



RED TAIL REPAIR AND RESTORATION TO FLIGHT STATUS TIMELINE AND SUMMARY

by Chuck Cravens



AIRCORPS AVIATION



Beautiful paint job by Flying Colors Aviation reflected from a wet ramp in this CAF Red Tail Squadron photo.



SUMMARY

The famous Red Tail P-51C, one of the most important educational tools of the Commemorative Air Force, sustained damage during a wheels-up landing in Dallas on February 3rd, 2016. It is very satisfying for those of us at AirCorps Aviation to be able to say she is back in the air, fulfilling the CAF Red Tail Squadron's mission to educate and inspire young people across the United States.

After months of repair, research and writing updates, we felt a project summary was in order.

The last AirCorps update ended with the Red Tail post-repair test flight, but much more has been accomplished since then.

AirCorps handled recovery, transport, estimating, project management, repair, managing and working with outside contractors, and return to service.

Twenty-one AirCorps Employees assisted in assembling components, repairing parts, completing repairs, locating parts, and the return to airworthiness. Truly a team effort.

The project was completed ahead of schedule and under budget. (26 of 38 Estimated Areas of Repair Were Under Budget.)



Thanks to the commitment of the CAF Red Tail Squadron and the efforts of AirCorps Aviation, Odegaard Wings, Roush Engineering, Maxwell Propellor Service and Flying Colors Aviation, the Red Tail will inspire young and old all over the United States in 2017.



Team

- Project Lead: Erik Hokuf
- Project Manager: Tye Halvas I.A.
- Parts Lead: Eric Trueblood
- Fabrication Lead: Dan Matejcek
- Restoration/Assembly Leads: Ryan Underwood, Mark Tisler

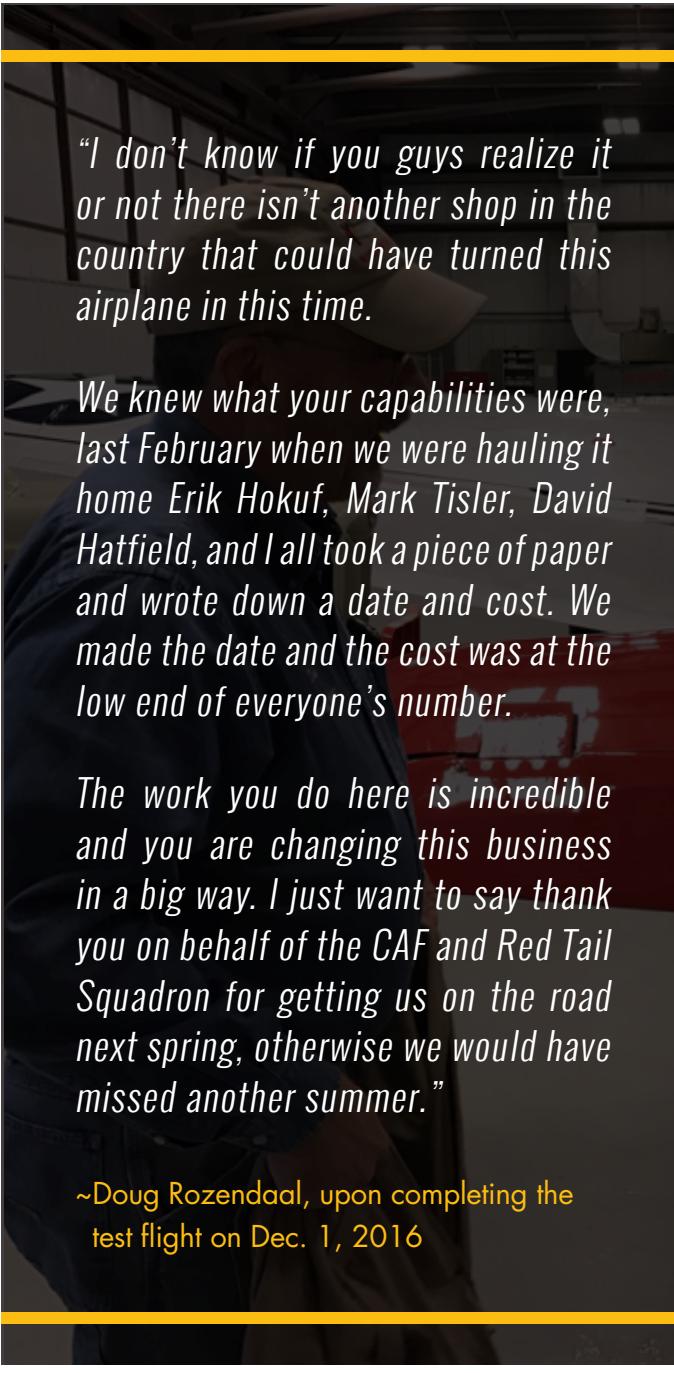
AirCorps Key Partners

- Flying Colors Aviation: Aircraft Paint
- Odegaard Wings: Wing & Flap Repair
- Maxwell Propeller Service: Propeller
- Roush Aviation: Engine Repair





