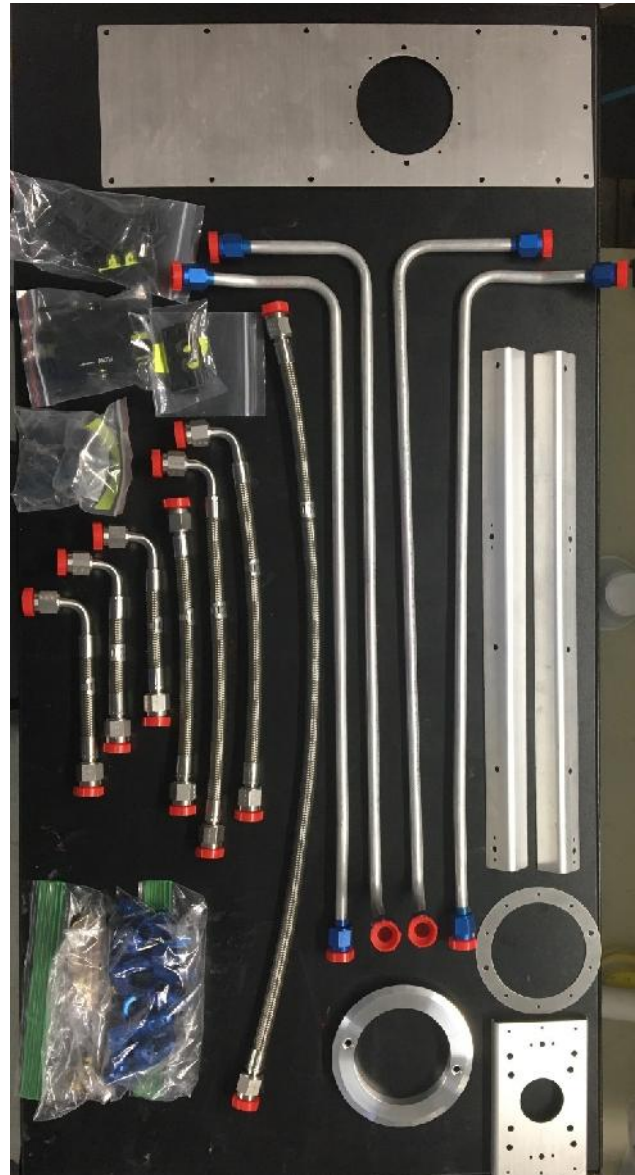


# NEW HOSE KITS

This is by no means a comprehensive list, but we have several longer term projects that we have recently wrapped up. As we develop new kits, we work to make them more and more inclusive. Information on all these kits as well as the many others that we offer (including detailed install manuals for many of them) can be found on [www.aircraftspecialty.com](http://www.aircraftspecialty.com).

IF you aren't finding exactly what you are looking for, let us know and we will be happy to custom build it for you.

1. **RV-14 DUPLEX INSTALLATION FOR SDS** – This kit has been in the works for awhile and has proven to be one of the more challenging kits we have developed due to how comprehensive it is. However, it is now refined and tested and will make installation of a complete duplex setup in an RV14/14A Cabin easy.



2. **Half Raven Installation Kit for RV-14:** This kit provides the hoses and plumbing necessary to install the Half Raven Inverted Oil System in your RV14. Kit utilizes our -10 and -12 Combi Firesleeve hoses.



3. **RV-10 Beringer Cabin Kit with Control Approach Pedals** : We now offer an additional Beringer Package for the RV10. This setup is the cabin kit for the RV10 with the Control Approach Pedals, ALIR and PB Valve. As a Beringer dealer, we are able to sell you a complete component package to include only the items you will need, while deleting the “do it yourself” hose/fittings that come with the standard Beringer Kit.



In addition we have kits for the RV14/14A with Parking brake/Parking Brake and ALIR/ and standard configurations. For other aircraft, we have enough data to work on creating a custom kit for your exact configuration. We also have complete Beringer Gear leg hose kits.