When the CAF Red Tail Squadron notified AirCorps Aviation of their interest in employing us as the lead organization in the repair effort, AirCorps Aviation put in motion an aggressive plan, an estimate, and aligned our resources to do what many felt was impossible. That task was to have the aircraft flying in time for the 2017 air show season.



"I don't know if you guys realize it or not there isn't another shop in the country that could have turned this airplane in this time.

We knew what your capabilities were, last February when we were hauling it home Erik Hokuf, Mark Tisler, David Hatfield, and I all took a piece of paper and wrote down a date and cost. We made the date and the cost was at the low end of everyone's number.

The work you do here is incredible and you are changing this business in a big way. I just want to say thank you on behalf of the CAF and Red Tail Squadron for getting us on the road next spring, otherwise we would have missed another summer."

~Doug Rozendaal, upon completing the test flight on Dec. 1, 2016

Timeline

February 13 2016	Disassembly / Recovery - Dallas
February 18 2016	Aircraft Arrives at AirCorps Aviation
February 24 2016	Disassembly & Inspections Began
March 5 2016	Estimate Completed
March 7 2016	Engine Shipped to Roush
March 9 2016	Wing to Odegaard Wings
April 14 2016	Tailcone Repairs Completed
May 15 2016	Engine Mount Completed & Installed
August 11 2016	Engine Installed
October 4 2016	Wing & Fuselage reattached
October 23 2016	Major Lower Scoop, Doghouse Exit Duct Completed
November 11 2016	Air Induction Trunk Completed
November 25 2016	Prop from Maxwell Aircraft Installed
November 26 2016	Gear Door Install
December 1 2016	Date Returned to Air
December 13 2016	Aircraft to Flying Colors for Paint
February 13 2017	AirCorps Final Assembly Post Paint
February 16 2017	Aircraft Completed



Doug brings her over for a photo pass.

Not long after, Doug returned to Bemidji and flew the Red Tail to Benton Harbor, Michigan, home of Flying Colors Aviation.

This paint scheme is unique in that it doesn't replicate a single wartime Mustang, but rather honors four fighter squadrons of the 322nd Fighter Group and all those who made the success of the Tuskegee Airmen possible. One of the goals of the repair was an improvement in the accuracy of the various elements of the paint scheme, so much effort went into research and artwork.

As the CAF Red Tail Squadron so beautifully states on their website: *The CAF Red Tail Squadron's rare P-51C Mustang represents all of the personnel that are now known as Tuskegee Airmen: pilots, bombardiers, navigators, ground crews, mechanics, cooks, ambulance drivers, medical staff, administrative personnel, etc.*

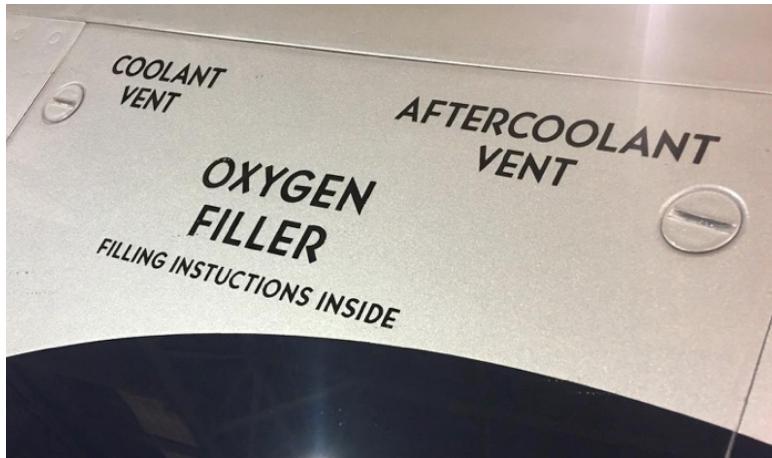
The Squadron's Mustang also has the phrase "By Request" on it just under the side windows. That was the name of the airplane of famed pilot and leader of the 332nd, Col. Benjamin O. Davis, Jr.



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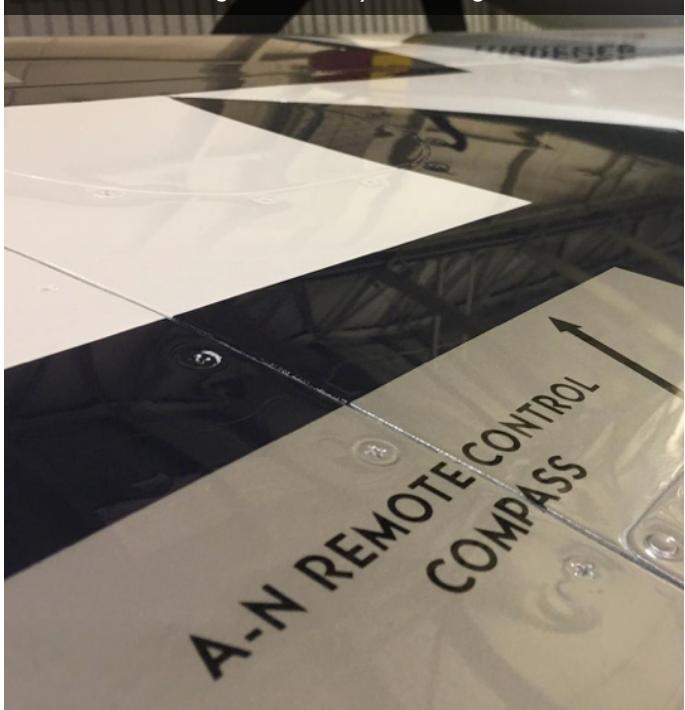


The Red Tail is airworthy but needs new paint, which Flying Colors Aviation of Benton Harbor, Michigan provided.(Flying Colors photo)



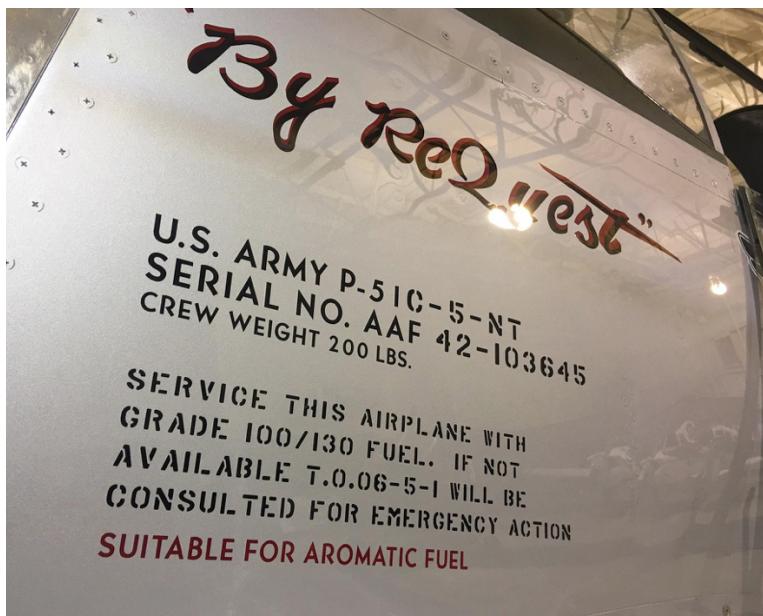
Every Mustang has numerous factory informational and cautionary graphics. AirCorps Aviation used its expertise and AirCorps Art services to put together a full exterior markings package for the Red Tail P-51C. Max Kelsey, our artist for AirCorps Art faithfully replicated this set of markings by creating all of the noseart, original factory marking masks, and water transfers. Graphic detail shots by Eric Trueblood.

The North American markings show up on virtually every surface of a P-51 and are called out on the original factory drawings.





The Red Tail has nose art and markings that weren't from the factory, instead these iconic markings would have been applied while overseas.



Here is an example of North American Markings and wartime personal markings.