4. **RV-10 SDS CABIN INSTALLATION PACKAGE:** This new RV10 Cabin install package plumbs everything aft of the firewall out to the wing roots on the RV10 for the SDS injection system.



## SOME OF OUR MACHINERY AND EQUIPMENT

Below are images on some of the equipment that we utilize in our prototype and production shops for development and manufacturing.

**3D Printer for prototyping**



**HAAS Y axis Lathe with Live tooling**



**HAAS CNC MILL**



**COMPUTERIZED HOSE CRIMPER- PRESSURE FEEDBACK AND AUTO CRIMP COMPENSATION**



**CNC ROUTER WITH BUILT IN AUTOMATED REVERSE ENGINEERING TOUCH PROBE CAPABILITY**



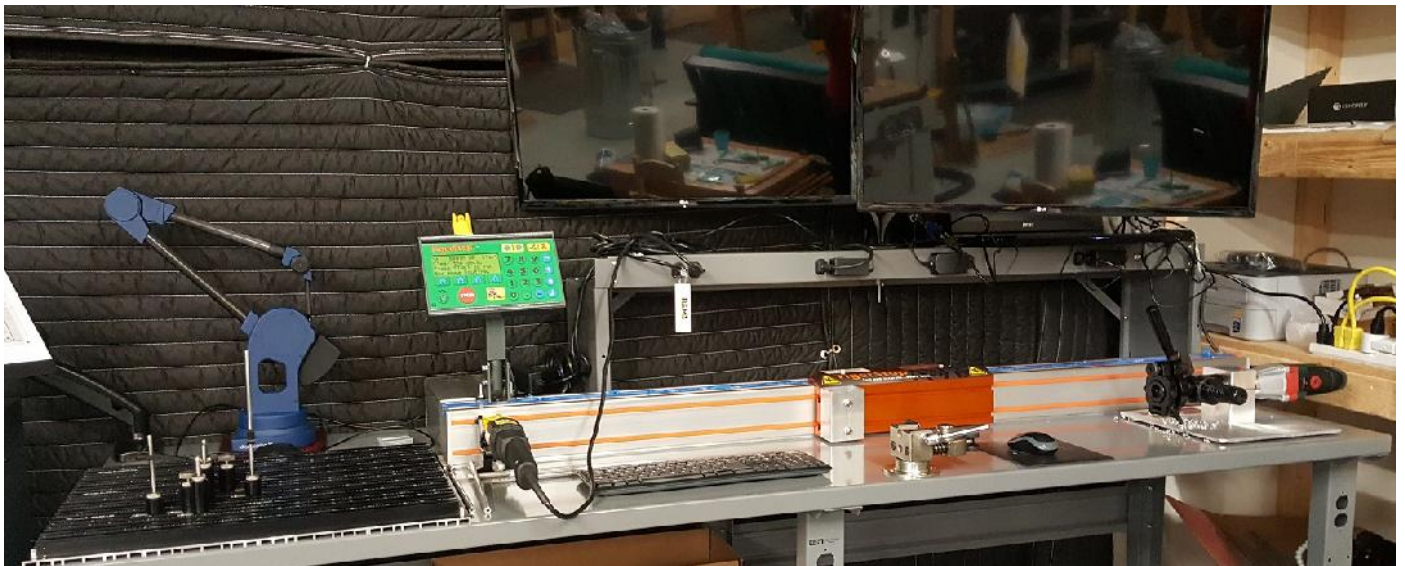
**DUAL SOURCE FIBER AND CO2 LASER FOR INSTRUMENT PANELS AND DATA TAGS**



## HYDROSTATIC PRESSURE TEST STATION



## CMM SCANNER, DIGITAL TUBE CUTTING MEASUREMENT



**Full 3 Axis Computerized CNC Tubing Bender**



**TUBE MEASURING TOOL- TEMPERATURE COMPENSATED FOR EXTREMELY ACCURATE MEASUREMENT OF CUT TUBES**



**Deburring,  
Flaring, Digital  
Protractor, and  
MILSPEC  
BEADING**