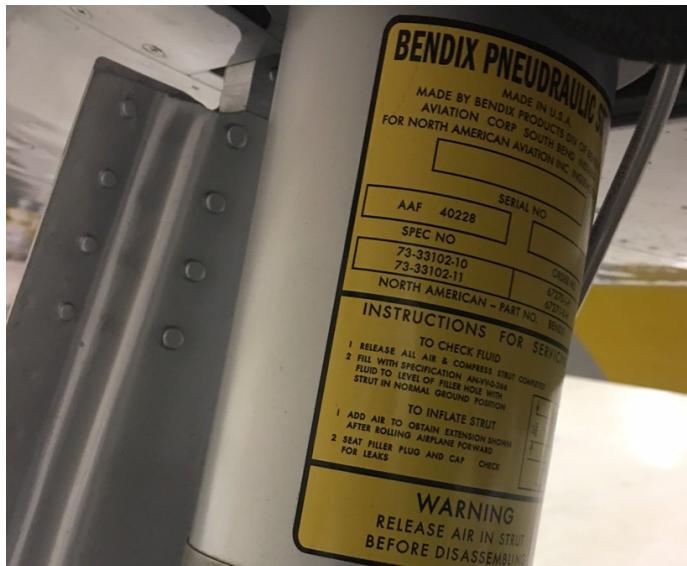
The title block came from the factory, if you look closely at the fonts you can see what was stamped and what was stenciled. "By Request" was nose art on Colonel Davis's P-51C. Digital files for the nose art were refined, researched and created at AirCorps and provided to Flying Colors Aviation.



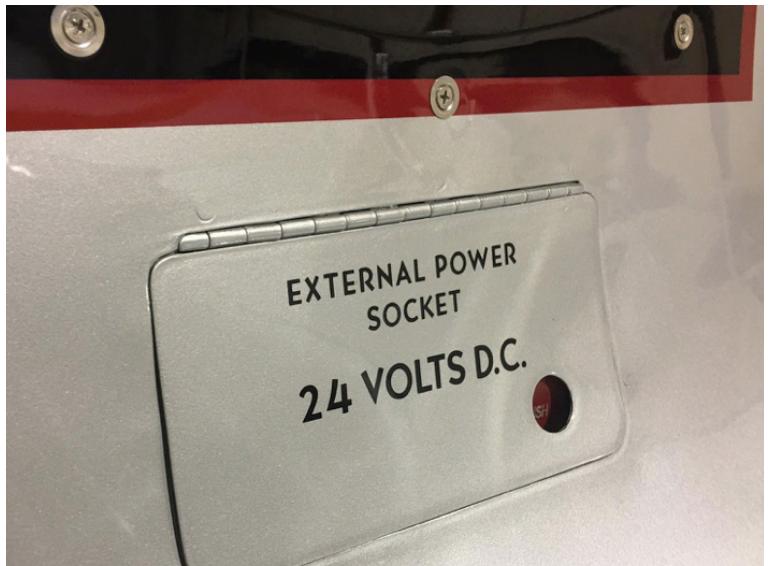
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This image gives a detail shot of one of the hundreds of factory markings originally applied by rubber stamp.



In addition to vinyl masks used as stencils, applied labels were used by North American and its contractors to provide important maintenance information.

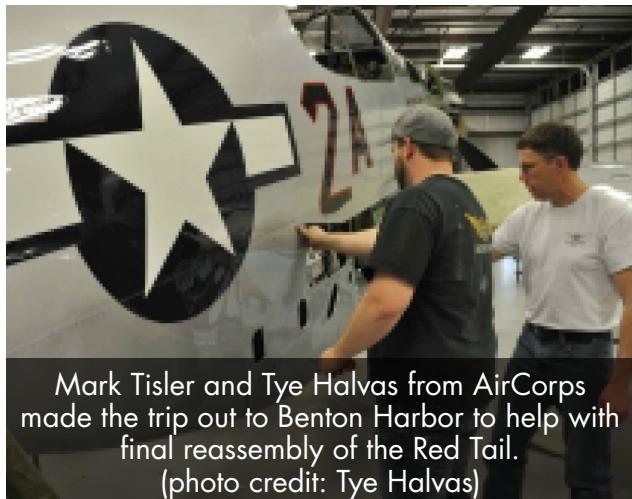
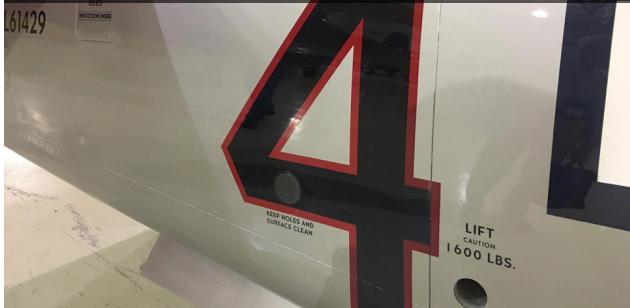


A self explanatory marking, which is, of course, the point! Notice the period correct type font used by North American Aviation.



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Both squadron and factory markings and even the FAA registration "N" number share space on the right rear fuselage.



Mark Tisler and Tye Halvas from AirCorps made the trip out to Benton Harbor to help with final reassembly of the Red Tail.
(photo credit: Tye Halvas)



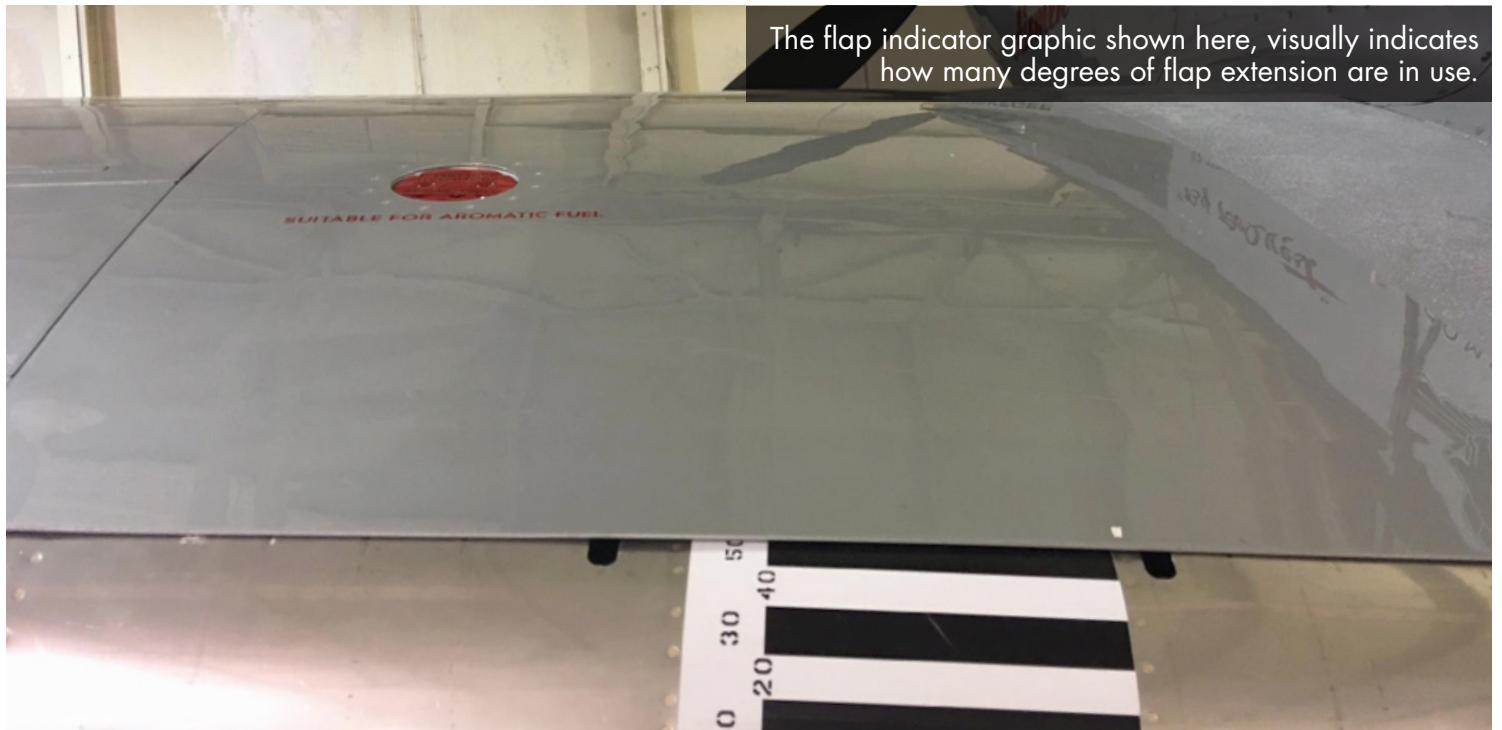
Mark works on the gun bay.
(photo credit: Tye Halvas)



The flaps are on.



RED TAIL SUMMARY





RED TAIL SUMMARY



Doug gets ready to fly her home. (photo credit: Tye Halvas)



The P-51C is completely finished in this side view of the Red Tail in her new paint. (CAF Red Tail Squadron photo)